

# Construction industry training and development — The ILO experience

by  
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## Introduction :

Wherever people are at work, their problems are in some way the concern of the International Labour Organisation. It is therefore right and proper that the ILO should take a special interest in the construction industry, which is not only a significant source of direct employment but is also a sector which contributes, through its wide range of operations and projects, to the growth and development of virtually all other sectors. In this paper, I propose to start by highlighting some of the significant — and special — characteristics of the construction industry, then to outline the way in which the ILO operates, with its concerns for management development in general and construction management in particular, and finally to discuss some of the experience that the ILO has gained during the fifteen years of effort that it has invested in developing a distinctive approach to construction management.

## Characteristics of the construction industry :

There is now an increasing recognition that the construction industry is a special — if not unique — industry, and that its special characteristics and needs call for a special response. But that recognition is very recent, and it is still far from universal. Thus it seems worth spending a little time to highlight

some of the sector's outstanding features.

One can start with the obvious fact that construction work is usually carried out in the open air, and is consequently subject to interference from the weather — and sometimes from the general public! But the most significant characteristics can be traced to the nature of the product and the way in which it is procured by its clients.

The difference between construction and manufacturing can most easily be seen by taking a sample sub-sector of manufacturing — I have chosen the motor industry — and comparing it with the construction sector. The characteristics of the motor industry have perhaps been most graphically and succinctly portrayed in the Paul Simon song 'Cars are cars'. He states (or rather sings):

"Cars are cars all over the world. Similarly made. Similarly sold."

In comparison, construction is not the same all over the world. Both the way in which the products of the construction industry are 'made' and the way in which they are 'sold' vary considerably with geographical location, and are generally different from the procedures which apply in other industries.

On the 'making' side, the appropriateness of alternative designs and construction methods depends greatly upon the local environment (including cultural norms and personal preferences) and upon the availability and cost of local resources. Indeed construction is one

of the most technologically flexible of all industries, with growing scope for robotics and automation where labour is scarce, but with equal or greater scope for the application of labour-based technologies where employment creation is a priority.

Construction projects (other than repetitive housing) are generally of a one-off discreet nature (again unlike cars, which Paul Simon dismisses as "Engines in the front. Jack in the back", and the essential similarity of which is confirmed by the enormous sums of money spent by manufacturers seeking to demonstrate that their models are in some way different from the rest!) Thus the organisations set up to deal with building and civil engineering projects must themselves be sufficiently flexible to adapt to constant change. This is in sharp contrast to 'steady state' organisations such as hospitals and mass-production factories, where many administrative tasks can be reduced to standard routines.

A further feature on the 'making' side is that construction involves a high volume of specialist work and a wide range of trades and activities. Additional management problems arise from the fact that the builder's site is also his factory, that each site is owned and controlled by his client, and that individual sites are often remote from the contractor's head office.

## Unsatisfactory conditions of employment :

From the worker's stand-point, the casual nature of so much construction employment is a hindrance to the development of stable work

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The opinions stated in this paper are those of the author, and are not necessarily those of the ILO.



patterns. Thus many workers are forced to accept a nomadic lifestyle, moving from job to job and from employer to employer as opportunities arise (interspersed with periods of unemployment or alternative employment).

Since casual workers are hard to organise, trade unions find it difficult to acquire the bargaining strength that they would need to negotiate more favourable conditions of employment. Furthermore, the fluctuating workload and casual employment patterns act as a disincentive to those responsible employers who would wish to build up a permanent and well-trained work force, since irresponsible contractors prefer to 'poach' trained staff from them when they obtain a job, rather than undertake the long term investment of training their own work force. The lack of training also shows up in the generally poor safety record of the construction industry.

**Relationships between contractors and clients :**

The ways in which the products of the construction industry are 'sold' also vary. Frequently the contractor is chosen by competitive bidding on the basis of a design prepared on the client's behalf (by his professional advisor), sometimes in a 'free-for-all' open bidding process and sometimes by competitive bidding among a list of contractors prequalified after an assessment of their resources and experience.

The effects of this split between responsibility for design and responsibility for manufacture of the products of the construction industry is discussed by Edmonds and Miles in their book 'Foundations for Change'.

The argument briefly runs as follows. In most industries, manufacturers have direct contact with the consumer, and stand or fall by their

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assessment of the consumer's needs and wants, and the price he or she will be prepared to pay. In the construction industry, contact with the client has typically been reserved to the architect or engineer who is commissioned to undertake feasibility studies, prepare a detailed design, control the bidding process and supervise the work of the chosen contractor.

