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WEST AFRICAN TRAINING COURSE FOR BUILDING

CONTRACTORS

July - September 1969

GHANA - NIGER - UPPER VOLTA - DAHOMEY - TOGO

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INTRODUCTION

GENERAL REVIEW OF THE MISSION

The United Nations Economic and Social Council, in resolution 1167 (XII) and the Economic Commission for Africa, in resolution 157 (VIII) adopted during the eight session, resolved to organize, within the framework of the Technical Assistance Programme, special training courses for building contractors.

Acting on this authority, the secretariat of the ECA, in co-operation with the World Health Organization and the International Labour Office, organized and directed, in April - June 1968, a first series of four training courses in East African countries (document E/CN.14/HOU/18) and, in July-September 1969, a second series of five training courses in the west African countries of Ghana, Niger, Upper Volta, Dahomey and Togo.

It is this second series of training courses which is the subject of this report.

A. Objectives

As the basic aim of these courses is to encourage the spirit of entrepreneurship of Africans in the contracting business, they were designed to attain the following objectives:

- (a) To enlarge the ranks of African contractors hitherto considered insignificant in number and capacity and handicapped by lack of adequate know-how and inability to compete with the enterprises owned by non-nationals.
- (b) To stimulate the national training agencies to undertake the training of nationals for participation in the contracting business, by identifying the group of existing or potential national contractors and by demonstrating the training possibilities in this field. (In some of the countries, such institutions already exist, in others they are being formed).

(c) To stimulate the national authorities to reexamine the prevailing regulations governing contracting registration and tendering procedures. These regulations and procedures, inherited from pre-independence days, are often disadvantageous to small contractors - conditions of bonds, sureties and retention money - requiring monetary manipulations unfamiliar, if not impossible, to them.

(d) To increase the knowledge of participants, enable them to strive for improvement of their practice, and encourage them to bid for larger tenders and to form larger units by showing through lectures and case studies the drawbacks of the too small firm.

(e) To encourage national contractors to form and develop contractors' associations or co-operatives, with governmental assistance to acquire the mechanical equipment needed for the contracting business on hire. This would prevent the small contractor being burdened with heavy investments or being exploited by equipment owners.

(f) To check the suitability of the subjects proposed in the syllabus in relation to the level and requirements of participants, and the time allotted to the courses and to each of the subjects, for formulating appropriate future training courses to be held in the other African countries.

A constant effort was made to keep in mind the objectives defined in the preceding paragraphs, both in lectures and in actual case studies; in order to establish a basis from which the national and public agencies of the countries in which the training courses were held might continue this work.

These objectives, previously defined during the organization of the first series of training courses (East Africa in April - June 1968) and contained in document E/CN.14/HOU/18 of 23 December 1968, have been enlarged in an attempt to;

- (a) Assess the existing possibilities of establishing high level contracting enterprises (for activities on an industrial scale) and to encourage the more advanced enterprises, or groups of enterprises, by making further information available to them.
- (b) Analyse and ascertain the opportunities open to the Economic Commission for Africa and to the various governmental or United Nations Agencies for the continued development of the practical training of contractors.

B. Brief analysis of the state of contracting enterprises

The analysis contained in document E/CN.14/HOU/18 still applies. A number of new aspects have been added with an indication of such development trends as have been observed.

The weak points of the African contracting enterprises, as inferred from previous knowledge and confirmed by the participants' contribution to the first training course, are as follows:

- (a) Small capacities of the enterprises and their inability to tender on substantial contracts.
- (b) Inability to comply with the contracting registration and tendering procedures (partly the fault lies in the prevailing conservative regulations).
- (c) Unavailability of reliable estimators (in many cases, estimating is done by the client's quantity surveyors).
- (d) Lack of basic knowledge of management finance and almost complete absence of knowledge of banking practice.
- (e) Lack of planning in the overall enterprise activities, in sales, production and finance, as well as in the implementation of projects.
- (f) The lack of organization of man-power to cope with the work in hand and with future projects.

- (g) Lack of experience in the use of plant and equipment, hitherto unnecessary in the unsophisticated projects available to African contractors, but also unattainable by small contractors because of the relatively big investments needed - justified only when a constant and high production capacity is attained.
- (h) A tolerant approach to bad workmanship due to lack of skilled labour and proficient and responsible foremen, who should not only supervise the quality of work, but should also be able to serve as instructors.
- (i) Frequent absenteeism on building sites undermining all planning and productivity efforts. In the face of these facts, the public authorities, who are the principle clients in the construction field, find it difficult, to call on the services of local enterprises without a substantial element of risk being involved. However, it should be pointed out that, in certain fields, a number of enterprises have succeeded in reaching a level of competence which occasionally enables them to compete with the large, non-national contracting concerns established in the country. Most, however, remain at the stage of small, private concerns, better fitted to undertake the rural or suburban type of contracting.

These various factors keep the enterprises in a state which prevents them from expanding.

The capabilities and techniques of the average private African contracting enterprises

It seems appropriate at this point to continue the above analysis of the state of contractors, emphasizing certain points.

Although generalization must entail a certain risk of error, it is possible to gain an insight into the state of African contractors regarding their technical skill in business management, by drawing on the impressions formed during the courses themselves.

- (a) It was established that there was principally a lack of familiarity with costing techniques. Although it is true that, even in some developed countries, not all medium size enterprises have completely mastered costing techniques (cost composition and its implications in management finance), this is offset by the fact that they are able to surround themselves with fully experienced and specialized technicians (accountants, quantity surveyors etc). In Africa, unknown to contractors in this vital area, the lack of specialists accentuates the acuteness of the problem.

Knowledge of this fact guided our approach to this question and the emphasis laid upon it.

- (b) Lack of knowledge of the financial side of the activities of an enterprise means bad money management, ignorance of financial procedures etc...

Careful consideration must be given to presenting questions of this type in a practical manner, based on the day-to-day problems encountered by contractors and to demonstrating their implications in the state of their enterprise as a whole.

- (c) The organization of the enterprise and the division of labour is a question which, although it may not seem of overriding importance at present, must be dealt with as soon as the enterprise outgrows the stage of the small family type business.

- (d) Similarly, the planning of work is often done without being based on an actual analysis of means and possibilities. The smallness of the enterprises and the volume of work often make such planning difficult, or even impossible, but none of these small enterprises can hope to expand without having at least some idea of work planning. This point has always been greatly emphasized.

A visit to a sizable building site is therefore helpful in showing the impossibility of carrying out any large-scale work without an organization plan having been drawn up before the site is opened.

(e) Maintenance of plant and equipment. This subject may seem irrelevant for such small enterprises, since most of them do not own any special plant or equipment. But it is important to show the point at which the level of activities economically justifies the use of more sophisticated equipment, while at the same time pointing out that it is sometimes preferable at this stage to hire, rather than to buy.

(f) In view of the general lack of understanding of the subject, particular emphasis was laid on the proper assessment of the volume of work necessary for an enterprise to survive and an explanation was given of how to determine the point at which an enterprise begins to expand.

C. Developmental Trends.

Contractors' Associations or Syndicates

National Associations of contractors or National Syndicates of contractors exist in a number of African countries, their nature varying according to the country.

In most countries these "Associations" at present comprise only the "National Branch" of overseas enterprises based outside the territory, and frequently outside Africa. These enterprises, whether they are established entirely inside the national boundaries, or whether they are only one of many branches of an Organization, are the only ones capable of coping with contracts of any significant size.

The contribution of these enterprises to the National Development Plan is considerable, and through them a number of Africans acquire skills and experience, both as craftsmen and as officials in the public sector. Few of them, however, felt themselves in a position to enroll either the Africans employed by them, or those working with them, in the training course. Most of the participants were recruited as a result of the efforts of the national Directors of Public Services. It should be pointed out that, in

Niger, the Chamber of Commerce made an important contribution to the organization of the training course.

Those Associations consisting solely of African contractors have in general shown themselves to be particularly active and energetic. The assistance provided by these Associations or Syndicates of indigenous contractors (the official designation varies from time to time) has been the fullest possible. In Ghana, the particular success of the training course was due largely to the co-operation between the Directors of the Association of Contractors and Mr. Engman, Chief Engineer, Director of the Department of Public Works.

All this illustrates the development of activities relating to the national contracting industry. In this connexion, mention should be made of various types of organizations which first came on the scene some time ago and which seem intent on expansion in a number of West African countries. These organizations are known as contractors' co-operatives. These co-operatives consist, in one form or another, of skilled workers, or young professionals who have received a certain amount of technical training.

There appear to be two main types;

1. The co-operative which creates a sort of workers' union, organizing and allocating work;
2. The co-operative whose members are workers with complementary specialities. These workers are partners, and the co-operative is governed by company articles. This formula appears to enjoy more success among the young professionals who have received a technical training. Occasionally this type of co-operative takes the form of a "phalanstery", where the company is presented in the form of a general enterprise, entering into contracts, undertaking commitments on behalf of its members, and organizing work.

Its activities are not restricted to the above but also extend to setting up workshops for ironwork and woodwork, hiring plant etc...

These co-operatives are seeking governmental and even international aid in obtaining contracts, financing etc..

The general impression is one of a keen desire for activity and expansion. Without wishing to prejudice the issue, it is suggested that the "Co-operative" formula could be the starting-point for enterprises of a fairly large capacity.

It should also be pointed out that, here and there, a few private concerns are beginning to approach a substantial size and it is also interesting to note that the numbers of such contractors among our audience were limited.

D. Attitude of government officials and contractors to the training course

Among government officials and participants from the various countries, the team found a go-ahead attitude and a genuine desire for development and expansion, combined with the wish to establish a really national body of building contractors.

Altogether, nearly 150 participants, all of them Africans with the exception of one in Upper Volta, attended the training courses in their entirety and received certificates of attendance, except in Ghana where material difficulties prevented this. Twenty-five of the participants were on the staffs of public authorities, the other 125 were either independent, or employed by enterprises (See the list of participants in Annex I).

In each country the training courses lasted an average of six to eight working days (See Annex I).

The Governments received the training courses favourably and made a useful contribution. In most countries regret was expressed at the duration of the training courses which was thought to be rather short, and it was hoped to see the training courses repeated regularly. In Ghana, the Department of Public Works proposes to continue this training by calling on its own specialists to carry on the instruction.

In Upper Volta, the Minister of Public works, during the closing ceremony, officially proposed his own country as the site for the establishment of an institute specializing in the training of building contractors (See Annex).

In Dahomey, the Minister of Public Works requested that courses of this type be extended to the middle and senior levels of his department as in-service training.

In view of the favourable response to these training courses, and of the wishes expressed, there is no question that a solution ensuring continuity should be found. It would undoubtedly be possible to set up a course of instruction for the contracting profession, on the basis of past experience and future activities in this field.

Judging from the attitude of the interested parties, it appears that the introduction of these training courses coincides with an effort being made in the majority of countries to stimulate a response in a field as important to the economic life of a country as the contracting business.

SECTION I

SUMMARY OF THE TRAINING COURSE - OBSERVATIONS

A. Organization and Administrative arrangements

The organization of this training course was based on the experience of the previous year, i.e:

1. Liaison officers, appointed at the request of the Economic Commission for Africa, by the Governments.

These officers were responsible for the recruitment of the participants, the material organization of the courses (classrooms, transportation when necessary, choice of sites to be visited etc,.).

Once more, their assistance proved invaluable.

In all the countries, the arrangements made (classrooms, vehicles, sites) fully met the requirements.

2. The directing team, made up of members of the ECA and of the consulting lecturers, from the Technical Assistance Unit of Bilateral Aid, was part of the Administrative Assistance Team, the role of which will be commented on later.

3. The lecturers provided by the International Labour Office and the World Health Organization. These lecturers changed throughout itinerary, since it was impossible to appoint any one lecturer for all of the countries visited.

4. Local lecturers. In each country, use was made of the services of Technical specialists working locally, on the staff of Public works Departments for the most part. These lecturers instructed classes on the problems peculiar to these countries, such as prevailing legislation, bank loan procedures etc..

In Ghana, but more so in Upper Volta, Dahomey, Togo, the team of lecturers found itself reduced in numbers, owing to the departure of two of its members, and the services of specialists, either independent or belonging to private or other agencies, were called on.

5. Publicity. The organization of the training courses paid particular attention to the publicity relating to the course in each country.

An approach was made to the press, radio and, whenever possible, television, principally before the commencement of the training course, during the opening ceremony, and for the closing ceremony.

These efforts made it possible:

- (a) To reach a wider audience, and contractors who had not been advised beforehand attended spontaneously.
- (b) To arouse some interest among a wider sector of opinion by showing that local enterprises had a desire for improvement in contracting matters.
- (c) For the local authorities to emphasize the efforts made by their Government for the improvement of local manpower.
- (d) To make public opinion and government circles aware of action taken by the United Nations and the Economic Commission for Africa.
- (e) To stimulate the desire for the success of this action among local administrative circle.

Administrative arrangements

As in the previous year, an administrative assistant from the ECA was attached to the team to handle the numerous administrative tasks.

During the first training course, this role was filled by the secretary of the Division of Industry and Housing, who was completely familiar with administrative procedure.

This year, the Economic Commission for Africa being unable, for budgetary reasons, to appoint a member of its staff specially for this task, the directing team was obliged to use the services of an individual who was willing to accept the burden of this work voluntarily. This individual proved to be equal to our expectations. She was fully bilingual and able to provide simultaneous translation when required, and to maintain close contact between the lecturers and the audience in French-speaking countries.

An excellent typist, the proficiency of her work was an important contributing factor to the smooth-running of the course as a whole. The team is glad to take the opportunity to make mention of her work.

B. Recruitment of Participants

As the objectives remain the same, the Governments were invited to select the participant on the same basis as before (See E/CN.14/HOU/18). The same obstacles and objections from certain authorities had to be overcome. These were:

- the level of African contractors
- the inability of these contractors to spare the necessary time etc..
- the limited number of contractors.

However, all the organizers showed the best possible will and, consequently, the number of participants reached 48 in Ghana, 14 in Niger, 45 in Upper Volta, 20 in Dahomey and 20 in Togo, a total of 147 (See table in Annex 1).

E. Duration of courses - allotment of time - programme of work

The essential purpose was to give instruction by emphasizing both the principle points and the techniques relating to business management.

It is not possible to ask those in charge of small enterprises and who work most of the time on sites, assisted by a small number of employees and apprentices, to cease their activities completely for too long a time. It was therefore decided that the total duration of the courses should not exceed 30 hours, with periods of 45 minutes.

The timetable was based on a timetable equivalent to one working week, from Monday morning to Saturday noon.

This arrangement made it possible to create the desired atmosphere, as well as to achieve the results intended.

Some participants, particularly those in a position to derive the greatest benefit from the techniques explained and to discuss the various points in greater detail, expressed the wish that the courses be prolonged and extended to more than one week. Some of them even hoped for a duration of one month.

The lecturers are of the opinion that, in the light of experience in the various countries, this use of time is best suited to the desired objectives.

D. Treatment of Subjects

Bearing in mind the experience acquired during the first series of training courses (See document E/CN.14/HOU/18 Page 7), the Secretariat of the Economic Commission for Africa again made use of the working paper prepared at that time which showed themselves to be in line with the objectives set.

These documents deal with the following subjects:

1. Vital Subjects

- (a) organization of the contracting enterprise;
- (b) estimating cost and cost control;
- (c) project planning and control;
- (d) management of funds and finances;

2. Auxiliary subjects

- (e) productive management;
- (f) tendering procedures and regulations;
- (g) safety regulations and accident prevention;
- (h) maintenance of machines.
- (i) sanitation on site and sanitary installations.

As the working papers were the same as those for the first training course, their content will not be discussed further here. Reference may be made to the previous report (document E/CN.14/HOU/18). However, in regard to the papers, the Secretariat of the Economic Commission for Africa encountered a number of difficulties.

The papers for the first series of training programmes were prepared in English, (the four countries involved were East African countries, whose working language is English). This year, of the five countries concerned, only Ghana uses English as a working language, the other four using French. This fact necessitated the translation of all documents previously prepared in English, with adaptations (monetary system etc.). This work, which was a considerable undertaking, could not be completely finished before the departure of the team, in spite of the efforts of the various sections involved, particularly the translation section. It was therefore necessary to despatch these documents from the United States by pouch, while the training course was in progress, by means of the various United Nations offices in these territories.

The courses were generally opened by a lecture and one or two case studies of the organization of a contracting enterprise. The theme of the case studied was the analysis of the organizational problems faced by a small contractor whose activities are rapidly expanding. As a result of the growth of activities the various aspects requiring examination were : organization of work, bearing in mind the personnel available (members of the family), and the new legal form of the enterprise.

The question of costing was then dealt with through a case study, followed by a discussion of the factors involved in determining the cost of foundation works, masonry, concrete, and all items making up the cost of construction.

The financial aspects of the enterprise were then developed in relation to the economic necessities of fund management within the enterprise, namely cost analysis, calculation of the cost of installation, plant, equipment, economy, profitability and all other aspects.

Emphasis was laid on the problems of finance (cash flow, short-term budgeting), the working capital in a contracting enterprise, estimating the investments required.

A large part of the timetable was reserved for site organization, the problems involved, the solutions and the reasons for them. The whole subject was illustrated by a case study, and terminated by visits to one or two sites, with an explanation of its organization by the site foreman, together with a critical study conducted after the return to the classroom.

Sanitation on site. These series of lectures were heard with great interest by the participants. Critical discussions were conducted on prevailing practices and the measures recommended by the lecturer from the World Health Organization.

This year no detailed instruction was given on sanitary installations in buildings. (The directing team takes this opportunity to thank the sub-regional experts to the World Health Organization whose valuable contribution in all fields of the work in which they collaborated, was due mainly to their training as civil engineers and their vast practical experience. We would also like to thank the sub-regional Director of the International Labour Office for his particularly interesting presentation, in Ghana, of the document "Productive Management in Industry and Construction". He was unfortunately unable to take part in the training course as a whole. The assistance received in two countries by the two other lecturers from the International Labour Office was particularly appreciated).

Local regulations governing tendering procedures were presented and explained by staff members of the Department of Public Works. The lively discussions which always accompanied these reports illustrated the keen interest of the participants in this subject.

E. The lecturers (See annex)

The group of lecturers was organized around a basic team made up of members of the Economic Commission for Africa, the World Health Organization and the International Labour Organization.

The lecturers recruited from the Economic Commission for Africa on the same basis as last year (document E/CN.14/HOU/18) were the same as for the first training course in East Africa and spoke only English. These lecturers were the authors of the documents used.

As the available budget did not permit the provision of an additional team of French speaking lecturers, the ECA hoped to get over this difficulty by using simultaneous translation. But, apart from the fact that this system makes contact between audience and speaker more difficult, more formal and unfamiliar to the majority of contractors, certain countries were not equipped with the necessary facilities. Consequently, as mentioned above, the ECA called on the services of an Administrative Assistant who was perfectly bilingual and who, in addition to her administrative duties, was responsible for simultaneous translation between lecturers and audience, and vice versa.

In addition, the authorities in Ghana, Upper Volta, Dahomey, and Togo each placed two lecturers at our disposal. The directing team of the ECA recruited one lecturer in Ghana.

In Upper Volta, they were able to enlist the aid of the National Building Laboratory, as a result of information provided by the S.M.U.H*. In Dahomey, the Banque dahoméenne de développement provided us with one lecturer.

SECTION II

NOTES ON THE PROGRESS COURSE OF THE VARIOUS COUNTRIES

A. Ghana

The course opened in Ghana with the arrival of part of the team as an advance party on the 22 July. This group was made up of Mr. C.K. Baltan, Co-director of the course, and Mr. R. Jahrling, Architect, a member of the ECA. After meeting Mr. Marcel Latour, United Nations Resident Representative, and explaining to him the broad outlines of the aims and methods of the training course, the group established contact with the members of the UNDP, made available to us by the local United Nations Office.

A press radio and television communiqué was prepared.

The official appointed by the Government of Ghana, Mr. Engman, Director of the Department of Public Works, took a keen personal interest in the course. He invited to his office the directors of the "Ghana National Building Contractors Association". He obtained the full support of the Association for the courses, and also the participation of members of the office in the audience.

The total number of participants was the highest for the five countries, 48 participants in all (see annex), 20 officials from Public Services, 28 independent contractors, of whom 22 were based in Accra, and 6 came from outside the capital. The course took place in the "Ghana Management and Productivity Institute", where the Director, Mr. Harley, made every facility available. The course was opened by His Excellency Mr. N. K.F. Owoo, First Secretary of the Ministry of Housing and Construction. Mr. Marcel Latour, United Nations Resident Representative, replied to the First Secretary's welcoming speech, on behalf of the United Nations, then Mr. C.K. Baltan, Co-director of the training course spoke on behalf of ECA.

Mr. J.T. Osei, Director of the "Ghana Contractors Association", concluded by saying, "they had been hoping for this opportunity for a long time and they intended to make the most of it".