Here again, there is a contrast with the motor industry. Not only are cars 'similarly made and similarly sold', they are also made and sold by the same organisation. The traditional construction industry framework deliberately limits the contractor to a subordinate role, much as the activities of automotive equipment suppliers are subordinate to the requirements of car manufacturers such as Ford or Toyota.

To quote from 'Foundations for Change' :

"The insulation of the contractor from his ultimate market had other ramifications. While firms operating in other product areas of a market economy face the problem of selling to a wholesale or retail market, they have the satisfaction of knowing that, once a market share has been established, demand can be forecast with reasonable accuracy and resources can be mobilised to

meet it. However, the contractor has to tender for work in the knowledge that only 1 in 10 or 1 in 20 of his bids are likely to be successful. Thus he is forced to tender for 10 or 20 times as much work as he feels able to cope with, with the risk that at any given time he could be faced with a workload far greater or far less than the capacity of his organisation. To these dangers must be added the endemic 'feast and famine' nature of construction demand, much of which emanates from the public sector capital budget, where spending can fluctuate wildly according to national economic conditions."

The management problems that spring from this traditional regulatory framework do not end here. The adversarial relationship tends to cut the client off from the technical and managerial expertise that the contractor could offer at the design stage, since the design is effectively 'fixed' once the project reaches the tendering stage (the contractor is usually permitted to offer alternative solutions, but this is costly to the contractor and the proposed alternatives are frequently unacceptable to the client's professional adviser).

The problems have led certain clients to join the trend towards 'design and build' packages and some have even gone further in the direction of passing over full financial and operational responsibility to the contractor through the system known as 'Build, Operate and Transfer' where, for example, a contractor might finance, design and build a stretch of motorway, recovering costs and earning profit by collecting tolls for a certain agreed period.

I hope that the case has been made for the proposition that construction is indeed a 'special' industry with special characteristics and



problems that call for special organisational procedures and approaches to management training and development. I would now like to go on to outline the growing interest in construction management among concerned international agencies over the last twenty years, as a precursor to describing the way in which the ILO has sought to develop a distinctive approach to management development for the construction industry.

**International Agencies and Construction Management :**

The ILO's general concern for the construction sector can be traced back to the establishment of its Building, Civil Engineering and Public Works Committee in 1946. However, it was only in the 1970s, as the unique organisational relationships and management needs of the construction industry became clearer, that a few brave iconoclasts began to declare that the construction industry was indeed different — in a variety of ways — from other sectors.

Accordingly the various international organisations within the United Nations family began to examine ways in which they could make a special contribution to the development of an industry which, for most developing countries is second in importance only to agriculture. At that stage most of the organisations were finding their way, and also seeking a role in construction industry development in keeping with their particular responsibilities and concerns.

The World Bank, for example, undertook a large scale study in the early 1970s which led to the formulation of detailed guidelines for support to the industry<sup>2</sup>. The Bank's preferred modes of support were, not surprisingly, primarily financial and contractual in nature, such as price preferences for domestic contractors on Bank-financed projects

and the provision of credit for equipment purchase.

UNIDO arranged two Expert Group Meetings on the Construction Industry and Industrial Construction in the early 1970s, and the World Bank-UNIDO Co-operative Programme followed this up with a series of interesting and informative national pre-investment studies of the construction sector. However, subsequently UNIDO has tended to give priority to initiatives in the field of building materials production.

**Genesis of the ILO approach :**

Meanwhile, the ILO undertook its own series of studies and workshops in an effort to determine an appropriate and distinctive role. In order to see how the ILO developed its approach, it may be helpful to return briefly to the origins of the Organisation, and review its growing interest in management development, the structure of organisations, and institution building.

The ILO originated in 1919 after a Commission had been appointed :

“to enquire into the conditions of employment from the international aspect and to consider the international means necessary to secure common action on matters affecting conditions of employment, and to recommend the form of a permanent agency to continue such enquiry and consideration with and under the direction of the League of Nations.”

The recommendation to set up a permanent International Labour Organisation was adopted by the Paris Peace Conference and, in the summer of 1920, the Governing Body decided to make its permanent headquarters in Geneva, Switzerland. As it turned out, the ILO outlived its first parent body and became, in 1946, the first specialised agency

associated with the United Nations. Its original membership of 45 nations has now grown to 150.

The first words of this paper were 'Wherever people are at work, their problems are in some way the concern of the International Labour Organisation'. This apparently sweeping statement can be justified by the record of more than 70 years service to its Member States, during which it has been driven by the pursuit of social justice in all its forms, believing that, as set out in its constitution, 'A universal and lasting peace can be established only if it is based on social justice'. In 1969 these efforts were acknowledged by the award of the Nobel Prize.

**Structure and working methods :**

Before going on to outline some of the ILO's general initiatives in management development and its particular concern for the construction industry, it may perhaps be helpful to explain briefly the structure and working methods of the Organisation.