The courses lasted from 28 July 1969 to 2 August 1969 and were distributed as follows:

- Planning a contracting enterprise - two hours
- Estimates - 6 hours
- Management of funds - 10 hours
- Site organization - 2 hours
- Productive management - 4 hours
- Cost control - 40 minutes
- Local regulations - 2 hours
- Site visit - 2 hours

- Sanitation on sites - 2 hours

- Miscellaneous - 1 1/2 hours

- Closing ceremony - 2 hours

a total of approximately 39 hours.

The set timetable had to be extended to meet the wishes of the participants.

Mr. C.K. Baltan, Co-director, gave the lectures on the organization of the contracting enterprise, planning of work, and site organizations; the lecture on management of funds was given by M. G. Doron; productive management in a contracting enterprise, by M. Chartey from the ILO.

Mr. Abam, an official from the Department of Public Works, instructed the audience on Department of Public Works regulations governing the contracting industry in Ghana.

The final ceremony took place in the presence of a representative of Mr. Marcel Latour, and Mr. Engman. Mr. Engman, speaking for himself and on behalf of his department, expressed his satisfaction at the work accomplished and at the interest of the participants, which was shown by the regular attendance at the courses. He reaffirmed the wish of his department to continue the work which had been begun, by an exchange of documents between the ECA and his department, and by assisting contractors in obtaining contracts

from his department. He urged them to pool their resources in order to be in a better position to meet the required conditions.

B. NIGER

Mr. Faladé, Director of the course, and Mr. C.K. Baltzan, Co-director, went to Niamey as an advanced party on 31 July, the course being scheduled to begin 4 August. They were received by Mr. Baba-Kassé, Director of the sub-regional office of the ECA in Niamey, who spared no effort in solving a certain number of problems which arose at the last minute at the level of the contractors' association.

By agreement with the authorities of Niger, the Chamber of Commerce, Agriculture and Industry consented to give its assistance in making available to the ECA its conference room and classroom facilities. Through the initiative of Mr. de Venel, its General Secretary, it also accepted the task of establishing contact with building contractors, either individually, or through their association, and through the press and radio.

Under the direction of Mr. Baba-Kassé, contact was established with all Ministers and government authorities. The characteristic feature of contracting enterprises in Niger is that they are few in number and relatively small. At present, few of them are generally active, and many are only occasionally active.

The educational background of most building contractors prevents them from expressing themselves easily outside their local language. This was the main cause of the difficulties in getting the course under way and was the reason for the small number of participants on the first day.

When contact had been established and the lecturers had quickly learned to adapt themselves to the level of the participants, the numbers increased rapidly, and during the final ceremony the contractors of Niger expressed their wish that this work be continued each year and its duration extended.

The total number of participants was 14, all of whom were working on their own behalf, except for two, one of whom was an official, and the other working for a non-national enterprise.

Extract from the press article which appeared in Niger

"Improvement of the building contractors of Niger. A business management course for building contractors of Niger will be held next week in the Chamber of Commerce of Niamey. The opening ceremony will take place in the afternoon of Monday, 4 August.

This course will be organized by the United Nations Economic Commission for Africa, with the co-operation of the General Commission for Development, the Ministry of Public Works, the Ministry of Economic Affairs, Commerce and Industry, the Chamber of Commerce, the Association of Building and Industrial Employers of Niger, the Association of Small and Medium Size Contracting Enterprises and Industries of Niger.

The aim of this course is to permit building enterprises in Niger to broaden their knowledge and to expand their activities. The courses deal with the following subjects: organization of a contracting enterprise, planning of work, costing, financial management of an enterprise.

The course will last six days, from Monday 4 to Saturday 9 August, and classes will be held in the morning.

Those interested in these courses should contact their professional organizations directly, or should go to the Chamber of Commerce not later than the morning of Monday 4 August".

Le temps du Niger - Saturday 2 August 1969.

C. UPPER VOLTA

Mr. Jahrling, Architect, member of the ECA went to Ouagadougou in advance of the rest of the team.

All contacts and arrangements were finalized before the arrival of the remainder of the team so that work began immediately.

Mr. Malik Ouedraogo, Director of the Department of Public Works, took a special interest in the activities, sparing no effort to ensure its success. He also followed personally the development of the work, placed at the disposal of the team officials from his department, and daily detailed a member of his staff to be present at the course, in order to keep him informed etc.

The total number of participants at the course was 45, the second largest for the courses held in West Africa (see annex). Of these, 8 were not working on their own behalf, and 37 were independent, 40 were based in the capital and 5 based outside the capital.

One characteristic observed was the tendency for associations of craftsmen in the form of Co-operative Societies; 3 of these represented were:

SOVE (Société Voltaïque d'entreprises) by 4 members,

UOV (Union Ouvrière Voltaïque) by one member,

SCOO (Société Coopérative Ouvrière) by 2 members.

In view of the small-scale activities of many enterprises and the fact that most of the contractors worked on site, it was decided to leave them as much free time as possible. The courses were held from 9.00 to 13.00 every day, from 12 to 20 August.

The absence of Mr. D. Doron, who was unable to prolong his stay was keenly felt by the other members of the team, who were, however, assisted by Mr. Magnian of the National Building Laboratory, who gave a course on the use and protection of materials on site, and by Mr. Bereni, Technical Advisor to the Department of Public Works, who gave a course on the prevailing legislation (tendering etc).

The closing ceremony was presided over by the Minister of Public Works, H.E. P.C. Damba, in the presence of Mr. Dorsainville, Resident Representative of the United Nations Programme and Mr. Malik Ouedraogo, Director of the Department of Public Works.

The Minister presented an official request from his Government asking that a training centre for African building contractors be set up. Mr. Dorsainville, on behalf of the United Nations, presented the aims of the action of the United Nations and the ECA, thanked the Minister for all the assistance which contributed to the success of this series of courses, and the participants for their regular attendance and interest.

At the request of the radio services, the course Director gave an interview on the courses and on the action of the ECA.

D. DAHOMEY

As in Upper Volta, Mr. Jahrling went to Dahomeya few days before the rest of the team. As Mr. Trabesse, Director of Public Works, the liaison officer appointed by the Government, had had to leave, Mr. Goudon Sinha, a Civil Engineer from the Department of Town-planning and Housing, deputized for him.

Mr. Goudon Sinha took an active part in the organization of the training course.

The course was held in the Hall des Congrès under excellent conditions, and lasted from 25 to 30 August.

The number of participants was 22, two of whom were officials of Public Works. As in Upper Volta, the team noticed the number of craftsmen's associations in the form of co-operatives, e.g. the Union of Building Sub-contractors and Workers, the Building Trades Co-operative, the African Co-operative of Economical Construction.

Mr. F. Lanza, United Nations Expert, took part in the course on cost estimating. Mr. Bidouzo, Representative of the Banque de Développement du Dahomey, explained the conditions of bank loans to contracting enterprises for building projects.

H.E. Mr. E. Paraiso, Minister of Public Works, presided over the closing of course. He expressed the desire to see a continuation of such courses, thanked the ECA and expressed the wish that the courses might be extended to managerial staff.

The United Nations was represented by Mr. Oehninger, assistant to Mr. Wright, United Nations Resident Representative in Dahomey, Mr. Eladé, course Director spoke on behalf of the ECA, and Mr. Oehninger offered cocktails at his residence, at which the Minister was present, together with all the participants.

E. TOGO

As in both the preceding countries, Mr. Jahrling preceded the rest of the team.

Mr. B. Dagadzi, Engineer of Public Works, Director of the Department of Public Works was the local liaison officer appointed by his Government. He was assisted by his aide Mr. Atsuh.

Both took part in the lectures.

Mr. Dagadzi took a keen interest in the organization of the course. The number of participants was 20, 4 of whom were employed in the Public Works Department.

The training course took place at a time when Togo was making a special effort to develop building activities and to obtain the participation of its building contractors.

The housing centre which was being constructed, due to the efforts of Togo with the participation of UNIDO, is an example of this.

Mr. L. Hababou, United Nations Expert, and Director of the centre, organized and directed a debate with the course participants, on the opportunities open to small contractors and sub-contractors to participate in the country's development.

Mr. B. Dagadzi, Director of Public Works, explained, during the course of a lecture, the prevailing regulations governing the conditions of participation in government tenders and contracts.

Mr. J. Atsuh, assistant to the Director of the Department of Public Works, presented the study of examples in determining costs.

The closing ceremony took place at the Chamber of Commerce in the presence of the Representative of the Minister of Public Works, and Mr. Blanch-Soler, United Nations Resident Representative in Togo.

Final cocktails were offered by the "Syndicat des entrepreneurs du Togo" ("Contractors Association of Togo").

Press article - Togo

Togo-Press, 8 September 1969

Our contractors have completed the training course organized for them with the co-operation of the ECA.

The training course organized by our own authorities from 2 September at Lomé for about 20 of our fellow countrymen who are building contractors, under the auspices of the United Nations Economic Commission for Africa (ECA), has come to an end. The closing ceremony took place at 11.00 a.m. on Saturday

in the conference room of the Chamber of Commerce and Industry. It was presided over by Mr. Ezéchiél, Director of the Office of the Minister of Public Works, deputizing for Mr. Alex Mivedor, who left for Paris the previous evening with the President of the Republic. Mr. Juan Blanch-Soler, United Nations Resident Representative in Lomé, Mr. Hababou, Director of the building and housing centre at Cacaovali, and Mr. Barnabé Dagadzi, Director of Public Works, were with Mr. Creppay during the ceremony.

In the absence of Mr. Faladé, course Director, who had been forced to leave Lomé suddenly following the death of his wife, the Co-director, Mr. Khanoh Baltan gave those present a summary of what had been accomplished during the six days. He listed the courses given and told those who had taken part in the course that the ECA would follow their progress with close interest and would endeavour to assist them.

Devote a reasonable part of their energies.

Mr. Blanch-Soler underlined the importance of problem of housing and construction in all countries. He said that the developing countries must devote a reasonable part of their energies to research into this field. The responsibilities of building contractors are every bit as great as the responsibilities of governments in evolving an overall building policy. The contractor must not be content with a passive role, accepting the directives of the authorities, proprietors or architects.

He must make constant use of his technical knowledge of organization and make his experience in technology and economy available to those responsible for research and specifications, added Mr. Blanch-Soler.

The last speaker of the ceremony, Mr. Ezéchiél Creppay, first presented the compliments of the absent Minister of Public Works to the ECA experts. On behalf of his Government, he thanked the President of the ECA Mr. Robert Gardiner, Mr. Faladé, Mr. Baltan, all the experts of the ECA, and the Togolese technicians involved in the organization of the training course.

An experienced technician.

After having stressed the importance which the Government accords to those attending training courses, and especially to those in the building industry, he continued, "any building contractor worthy of the name is first of all an experienced technician; he is a business man; he is a teacher, for he must advise and explain the project to all those who make up his clientèle, whether individuals or corporate bodies, and convince them of the quality, the choice and the cost of the work, the best technique etc."

In view of the importance which the Government attaches to the improvement of national building contractors, it is easy to imagine its desire to see banks and business houses associate themselves with its own efforts.

Following these speeches, the diploma testifying to the 6 days of training was distributed to the trainees.

The ceremony was concluded after the spokesman for the Togolese contractors, Mr. Samarou, had expressed the gratitude of his colleagues to the organizers and lecturers.

SECTION III

STUDENTS' EVALUATION OF THE COURSE

As during the previous training course, a questionnaire was distributed to the students on the final day of classes, in order to discover their immediate reactions. They were asked to answer the questionnaire anonymously.

The questionnaire asks for impressions and criticisms of the courses, the subjects treated, the method used and the benefits which they hope to derive from the course.

An example of this questionnaire is given in the annex. The majority of those involved replied, and many of them made suggestions for future development.

In general, the participants stated that the course enabled them to improve their knowledge of the fields which were dealt with. Most of them confirmed that they wished to make use of the knowledge gained. They agreed with the presentation of the subject and expressed the view that none of the subjects should be omitted or shortened.

It is interesting to note the answers to the following questions:

Question 4: Please state your general opinion on the way the course was conducted. What did you think about the lectures, the cases presented, the discussion? Comment on whether each phase of the course was satisfactory or unsatisfactory to you.

Answers: - Perhaps UNO, by agreement with the Government, could set up an agency in order to enable small contractors to receive advice and above all assistance in obtaining equipment more easily.

- Present actual, concrete cases.
- Produce more drawings, which would certainly make comprehension easier.
- For these courses a sound training is necessary.
- It would be good if each year the United Nations, with the assistance of our Government, could enable us to follow up and continue what we have already seen.

- My suggestion in this matter would be to introduce lectures on the subject of legislation for Building and Public Works Enterprises.
- My proposal would be to review, on the following day, subjects taught on the previous day, before teaching the day's courses, and to ask if any one has any questions.
- Preferably a local office where further sessions could be held.

Question 6: Do you have any suggestions which might improve future courses of this type?

Answers: There was almost unanimous agreement that the courses should last longer, from several weeks upto three months and, above all, that they should be renewed each year.

Among the answers to this question, mention was made not only of the contribution which the United Nations could make, such as technical and commercial papers, papers on the accounting of building enterprises, but also of the contribution of their own governments.

Question 7: Do you believe you could benefit from further courses on more advanced subjects? What subjects or special items do you think should be emphasized?

The answers vary. The most critical thought that they would have to attend a technical school for this purpose.

Question 8: What prevents you from expanding your enterprise?

Answers: What mainly prevents the development of the enterprise is the lack of work (Ouagadougou).

- The difficulty of financing and the lack of aid from the government.
- Aid from the country.
- Government aid (Ouagadougou).
- The lack of equipment, financial resources, and skilled personnel.
- Capital aid for investment, in view of the lack of regular supplies of materials.
- The lack of legal support.
- The lack of "impartial" technical aid.

- Finances and the lack of technical know-how.
- Financial resources.
- Great difficulty in obtaining loans from financing organizations.
- Technical problems.
- The main cause is the irregularity of contracts.
- The ignorance of certain practical and legal information.
- It is the lack of guidance and training courses like this one.
- Individual initiative is not encouraged here. Lack of financial opportunities. (Cotonou).

SECTION IV

GENERAL CONCLUSIONS

From the two training courses held in nine countries, some experience has been gained from which it is now possible to establish the following points:

1. Firstly, it can be confirmed that these training courses for building contractors have made a positive contribution in the different countries where they were held, if only in encouraging those concerned, together with the competent authorities, to organize such training and to wish to continue and develop it.

It has been shown that the problem can be dealt with and that the governments are in a position, with some aid from the ECA, for example, to find a successful solution.

2. In the following paragraphs, an attempt is made to emphasize the main aspects of this action and the conclusions which can be drawn from them. Suggestions are also given for the method of continuing this action with, in conclusion, some recommendations. In the annex, an indication is given of how, in the opinion of the team, this action may be developed.

How to continue the training and development of African contracting enterprises.

There seems to be no doubt that this action must be continued. The question which must be answered is how? For whom? By whom? and where to find the means?

The answers to these questions are important, but are outside the competence of the authors of this report.

The following recommendations are intended only to indicate to the competent authorities the factor to be borne in mind in making their decision. In their conclusions, the authors restrict themselves to outlining the developments and possible modifications which might be made next year, for the training course in Central Africa.

- (a) The reactions aroused by the courses in these countries lead the authors to conclude that they can be continued in the same form, but with some modifications. Such a continuation raises a number of problems and involves heavy responsibilities, which only an organization of the size of the United Nations is able to undertake.

Of the 42 African States which are members of the ECA, it has been possible to involve only 9 in two years, for reasons which will be seen later. This means that it would take ten years to cover all of the countries; it is unthinkable that each one of these countries should be revisited only once every ten years. Furthermore, requests for more advanced courses have been put forward in many of these countries. Even if a priority was established in favour of the least favoured countries, the present formula seems inadequate in this field. To conclude this first point, it is reasonable to wonder if the ECA alone, or with the aid of other agencies, has the necessary means and resources to meet the growing need within a reasonable space of time.

- (b) The problem of the working language must also be solved, for the working papers were prepared by lecturers whose working language is English. The first training course was held in East African

countries, where the authors of the papers were themselves able to communicate them and develop them with the audience. This year's course in West Africa included one country which was English-speaking and four which were French-speaking. Both the response aroused and its limitations are reviewed below:

1. The papers were translated into French. This work proved to be long and difficult and it was not possible to complete it fully before the departure of the team, so that a number of the papers were despatched while the training course was in progress, without having been checked, and modifications are necessary. Moreover, although the texts may be translated adhering as closely as possible to the original, the problem of examples is more delicate, as they correspond less to the actual problems in French-speaking countries, particularly in the area of prices.

2. The Administrative Assistant had the special responsibility of ensuring a sort of simultaneous translation for the lectures given by Mr. Doron on matters of financial management. This solution could be used in the future, provided that the size of classes is limited, that the person responsible for the translation preferably has some teaching experience, that this person and the lecturer or lecturers have ensured that the translator is completely familiar with the terms and their meaning, and also with the teaching method of the lecturer or lecturers.

3. For the other subjects dealt with, one of the members of the team who was fluent in French assisted the lecturer. Although this solution made it possible to cope with the problem of mastering the language used, it has proved to be particularly tiring for the team as a whole, is time-consuming, and only seems valid if the number of participants is not too large; and then only if perfect contact is established between the lecturer, the assistant and the audience. Unfortunately, apart from the departure of one lecturer, the team lost one other member, which required even greater efforts from the remaining lecturers.

For the course to be organized in Central Africa, where the working language of all countries is French, with the exception of Guinea, where the working language is Spanish, a possible solution might be thought to be the provision of a team of French-speaking lecturers. This now involves:

1. Finding lecturers who comply with the criteria which governed the recruitment of the previous lecturers (See document E/CN.14/HOU/18 - Section 4 Para. 10-13 page 6).
2. Allowing lecturers to produce their own papers or, with the authorization of the authors of the document at present in use, adapting the existing documents to their own personal approach to the subject.
3. Reproducing new documents in sufficient numbers, whatever the circumstances. The time available does not permit this.

The second solution is to recruit from French-speaking public or other organizations, at least two capable assistants who are specialized and who would work in collaboration with the lecturers on the main themes. Additional assistance could be obtained by recruiting from the areas one or two specialized lecturers as necessary.

The third solution is to improve the previous year's method in West Africa by assigning two people instead of one to the task of simultaneous translation, independently of the Administrative Assistant whose secretarial work is sufficiently important in itself to make it impractical to ask her to perform any other duties. Her contribution in this field must be punctual and accurate.

The team is therefore of the opinion that the choice is between one of the last two solutions. In their opinion, it rests on the use of the initial team of lecturers, who are authors of the documents, who are perfectly familiar with their specialized fields, who have had a wide experience of these training courses and whose work, in the view of the team, is invaluable in guaranteeing the success of the project.

The answer therefore depends on the budget available for the organization of the training course.

The programme and the level of lecturers

The teaching programme established in 1968, is a basic programme which is valid for the training of building contractors of all countries (in Africa, outside Africa). In each country, it must be adapted to the general level of development and the background of the participants.

This adaptation must take into account in the country concerned:

- (a) The stage of industrial and economic development,
- (b) The prevailing administrative practices and regulations,
- (c) The personal level of the participants.

This level, moreover, does not necessarily reflect the general level of existing enterprises. A special effort can be made to assist the weaker enterprises.

The lecturers must adapt themselves to the actual level of their audience. If it proves necessary to teach how to calculate a percentage, they must do so. However, on the other hand, it is regrettable not to try to derive the greatest benefit from a better prepared audience, otherwise the participants can quickly develop a sense of frustration and of a waste of time.

Special attention must therefore be paid to the selection of participants. As far as possible, homogeneity should be sought and, if necessary, the course could be divided into two groups. Until now, this selection has been entrusted to the local government-appointed liaison officer. Before the commencement of the training course, a member of the team could consider the best solutions in co-operation with the organizations concerned (Ministry of Public Works etc., contractors associations etc.) It is true that in many of the countries visited there was not a great deal of choice (in view of the limited number of enterprises and the general level). Moreover, we must be wary of arriving at a selection by age, for the older generations of contractors have had little opportunity of receiving any background training, however small, whereas this is not the case with the younger generations.

The solution which is adopted must therefore be flexible. On each occasion, the lecturers must find the most suitable means of communication. This year, for the less advanced audiences, the subjects taught were only presented in the form of studies of concrete examples, and of cases taken from the day-to-day problems of the participants. This solution met the requirements of the situation.

Duration of training courses

It has already been explained why the duration of six days has been retained for the teaching programme.

The following is a brief summary of the main reasons:

- (a) The aims within the framework of this course can be achieved by a programme of six days of intensive work.
- (b) It is not recommended that small contractors should be kept away from their work for more than a week, as there is a risk of some falling-off in attendance after the first week, even if some compensation is intended.
- (c) Nor should the efforts required from the departments of local authorities be overlooked. In countries where the success of the course was the least assured, the contribution of the administrative departments created for them a considerable increase of work both in the preparation for the courses and during their progress. Prolonging this tension for more than six to ten days is not recommended.
- (d) It is difficult to keep from their normal activities for too long a period, lecturers who must be specialists of the highest calibre in their own fields.