A feature of the ILO is its tripartite structure and, at every level of the organisation, Governments are associated in decision-making with their social partners — the workers and the employers. The three principal organs of the ILO are :

- (1) The International Labour Conference,
- (2) The Governing Body, and
- (3) The International Labour Office.

The Conference is the supreme policy-making body of the Organisation and the Governing Body is effectively its executive council, while the International Labour Office forms its Secretariat, its information centre and its operational headquarters.

The International Labour Office is



now a substantial organisation in its own right, and is staffed at headquarters and around the world by about 1,800 people of some 110 nationalities. Operations are decentralised in regional, area and branch offices in more than 40 countries. But if the resources are significant, the overall task remains daunting in all four major fields of activity:

- improvement of living and working conditions, to humanise work, promote safety and raise living standards;
- promotion of employment, the condition for collective prosperity and individual well-being;
- the development of human resources, the essential key to all forms of economic expansion and social progress;
- development of social institutions, that is the establishment and strengthening of the administrative bodies, professional organisations, and the channels of participation and communication which are the framework of modern society.

All these activities are significant to the construction industry, but in this paper I propose to focus upon the latter two — the development of human resources, particularly in the area of construction management, and the development of institutions dedicated to construction industry development.

#### **The ILO and Management Development :**

The ILO's interest in management dates from the 1920s when the first International Institute of Management was established with ILO support and located in its premises. However, it was in the 1950s that the ILO's Management Development Programme began to expand significantly with priority given to productivity improvement, management

and small enterprise development.

Over the last forty years, this has evolved into a major international advisory and technical assistance programme which provides services to a wide range of clients (organisations, institutions and enterprises) in all parts of the world. At any given time, some 80-90 field projects or advisory assignments in management and small enterprise development are in operation, while a further 40 to 50 are at various stages of planning and preparation.

Core financial resources are provided by the ILO for conceptual work, programme management and technical support of field projects. However, the Programme also depends heavily on support by funding agencies, such as the United Nations Development Programme (UNDP), the Swedish International Development Authority (SIDA), the Danish International Development Agency (DANIDA), the Governments of Norway, the Federal Republic of Germany, and the Netherlands. Through a 'Trust Fund' arrangement, a government, agency or private organisation wishing to receive technical assistance can also contract the ILO to undertake project preparation and implementation using its own resources or by obtaining a loan from the World Bank or another development bank.

The Programme is run by twenty professional staff members employed in the Management Development Branch of the ILO in Geneva, together with professional advisers attached to various ILO regional offices and Chief Technical Advisers and other experts attached to field projects. In the selection of staff for field projects, the Programme is able to draw upon a worldwide network of contacts with consulting firms, individual consultants, trainers and training development institutions registered on its computerised roster.

With this wealth of resources at its command, the ILO Management Development Programme is in a position to respond effectively and flexibly to the needs of its clients by preparing projects and programmes specifically designed to meet individual needs. This emphasis on 'tailor-made' solutions is important. Even where a standard technical guide or training package has been produced and disseminated, such as the 'Interactive Contractor Training' modules for small contractors and the companion volume 'Training Contractors for Results', it is done on the understanding that a proper training needs survey should be undertaken and adaptations should be made before the materials are used for a particular assignment.

The search for tailor-made solutions led logically to specialisation. Thus the ILO Management Development Programme has recognised priority areas of work such as productivity improvement, financial management and accountancy development, small enterprise development and the need for appropriate management training for supervisors (the 'forgotten' men and women in many industries). In each case the first step has been practical research on needs, then pilot training initiatives, often leading to the development of publications and training materials, and finally the development of confidence to introduce and apply the refined approach in practice through full-scale technical co-operation projects. This is precisely the path that the ILO Construction Management Programme has trod in the fifteen years of its existence.

#### **The ILO Construction Management Programme :**

The ILO Construction Management Programme has so far proceeded through three phases :

1. Exploration of needs and priorities. Development of pilot training materials;



- 2. Pilot regional programmes including seminars and workshops to discuss experience, formulate strategies, and test out and publish training materials and prospective publications;
- 3. Institution building, primarily through the design and implementation of national technical co-operation projects.

**Phase 1 : Exploration :**

The ILO first began to recognise the need for a special approach to construction management within its Management Development Branch in the mid-1970s. It drew notably on earlier experience such as the 'Building for Development' project of the Intermediate Technology Development Group (ITDG), which had identified smaller indigenous building contractors as a neglected but important target group.

One of the first events was a 3-week African Regional Course on Construction Management, held in Nairobi in 1976, at which three pilot training modules for small contractors were presented to prospective trainers from national institutions. These modules were later refined and extended, and published by ITDG as its 'Small Building Contractor' series<sup>3</sup>.