The courses should therefore be kept to their present formula, as far as duration is concerned, beginning on Monday and finishing on Saturday.

Lecturers

This type of teaching cannot be considered as of the traditional type. It is directed towards adults who, in general, have an elementary educational background and deals with subjects which are, or should be, dealt with every day on a practical level by the student. It is also very important to use appropriate language. The basic training and even the high technical competence of a lecturer are no guarantee of his ability. However, a high degree of mastery of his subject will assist the lecturer in finding the appropriate level of language. High qualifications are therefore essential and men of this calibre are in great demand. The difficulty of finding suitable lecturers will remain one of the main problems to be solved in future courses, as will the recruitment and organization of a team capable of achieving the best results in a relatively short space of time, without any previous preparation (in general members of the team meet two to four days before the departure of the mission).

The quality of the team, together with the qualifications of its members, count for 60 to 70 per cent of the success of the mission.

Preliminary survey

The development of the training course depends heavily on the preparation, and, for this reason, a member of the ECA, who must also be a member of the team, should conduct a survey of the country in which the course is to take place.

The objectives of this preliminary tour should be as follows:

- (a) to gain an insight into the level of the average local enterprises, their work methods, their distribution over the various sectors of the construction process and their professional organizations and associations. This can be achieved only by a personal approach to the authorities concerned, to a number of contractors and to representatives of their organizations. In this way, the team can be advised of the points requiring special attention and of the most appropriate teaching methods.

- (b) to determine whether the difference in background and development, as well as the number of participants, call for the establishment of one or two separate courses. It is therefore desirable, during this preliminary visit, that the prospective participants should have already been contacted.
- (c) to establish contact with the more developed enterprises and to obtain their co-operation.
- (d) to involve, as far as possible, the local official appointed by the government and to encourage him to make every effort to ensure the success of the training course. The best results have been achieved when this official has held a senior rank in the local administrative system and enjoyed some popularity among the contractors.

This role was often best filled by the Director of Public Works. He is also often the best fitted to assist in solving the material problems such as classes, lecture rooms, sites to be visited, transportation etc.

The authors take this opportunity to thank the Directors of Public Works who, through their personal efforts, ensured the success of the training course.

Local lecturers

During the first training course, which was held in East Africa, the directing team was itself able to teach all the basic subjects - organization, work planning, management finance, costing, estimating, productive management and sanitation on site. From time to time, however, local lecturers were asked to assist in dealing with questions of prevailing regulations, tendering procedures etc., which vary in each country. This was also done to achieve a wider participation and distribution of responsibilities.

In the last series of courses, the team was obliged to call regularly on the services of local lecturers, as a result of the small number of lecturers constituting the team and the problem of bilingualism.

A list of the lecturers who gave their assistance in each country, together with the subjects dealt with by them, is given in annex I. The team extends its thanks to them and is pleased to point out that the majority of them learned to adapt themselves to this type of work without too much difficulty. Occasionally there was a problem of an initial hesitancy in finding the correct approach and communicating with an audience to which they were unaccustomed. It is, however, recommended that preference be given to lecturers who are familiar with the problems they will have to cope with, particularly for the main subjects.

Documentation

The documents used were those prepared in 1968 for the East African countries, all of which use English as a working language, as has already been pointed out. These established documents must be modified in certain details, in order to be better suited to the objectives. At present, however, these documents, translated into French, have been distributed in the French speaking countries. Unfortunately, because of the limited time available, certain corrections which would have better adapted them to the conditions in these countries could not be made in time. We propose in annex 3, to revise a number of them.

Certificates of regular attendance

In all cases, certificates of regular attendance were distributed testifying that the person concerned regularly attended training courses over a six day period. This has sometimes been criticized. Nevertheless, the team still feels that this practice should be continued, as a modest acknowledgement to the participants for the effort they have made, which can in no way be considered as a diploma or qualification.

UNITED NATIONS - Economic Commission for Africa - West African training course for building contractors

TIMETABLE SUMMARY

Ceremonies

	Dates	No. of participants	ECA Team	Other lecturers	Course	Place and hours of instruction	Advance parties	Opening	Closing	UNDP and other Representatives
	28-7-69 to 2-8-69	48	Faladé Baltsan Doron Jahrling Heidt (Sec)	Chartey (ILO) Pascal (WHO) Abbam (PWD) Robinson	Productive management Sanitation on site Tendering procedures Estimating	Productivity centre 40 hours	Baltsan Jahrling	28-7-69	2-8-69	M. Latour M. Akatani
	4-8-69 to 9-8-69	14	Faladé Baltsan Doron Jahrling Heidt (Sec)	Roy (WHO)	Sanitation on site	Chamber of Commerce 18 hours	Faladé Baltsan	4-8-69	9-8-69	M. Baba L. ECA Sub-reg. Director, C N.U.
Upper Volta)	12-8-69 to 20-8-69	45	Faladé Baltsan Jahrling Heidt (Sec)	Roy (WHO) Bérén (PWD) Magnan (National building laboratory)	Sanitation on site Tendering Construction materials	Afro-american institute 28 hours	Jahrling	12-8-69	20-8-69	M. Dorsainv Minister of
r)	25-8-69 to 30-8-69	23	Baltsan Jahrling Heidt (Sec)	Vinayagam (WHO) Lanza (FAO) Goudou Sinha Ing.Ch.T.P. Bidouzo	Sanitation on site Machine costs Tendering Local banking regulations	Hall des Congress 24 hours	Jahrling	25-8-69	30-8-69	M. Major W Minister of (Rep. Govt.)
	1-9-69 to 6-9-69	20	Baltsan Jahrling Heidt (Sec)	Vinayagam (WHO) Dagazi (Dir.T.P) Atsu (Ing.Ch.T.P) Hababou (Dir.CCL) Architect	Sanitation on site Local regulations and unit costs Sub-contractors and contractors	Ministry building 28 hours	Jahrling	1-9-69	6-9-69	M. Blanch-S

a, Upper Volta, Dahomey and Togo the opening and closing sessions took place in the presence of radio, the press and television (Ghana tel

UNITED NATIONS Economic Commission for Africa Course for building contractors from 28 July to 6 September 1969
West Africa

STATISTICS	Accra (Ghana)	Niamey (Niger)	Ouagadougou (Upper Volta)	Cotonou (Dahomey)	Lomé (Togo)	Total
1. Number of participants	48	14	45	20	20	147
2. Number of participants from the capital " " province	42	14	40	18	20	134
		-	5	2		13=10%
3. Number of participants Public Departments Independent contractors	20 28	- 14	8 37	5 15	4 16	29=20% 118
4. Number of certificates distributed		-	36	15	19	70

ANNEX I : (a) List of Team Members and Lecturers

A. Team organized by the Economic Commission for Africa

1. M. Faladé (Dahomey) Urban Architect, Course director,
responsible for the project, address
ECA P.O.Box 3005, Addis Ababa
2. C. Baltzan (Israel) B.Sc., Civil engineer, Course co-director
construction problems consultant
12, Massad Street Ramat Gan -- Israel
3. R. Jahrling (Germany) Architect, member of the ECA, Division
DIPL. ING/ARCH. of Housing and Industry, ECA, P.O.Box 3005
Addis Ababa
4. G. Doron (Israel) M. B.A. Assistant Director-general of the
Israel Institute of productivity
15, Daniel Street, Ramat Gan
5. U. Heidt (Germany) Interpreter -- Administrative assistant
P.O.Box 543, Addis Ababa

B. Lecturers provided by other United Nations Organizations

6. K. Gharney (Ghana) Director of the International Labour Office
for the sub-region -- Lagos
7. Pascal (Haiti) Civil engineer, World Health Organization
8. L. Roy (Haiti) Sanitary engineer, World Health Organization
9. Ken Vinayagen Civil engineer, World Health Organization
(Mauritius)

Local

Local lecturers

Ghana: Mr. Abam

Head, Quantity Surveying Department,
Department of Public Works

Mr. Nigel M. Robinson, Quantity surveyor, private sector

Upper Volta

Mr. Béréni

Technical Assistant Department of Public
Works

Mr. Magnian

National Building Laboratory

Dahomey

Mr. E. Goudon Sinhan Engineer, Head of Department of Urbanization and Housing

Mr. Bidouzo Banque Dahomehenne de Développement

Togo

Mr. B. Dagadzi Engineer, Director of Department of Public Works

Mr. Atsuh Engineer, Assistant Director of Public Works

Mr. L. Hababou Architect, United Nations Expert, Co-director of the Caccavelli Development centre.

ANNEX I : (b) List of participants and addresses

GHANA

1. Ababio Amoah Robert, Partner, Yahaya 1001 & Co., Central Contractors, P.O.Box 174, Talalé - Ghana
2. Aboagya Ohyere, Senior Works Superintendent, Site Agent, Ghana Housing Corporation, P.O.Box 2753 - Accra
3. Addo Kwasi Isaac, Foreman of Works, R.B. Boachie & Sons, c/c P.O.Box 4233 - Accra
4. Addy Tettey Samuel, Managing Director, Jasthess Staddy & Co. P.O.Box 2522 - Accra
5. Akoto Osae Samuel, Proprietor, Crosses & Crowns Stores (Gen. Contractors & Merchants), P.O.Box 056 - Accra
6. Alexander Ansong Annoch, Administrative Officer, Okubi Company, P.O.Box K. 102 - Accra New Town
7. Ampong Amaming Francis, Managing Director, Akwamu Building Contractors, P.O.Box 2022 - Accra
8. Anderson Mark William, Senior Supervisor of Works, Workers Brigade, P.O.Box 1853 - Accra
9. Appiah Pat Joseph, Building Foreman, E.K. Poku & Co., P.O.Box 2414 - Accra
10. Arthur Benjamin Samuel, Assistant Engineer - Ghana Housing Corporation, P.O.Box 2753 - Accra.
11. Ashong Nortey Davis, Senior Works Supt. Tema Development Corporation, P.O.Box 46 - Tema - Ghana
12. Asmah Benjamin Harry, Managing Director, Luctor Constructions Ltd. P.O.Box 5097 - Accra
13. Edward William Adu Botchway, Assistant Regional Architect - Regional Branch P.W.D., P.O.Box 136 - Accra
14. Boateng Kofi Francis, Director, Oyoko Contractors Ltd., P.O.Box 1233 - Accra
15. Botchway Quarco Robert, Sole Proprietor - R.Q. Botchway & Son, P.O.Box 347 - Accra

16. Busumtwi Stephen, Managing Director, Stephen Busumtwi & Co.,
P.O.Box 6320 - Accra
17. Chass Ogloo Clement Libo, Managing Director Technic -Volta
Basin Co., P.W.D. Renovations, Resurfacing Roads Construction -
Accra
18. Coker Archibald James, Proprietor - Coker & Co., P.O.Box 6364 -
Accra
19. Don Arthur Eric Georges Alexander, Architect, Public Works
Department, P.O.Box 136 - Accra
20. Jones Freeman Emmanuel, Clerk of Works - Tema Development Corp.,
P.O.Box 46 - Tema - Ghana
21. John Kwaku Addai, Engineer - State Construction Corporation,
P.O.Box 2582 - Accra
22. John Kwaku Nanyue, Engineer - State Construction Corporation,
P.O.Box 2582 - Accra
23. Kofi Moses Tulashie, Architect, Public Works Department,
P.O.Box 136 - Accra
24. Kpedekpo Kwadzo Kuma Cephas, Senior Civil Engineer - State
Construction Corp., P.O.Box 1527 - Accra
25. Larbie Ekow Acheampong Maxwelle Nicholas, Managing Director -
Larbie's Enterprises Ltd., P.O.Box 87 - Kaneshie - Accra
26. Lamtel Sampson Tawiah, Clerk of Works - Tema Dev. Corporation
P.O.Box 46 - Tema - Ghana
27. Manteaw Kwahena George, Mechanical Supt., Tapa Construction
Company, P.O.Box 77 - Jesikan V.R.
28. Mensah Kofi Rudolph, Engineer Quantities - Ghana Housing
Corporation - Accra
29. Nsiah Yaw Joseph, Purchaser M/s S.K. Maicoo & Co., P.O.Box 3401 -
Accra
30. Nettey Akai Joseph, Manager, Nebbros Leoust & Haulagr. Co.,
P.O.Box 195 - Kaneshie - Accra
31. Odjidja Daniel Frank Tekpetey, Architect Public Works Department,
P.O.Box 136 - Accra

32. Opintan Daniel Lartey, Site Engineer, M/s D.L. Opintam Bldg and Civil Engineers, P.O.Box 320 - Takoradi - Ghana
33. Osei Joseph Tufuor, Managing Director - J.T. Osei & Co.
34. Owusu Bour William Jacob, Accountant Secretary, P.O.Box 4233 - Accra
35. Peterson Charles, Administrative Manager, Larbies Enterprises Ltd. P.O.Box 87 - Kaneshi - Accra
36. Rogers Sowah Osae, Assistant Chief Accountant - State Construction Corp., P.O.Box 2582 - Accra
37. Samuel Laryea Quartey, Manager State Construction Corp. P.O.Box 2582 - Accra
38. Segbedzi Kofi Richard, Managing Director, R.K. Segbedzi & Co. P.O.Box 3734 - Accra
39. Segbedzi Kosi Francis, Architect Public Works Dep., P.O.Box 136 - Accra
40. Senaya Louis Arthur, Chief Works Superintendent - Ghana Housing Corp., P.O.Box 2753 - Accra
41. Simons Minta Paul, General Foreman - S.K. Mainoo & Co., P.O.Box 3401 - Accra
42. Seyena-Susu Wisdom Isidore, Architect - Public Works Department, P.O.Box 139 - Accra
43. Tackle Obili Arde Emmanuel, Clerk of Works - Tema Development Corp., P.O.Box 46 - Tema - Ghana
44. Tamakloe Kofi Edwin, Managing Director - Tamakloe Technical Institute & Works
45. Tandoh Kwesi John, Works Manager, Nenn Building Works, P.O.Box 3848 - Accra
46. Teye Kwabla Euan, Managing Director - Top Construction Company Ltd., P.O.Box 7127 - Accra
47. Twum Samuel Kofi, Quantity Surveyor - Oyoko Contractors Ltd. P.O.Box 4233 - Accra
48. Wood Reuben Frank, Officer-in-Charge - S.C.C., P.O.Box 2582 - Accra
49. Robert Amoah Ababio, Partner - Yahaya 1001 & Co. P.O.Box 174 - Tamale - Ghana

NIGER

1. Abdou Umago, Peintre, Nouveau marché - Niamey
2. Amadou Assane, Tôlier - réparations de voitures - B.P. 2080 - Niamey
3. El Hadj Ali Djibri, Menuisier, entreprise nigérienne de menuiserie bois et fer, B.P. 2013 - Belaufout - Niamey
4. Gariko Ousmane, menuisier métallique - B.P. 584 - Niamey
5. Ibrahim Sidibé, Menuisier bois et fer - bâtiments B.P. 197 - (voir ci-dessus)
6. Kante Sekou, Menuisier métallique - B.P. 180 - Niamey
7. Koue Amadou, Assistant topographe, service topographique - Niamey
8. Mahaniane Danssounssou, réparateur de radiateurs - B.P. 34 - Niamey
9. Maiga Ousseline Haroua, vendeur, Brosetie Valor. 137 - Niamey
10. Maiga Midjaba Issa, commerçant peintre - peinture pour bâtiments - transports B.P. 695 - Niamey
11. Moussa Idrissa, maçon - B.P. 2055 - Niamey
12. Rey Dieudonné Hector, menuisier métallique, entreprise de menuiserie métallique B.P. 857 - Niamey
13. Sitti Thomas, plomberie B.P. 187 - Niamey
14. Tini Bagadj, maçon B.P. 34 - Niamey

HAUTE-VOLTA

1. Bamogo Kayaraoua, artisan serrurier, (S.O.V.E.) Société Voltaïque d'entreprise spécialité serrurerie B.P. 878 - Ouagadougou
2. Bikienga Noraogo, entrepreneur - entreprise Bikenga B.P. 726 - Ouagadougou
3. Bikienga Ouidi, contrôleur, B.P. 726 - Ouagadougou
4. Bikienga Ali Dupierre, plombier - B.P. 726 - Ouagadougou
5. De boer Willy, aide chantier - Kafando Jean - B.P. 90 - Ouagadougou

6. Diallo Amadou, Entrepreneur EGECEB (entreprise générale d'études et de constructions en bâtiment) Ouagadougou.
7. Diendéré Aloys, employé dans l'entreprise Jean Kafando - B.P. 872 - Ouagadougou
8. Goro Abdoulaye, chef de chantier - Bureau d'études générales d'entreprise de constructions - B.P. 311 - Ouagadougou
9. Ima Hervé, entrepreneur - IMA HERVE - B.P. 1014 - Ouagadougou
10. Kaboure Denis, plombier - B.P. 27 - Ouagadougou
11. Kadsondo Bernard, chef de chantier - entreprise Kadsondo Bernard - B.P. 140 - Ouagadougou
12. Kafando Henri Bruno, tâcheron sous traitant - Union Ouvrière Voltaïque - B.P. 296 - rue Kennedy - Ouagadougou
13. Kafando Jean, entrepreneur - entreprise Jean Kafando - B.P. 872 - Ouagadougou
14. Kargougogu Salif
15. Kiemtore Hervé, peintre vitrier - application voltaïque de peinture B.P. 177 - Ouagadougou
16. Komi Georges Pousraogo, artisan électricien - société voltaïque d'entreprises, spécialité électricité - B.P. 878 - Ouagadougou
17. Konbobo Robert, charpentier menuisier - Solodi Bastib - B.P. 404 - Ouagadougou
18. Koudougou Moussa, tâcheron de peinture - tâcheron de peinture Yahara Boureina - B.P. 285 - Ouagadougou
19. Ky Oumar, tâcheron - Ky Oumar - B.P. 945 - Ouagadougou
20. Maiga Arzouma, tâcheron - Ouahigoya - quartier Rougan - B.P. 7 - Ouagadougou
21. Mamadou Alpha Barry, directeur général - Afimeg Afrique Immobilier et d'entreprises générales - B.P. 1012 - Ouagadougou
22. G. Messanh Michel, entrepreneur depuis 27.9.58 - nouvelle entreprise volta africaine - B.P. 52 - Ouagadougou
23. Naba Abel, artisan peintre - société voltaïque d'entreprises spécialité peinture - B.P. 878 - Ouagadougou

24. Quadra Mamadou, maçon - quartier des Joronats - Ouagadougou
25. Ouattara Bakary, entrepreneur - B.P. 311 - Begéc (Bureau d'études générales et d'entreprises de construction) - Ouagadougou
26. Ouattara Kossoum, artisan maçon - société voltaïque d'entreprises, spécialité maçonnerie - B.P. 878 - Ouagadougou
27. Ouedraogo El Hadj Salif, tâcheron - B.P. 7 - Ouagadougou
28. Ouedraogo Emmanuel, comptable - Afimeg - B.P. 1012 - Ouagadougou
29. Ouedraogo Moussa, tâcheron - Carrelafa - Ouagadougou
30. Ouedraogo Noufou, aide-comptable - société coopérative ouvrière (SCOO) de Ouahigouya - B.P. 7 - Ouagadougou
31. Ouedraogo Pascal, artisan maçon - société voltaïque d'entreprises - spécialité maçonnerie - B.P. 878 - Ouagadougou
32. Ouedraogo Soumaila, président de la société coopérative ouvrière - de Ouahigouya - B.P. 7 - Ouagadougou
33. Ouermi Charles, artisan maçon - société voltaïque d'entreprises - spécialité maçonnerie - B.P. 878 - Ouagadougou
34. Ouermi Tibo Bruno, artisan menuisier - société voltaïque d'entreprises - spécialité maçonnerie - B.P. 878 - Ouagadougou
35. Ouilio Moumouni, tâcheron - Ouilli Moumouri à Ouahigouya RHV. Ouagadougou
36. Ouaba Mindieba François, entrepreneur en bâtiment - Ouaba François - B.P. 919 - Ouagadougou
37. Paré Omar
38. Sampo Kalambouli Blaise, maçon - entreprise Jean Kafando - B.P. 872 - Ouagadougou
39. Salif Kagougou, électricien - B.P. 27 - Ouagadougou
40. Sanou Kasim, tâcheron - Sanou Kasim - B.P. 44 - Ouagadougou
41. Sawadogo Joachin dit Moussa, maçon - entreprise Saire Lucien - Ouagadougou
42. Yahana Boureima, tâcheron - B.P. 285 - Ouagadougou

43. Yameogo Ignace, entrepreneur - entreprise Yameogo Igrace -
B.P. 669 - Ouagadougou
44. Yonli Vincent, associé - entrepreneur Ouaba Francis - B.P. 919 -
Ouagadougou
45. Zerbo Sita, plombier - B.P. 1014 - Ouagadougou

LIST OF REPRESENTATIVES OF AFRICAN CONTRACTORS IN

BOBO-DIOULASSO:

El Hadji Traoré Tiémoko, coopérative des bâtiments (Sanon Adama)
Traoré Zanga
Daniel

DAHOMÉY

1. Akplá Clément, directeur de l'entreprise Cimentarmé - Ciment armé
B.P. 946 - Cotonou
2. Agbidi François, directeur - Unions des tâcherons - des Travail-
leurs du Bâtiment UTTB - carré 414 - Cotonou - Tél. 37-01
3. Aissi Dominique, dessinateur - entreprise Aisi René - carré n° 888
B.P. 528 - Cotonou
4. Capo-Chi-Chi Marcel, tâcheron
5. Capo-Chi-Chi Raphael, directeur adjoint - Union des tâcherons
des travailleurs de bâtiments (UTTB) - carré 414 - Cotonou -
Tél. 37-01
6. Denon Gabriel, comptable - Société africaine de travaux publics
et de bâtiments - B.P. 191 - Cotonou
7. Diéné El Hadj Ousmane, entrepreneur de bâtiment et travaux publics -
entreprise africaine de construction - EAC - B.P. 329 - Cotonou
8. Djkpesse Eloi Benoît, commis supérieur d'architecte - Coopéra-
tive dahoméenne de construction carré 918 - B.P. 28 - Cotonou
9. Domingo Alfred
10. Gomez Pholippe, adjoint technique des TP - entreprise Sotrab
(société africaine des travaux publics et bâtiments) B.P. 191 -
Cotonou

11. Goudjo Gaspard, dessinateur des travaux publics (direction des TP) - Cotonou
12. Nadjo Augustin
13. Nougbodé Béatrice, dactylographe - Coopérative dahoméenne de constructions - B.P. 28 - Cotonou
14. Sagbo Loko Ludovic, agent des TP en tretraite - Entreprise de Constructions Mihami Siège à Bohicon - carre 354 - Cotonou
15. Sanda Pierre, dessinateur CAB (Coopérative des Artisans en Bâtiment) Porto-Novo - B.P. 167 - Cotonou
16. Sayi Emmanuel, entrepreneur CACEM (Coopérative africaine de constructions économiques modernes) Porto-Novo - Dahomey
17. Togo Michel
18. Turner Samuel, magasinier - Entreprise du Benin - B.P. 1057 - Cotonou
19. Villaca Francis Robert, Fils d'entrepreneur COMAF (Construction modernes et améliorations foncières) - B.P. 1057 - Cotonou
20. Villaca Joseph, Directeur d'entreprise - B.P. 1057 - Cotonou
21. Villaca Raymond Honorat, Frère de l'entrepreneur Villaca Joseph - B.P. 1057 - Cotonou
22. Zamba Xavier, Adjoint technique des travaux publics - Direction des travaux publics

TOGO

1. Adja Emile, maçon tâcheron
2. Afidegnon O. Edmond, Directeur - Sogbali Face - Lomé
3. Agoli Agbo C. François, Directeur d'entreprise des habitations à loyers modérés - B.P. 1678 - Lomé
4. Ajavon A. Ajite, conducteur de travaux EGTP - Administration d'entreprises
5. Ames Komlanvi Daniel, Agent de maîtrise des TP - Service des travaux Publics arrondissement bâtiment - B.P. 335 - Lomé
6. Ayienou Ouma Benoît, agent de maîtrise des travaux publics - TP - B.P. 335 - Lomé

7. Baka Komi Alphone, Directeur d'entreprise "Les bâtiments"
8. Amekoudji A. Joseph, entrepreneur - Travaux publics et particulier
9. Cote Albert Raymond, Conducteur de travaux - B.P. 211 - Lomé
10. D'Almeida C. Michel, entrepreneur en bâtiment ENTGO - B.P. 169 - Lomé
11. Falana Taofiqui, entrepreneur à "Deleure africaine DAFRIC", 36, rue Thompson - B.P. 560 - Lomé
12. Follican Alphonse, technicien spécial - entrepreneur tâcheron - entreprise de la mutuelle des tâcherons du bâtiment
13. Djankale Ange, entrepreneur tâcheron - Djankale Ange - B.P. 843 - Lomé
14. Koudadje Michel, gérant - Coopérative des techniciens de constructions modernes

ANNEX I : (c) Syllabus

Note: The list covers most of the items required in contracting. However, a more detailed syllabus, and the time to be assigned for each of the items, will be determined by the course director, in co-ordination with the nominated liaison officer for each country, depending on the level of the participants and the priorities given to the subjects in each country, as well as number of hours available.

1. The role of construction in the national economy and the contractor's role in the construction industry

- The construction "project-cycle" and its participants: the client, the architect, the clerk of works, the quantity surveyor, the supplier, the subcontractor, the user, etc.

2. Organization of the contracting enterprise

- The functions to be performed, the functionaries, the organization charts.

3. The legal aspects of a contracting enterprise

- The types of organization: sole proprietor, partnership or corporation.
- The types of contracts and tenders: "Quotation", "Labour only", "Lump Sum", "Bill of quantities", and others.
- The contract documents: "Conditions of contract", "Specifications", "Bills of quantities", plans, "the daily construction field report", etc.
- Bonds, securities, insurance: surety bonds, performance bonds, payments bonds, workman's compensations, public liability and types of insurance.
- Claims for deviations, contingencies, guarding against penalties.
- Contractors responsibilities: proficiency, safety, business reliability.

4. The pre-contract phase

- Estimating the cost:

The general structure of cost composition.

Some elements of quantity surveying.

Selected cost examples of building elements.

Planning the system as a base for estimating - the impact of technological alternatives or production techniques on cost.

5. The contract in implementation

- Planning and follow-up techniques:
 - Critical path planning.
 - The bar chart and other planning tools.
- Planning and implementation of reporting:
 - For evaluating performance and "cost control"
 - For preparing the bills.
- Site organization (including a visit to a selected site).
- Carrying out the work proficiently.

6. Successful use of the production means

- The employment of labour:
 - Planning the gangs works, and selecting repetitive operations.
 - Wages, piece-work and incentives.
- The economic use of building materials and components:
 - Compliance with specifications (the economic view).
- Planning the internal transport and the storage facilities.
 - Reliability of suppliers.
- The efficient use of machines and equipment:
 - The cost elements.
 - Planning the employment of machines.
 - The maintenance.
- The co-ordination of sub-contract work.
- Saving on "overheads".

7. The financial and the business aspects

- Volume of work - the minimum required volume.
- Financing - sources, procedures and policies.
- Investments - in plant and in "know-how".
- Working capital.
- Cash flow, planning and follow-up.

Timetables by country

ANNEX I : (d) United Nations Economic Commission for Africa - Training course for building contractors in Ghana (Accra) from 28 July to 2 August 1969

TIMETABLE

<u>Time</u>	<u>Monday</u> 28/7	<u>Tuesday</u> 29/7	<u>Wednesday</u> 30/7	<u>Thursday</u> 31/7	<u>Friday</u> 1/8	<u>Saturday</u> 2/8
9.00 - 9.40	Registration	Planning of work	Visit to site	Productive management	Finance	Sanitation on site
9.45 - 10.25	Opening session	"	"	"	"	"
11.00 - 11.40	Organization of a contracting enterprise	"	Site organization	Prevailing regulations	"	Closing session
11.45 - 12.25	"	"	"	"	"	"
14.00 - 14.40	Estimating	Finance	Productive management	Finance	Estimating	"
14.45 - 15.25	"	"	"	"	"	"
15.50 - 16.30	"	"	Cost control	"	"	"

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ANNEX I : (d) United Nations Economic Commission for Africa - Training course for building contractors in Ouagadougou (Upper Volta) from 14 - 22 August 1969

TIMETABLE

<u>Time</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>
9.00 - 9.40	Registration	Finance	Visit to site	Construction materials	Sanitation site	General review
9.50 - 10.30	Organization of the contracting enterprise	Finance	"	"	"	"
10.50 - 11.30	"	Planning of work	Tendering (exercises)	Costing	Finance	Brief discussion
11.30 - 12.10	Costing factors	"	"	"	"	Closing session
12.20 - 13.00	"	"	"	Maintenance of plant and equipment	"	"

ANNEX I : (d) United Nations Economic Commission for Africa - Training course for building contractors in Lome (Togo) from 1 - 6 September 1969

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TIMETABLE

<u>Time</u>	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>
14.00 - 14.45	Organization of a contrac-		Visit	The sub-contrac-	The government con-
14.45 - 15.30	ting enterprise	Planning	to site	tor and contractor	tracts and tender
15.40 - 16.25	Management	Management			
16.30 - 17.10	finance	finance	Planning	Costing	Finance
17.50 - 18.00		Maintenance			
	Cost composi-	of planning			
	tion	plant and	Planning	Sanitation	Cost control
		equipment		on site	on site
	<u>Saturday</u>				
8.00	Review				
11.00	Closing session				

ANNEX I : (e) List of working papers prepared for the sub-regional training course for building contractors

ECA resolution 157(VIII) and 209(IX) 1969

13 English Working Papers

16 French Working Papers

- | | |
|--|---|
| 1. WP - Objectives | 1. WP - Généralités sur les stages |
| 2. WP.1 | 2. WP.1 |
| 3. WP.1 - Annex I | 3. WP.1 - Annexe I (figures) |
| 4. WP.2 | 4. WP.2 |
| 5. WP.3 | 5. WP.3 |
| 6. WP.4 | 6. WP.4 |
| 7. WP.5 | 7. WP.5 |
| 8. WP.6 | 8. WP.5 - Annexe I |
| 9. Case 1 | 9. WP.6 |
| 10. Case 2 | 10. Etude de cas |
| 11. Financial management case study | 11. Deux études de cas |
| 12. Plumbing construction practice | 12. Etude de cas - Gestion financière |
| 13. Modern site organization n° 2 | 13. Principes de l'établissement des prix de revient |
| 14. The principles of costing | 14. Quelques indications sur le montage et l'utilisation des échafaudages métalliques |
| 15. Care of small plant and hand tools | 15. Entretien du petit matériel et des outils à main |
| 16. How to keep machines running smoothly | 16. Comment assurer le bon fonctionnement des machines |
| 17. Hints on use and erection of metal scaffolding | 17. Passation et exécution des marchés de l'état (Barnabé Dagadzi) |
| | 18. Recommandations aux entrepreneurs pour la préparation et la remise des appels d'offres. |

THE WORKING PAPERS

As there was no ready-made material available for teaching contractors, special working papers were prepared for this course. Each lecturer prepared a paper for his subject. Six working papers were issued to participants during the course; they were not sent in advance.

The papers sometimes covered much more than was imparted during the lectures, and they were intended to serve as reference documents for participants' future use.

A brief description of the working papers follows.

WA COURSE/WP/1

"The Building Contracting Enterprise", prepared by Mr. Chanoch Baltzan, was the basic paper for the course. This paper provided general information about the contracting enterprise in 66 pages and eight illustrations, under the following headings:

Introduction

- Construction in the economy
- The contractor's responsibility
- Types of contracting organizations
- Types of tenders and contracts

The contracting enterprise

- The organization in a contracting firm
- Functions of a contracting enterprise
- The division of work
- The principal activities

Planning and control of construction projects

- Introduction to work planning
- The principles governing the planning of the different resources
- Planning procedure
- Site organization (layout)
- Overall progress chart or timetable

An introduction to cost control

The need to know the cost

Terminology

"Catch" the cost at the expenditures outlets

Cost control begins already at the cost estimating stage

Making the best use of the existing flow of data on site

The cost code

New horizons

Efficient Use of Machinery

Bibliography

Two case studies were used in conjunction with this paper. Case 1, on "contracting organization", was "The story of John Omari and Sons, Contractors", in which a one-man contracting enterprise developed into a bigger family enterprise. This served as a basis for discussion of the division of work, and this discussion in turn provided the framework for the lectures on organization. Case 2 was a presentation of a contract for one villa-type house and a variation to 20 houses of the same type. This case served as a study for planning and site organization.

WA COURSE/WP/2

"Productive Management in the Construction Industry" was prepared by Mr. K.A. Chartey. This paper was divided into three parts. The first dealt with employment and wages, the second with construction techniques and productivity. The third part dealt with the problems of starting a new contracting business, and it was here that the author brought out the experience of Ghanaian contractors in forming plant pool co-operatives with governmental assistance. Appendix 1 gave a breakdown of the costing of a road works, an additional subject covered by the same lecturer. The other two appendixes dealt with a road contract and an example of a schedule showing the percentage progress completed for stages of constructing a building.

WA COURSE/WP/3

"Financial Management and Managerial Economics for Small Contractors" was prepared by Mr. G. Doron. The three chapters of this paper were distributed separately, so that for each lecture the participants had before them the section dealing with the topic under discussion.

Chapter A covered:

- Cost analysis and classification
- Breakeven point calculation (volume of work needed)
- Cost involved in owning and operating machinery.

Chapter B covered:

- The income statement
- Cash flow in a construction company
- Cash budgeting
- Working capital
- The balance sheet.

Chapter C covered:

- Bank services
- Accounts receivable
- Accounts payable
- Inventories
- Investment evaluation.

WA COURSE/WP/4

"Estimating" was prepared by Mr. Habte Georgis Indrias. The paper had the following divisions:

- Estimating
- Compiling prices
- Analysis and examples of pricing preliminaries
- Contract documents
- Types of contracts
- Forms of tenders
- Examples.

Two addenda, affecting the final section, were prepared for use in Kenya, Uganda and Zambia. The examples were simplified and the currency was changed from dollars to shillings for Kenya and Uganda, and to kwacha and ngwee for Zambia.

WA COURSE/WP/5

"Sanitary Installations" was prepared by Mr. Max Roy. The following items were supplemented by six working drawings.

- Definitions
- Essential parts of sanitary plumbing
- Principles
- Pipe sizes
- Types of installation.

WA COURSE/WP/6

"Sanitation on Site" was also prepared by Mr. Max Roy. This short paper dealt with water supply, drainage, latrine construction, disposal of refuse, food control and rat control.

Advisory leaflets

In addition to the above specially prepared papers, offset copies of the following Advisory Leaflets issued by the British Ministry of Public Building and Works were distributed to participants (with permission of the British Embassy in Addis Ababa).

- No. 14. Modern site organization No. 2
- No. 13. The principles of costing
- No. 22. Care of small plant and hand tools
- No. 33. How to keep machines running smoothly
- No. 36. Hints on use and erection of metal scaffolding.

Final questionnaire for the West African training course for building and
Public Works contractors:

- (1) In general, have you gained knowledge from this course?
- (2) Please state the field (or fields) in which you have increased your knowledge.
- (3) What subjects do you believe should be broadened and what shortened?
- (4) Do you have any suggestions which might improve future courses of this type?
- (5) Please state your general opinion on the way the course was conducted. What did you think about the lectures, the cases presented, the discussion? Comment on whether each phase of the course was satisfactory or unsatisfactory to you.
- (6) Do you think you will use in your work some of the techniques or other things which you learned in this course? Please specify.
- (7) Do you believe you could benefit from further courses on more advanced subjects?
- (8) What prevents your enterprise from expanding?

United Nations Economic Commission for Africa

West African training course for building contractors, 28 August -

6 September 1969

ACCRA -- GHANA

Summary of the answers to the questionnaire

General trend

All participants found the course useful in enabling them to improve their knowledge. Most of them decided to put into practice what they had learned. All emphasized the necessity of extending the courses over 2 to 4 weeks, and some suggested holding them twice annually.

One suggestion frequently put forward in private discussions was that the subjects presented should be expanded and developed further, with the understanding that the participants fully agreed with the existing programme.

There seemed to be some uncertainty on tendering procedures.

Among the reasons given for the obstacles preventing the development of local enterprises, those most often put forward were:

- Lack of technical know-how
- Lack of knowledge of the basic principals of running an enterprise
- Lack of organization
- Lack of equipment
- Difficulties in importing certain materials
- Lack of Government and bank loans.

Some answers to the various questions

- Answer to question 4

The lectures were interesting and well presented, but the discussion was of a generally low level, mainly because the members of the audience were of widely differing backgrounds.

- Answer to question 6

More case studies should be introduced

- Answer to question 7

On everything concerning the contracting industry
(Roads Sanitation - to be translated)

- Answer to question 8

The principal factor which hinders the development of our private enterprises in Ghana is the lack of knowledge and skill in management.

- Capital
- Technical know-how
- Weakness in management and organization
- Acceptance of work without planning ahead
- Bad work planning
- Bad productive management
- Bad estimating
- Bad cost control
- Sometimes no capital to invest in the enterprise, sometimes no idea about the work and what is necessary for the work
- Most contractors do not know how useful it would be to them to form a joint company
- Contractors should form partnerships
- The scarcity of plant and capital which it is often impossible to import, hinders the development of local enterprises
- Lack of funds
- Lack of mutual confidence among contractors, resulting in isolated efforts and preventing the contractors from forming large influential unions
- The desire of most contractors to become rich overnight
- Lack of knowledge of the basic principles of business management
- Architectural specifications are out-dated and must be made more flexible, to enable new techniques and materials to be introduced
- Delay in payment by clients
- Lack of growth in productivity and in reinvestment of profits
- Instability on the part of Ghanaian contractors. Prevention on the part of the banks against independent contractors.

ANNEX II : (a) Permanent training

The team was requested by Mr. B. Nomvete, Director of the Division of Industry and Housing of the United Nations Economic Commission for Africa, to look for ways:

1. of continuing and improving the courses;
2. of investigating ways in which this training could be made permanent.

An answer to the first request is given in the general conclusions. The aim of this part of the course is to present a proposal regarding the second point.

This training can be placed on a permanent basis only with assurance of Government participation. It is therefore necessary to investigate, with the various Governments, ways in which they, with support from the international agencies concerned, can gradually assume responsibility for this action.

The procedure could be set up as follows:

1. (a) on the local level:

The setting up of small national committees to include the representatives of contractors from the Ministry of Public Works and, for example, from either the Ministry of National Education or of Human Development.

This committee would be responsible for co-ordinating action on the local level, in co-operation with the ECA and the other agencies concerned.

(b) Training of local instructors

These instructors would be chosen on the basis of qualifications, technical background and teaching ability. They would receive special training, which would be provided by the present team of lecturers in two courses of one month each.

It would be useful to set up a file evaluating the action which it has been possible to take or carry out, in various countries, for the training of instructors, for example in Israel.

(c) The existing working papers, which were used as basic papers during the various training courses, should be revised in the light of experience and in relation to this new context. They could be printed under the auspices of the ECA and the United Nations agencies which have contributed to the setting up of this teaching programme and under whose responsibility this action must be continued.

2. On the sub-regional level:

(a) This locally-based organization would receive regular assistance from a team of experts constituted in relation to the work programme agreed with the ECA.

This advisory team, consisting of one expert from ECA and other from ILO and WHO, would provide additional in-depth instruction on one of the main themes, such as management finance or work planning etc...

This would be the appropriate time to revise the instruction currently being given by the local instructors, together with the papers they are using.

This team could cover an entire sub-region in one season. Two or three specialized teams, made up in the same way, can, in one season, cover all the various sub-regions.

(b) A re-training course for instructors would be held every four years in a centre in the sub-region, specially designed for this purpose.

(c) It might be possible in the future to call on the service of private institutions specializing in the training of instructors, to be used as consultants under the direction of United Nations Economic Commission for Africa.

In short, joint action by local governments and the United Nations can ensure a permanent training service in all the countries concerned.

The United Nations would be responsible for:

- The training of instructors
- The production and distribution of papers
- Regularly sending experts to go into the main themes more deeply, to ascertain the standard of local instruction and to play an advisory role.
- The re-training of instructors.

The local Governments would ensure the establishment and maintenance of a co-ordinating committee consisting of two or three members from the private and public sectors having significant influence with contractors.

The Committee's function would be to ensure the co-ordination of action on the local level and, in conjunction with the ECA, to assist the local instructors whose training is provided by the ECA.

ANNEX II : Closing speech by P. C. Demba, Minister - Ouagadougou
(August 1969)

I am very pleased with the arrangements made by the United Nations Economic and Social Council and the Economic Commission for Africa in conjunction with the Government of Volta in organizing this practical course of technical training for the building contractors and sub-contractors of Upper Volta.

We take this opportunity to express our gratitude to the United Nations and to the ECA for this contribution.

Here, in Upper Volta, in this important sector of Public Works, we are very anxious to ensure the promotion of our fellow countrymen to the technical, financial and commercial management levels of building enterprises.

We want them to be able to submit tenders, to meet all competition without limitation or difficulty. This supposes that, in addition to the good will and practical experience which they have acquired - since it is they who, in reality, ensure the work done on sites entrusted to non-national enterprises - they will be able to assume the role of "chief contractor" on their own account.

This is why it is important for them not only to have a conception of what is involved in business management, but also to acquire the basic knowledge of the conditions of exercising this responsibility, namely a complete knowledge and mastery:

- Of the various technical standards required in the art
- Of the various types of contract
- Of organizing work on site
- Of the problems of materials' supplies
- Of the types of labour contract
- Of progress planning
- Of management finance and accounting (investments, finance etc.)