The outcome of this exploratory phase was a growing appreciation of the potential benefits that could be gained by improving the resources and performance of domestic construction industries. Accordingly, the Government of Norway agreed to provide support to an ILO project for the African region 'to create in the participating countries a basic capability for delivering management training to small-scale building contractors', with the longer term objective to improve the overall managerial and economic performance of the contractors. This assistance provided the impetus for the

programme to proceed into its second phase.

**Phase 2 : Pilot Programmes :**

The general strategy for the first phase project was to raise awareness among participating governments of the potential to improve the performance of their domestic construction industries through training and other measures to support the development of local contractors. Project activities included study and advisory visits, and holding regional seminars, workshops and other events which it was hoped would lead to more specific national initiatives and activities.

It quickly became clear that, due to the separation in the construction industry between responsibility for construction and responsibility for design and supervision, a comprehensive improvement in the construction environment could not be achieved by focussing on contractors alone. Accordingly, thanks to the Swedish International Development Agency (SIDA), a compatible project was set up 'to improve the effectiveness of officials and agencies responsible for the administration of construction projects'.

The two projects were run in parallel by a specially appointed 'Director of Construction Management Programmes'.

The compatibility of the two projects was used to good effect in providing training to inter-disciplinary groups from a number of countries, and thereby encouraging mutual understanding and collaboration. The theme of 'working together' to achieve project objectives has subsequently become the hallmark of the ILO approach to construction management.

An important achievement during Phase 2 was the drafting of a guide to 'Managing Construction Projects'<sup>4</sup>

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treating the five basic stages of briefing, design, tendering, construction and commissioning as steps in a single process. This is one of the few books in its field to take special account of the needs of developing countries, and has been widely acclaimed as 'a practical book for practical people'.

**Phase 3 : Institution Building :**

Otherwise the results of Phase 2 were mixed. There is no doubt that general awareness of the importance of the construction industry was raised, and that decision-makers began to appreciate the scope for performance improvement through training and the development of managerial skills. However, the hope that seminar and workshop participants would themselves achieve a rapid metamorphosis into 'construction management developers' proved vain. After they returned to their parent institutions, they soon became caught up in day-to-day routine, or were promoted to posts elsewhere, while the institutions themselves continued unchanged.

When the experience gained during Phase 2 was analysed and distilled in the publication 'Guidelines for the Development of Small scale Construction Enterprises'<sup>5</sup>, it became clear that there were to be no short cuts, and it would be necessary to work steadily and purposefully to identify and strengthen a series of dedicated institutions if construction industry improvement through management development was to become a reality.

The Management Development Programme as a whole has helped



to establish and/or strengthen more than 80 management institutes and centres in most parts of the world and, as a result, has identified the following criteria which should be met by institutions that strive to be effective in their environment :

- ☛ strong leadership;
- ☛ a pronounced practical orientation;
- ☛ an interdisciplinary and problem-oriented approach;
- ☛ closest possible links with the client base;
- ☛ a coherent and balanced portfolio of intervention methods

(training, consultancy, research, information services);

- ☛ flexibility in reacting to new situations, needs & challenges;
- ☛ Competent and motivated staff;
- ☛ operational autonomy;
- ☛ impact judged according to actual results achieved by clients served.

The criteria appeared equally applicable to sector-specific management training and development institutions, and have been followed in the design of projects to support dedicated construction industry development institutions. One of the first

of these projects (which is close to my heart since it was the first which I designed as an ILO staff member) was set up to support the growth of the ILO's prime construction management collaborator in India — the National Institute of Construction Management and Re-search (NICMAR).

NICMAR is certainly among the most successful of the dedicated national construction management institutional initiatives, and it is notable that NICMAR scores well on all nine criteria set out above. However, the number is now beginning to grow dramatically, as shown in the following table :

**Institution building in construction in co-operation with the ILO :**

Country	Institution	Main target group
Botswana	Botswana Enterprise Development Unit (BEDU)	Local building contractors
China	China International Contractors' Association (CHINCA)	Senior construction managers
Egypt	Arab Contractors' Construction Management Institute (ACCMI)	Senior construction managers
Ghana	Management Development and Productivity Centre (MDPI)	Small construction enterprises
India	National Institute for Construction Management and Research (NICMAR)	Construction managers at all levels
Indonesia	Ministry of Public Works Centre for Construction Industry Training Development (Pusbintat)	Mandors (subcontractors)
Iraq	National Centre for Consultancy and Management Development (NCCMD)	Senior Project managers
Malawi	Malawian Entrepreneurship Development Institute (MEDI)	Small building contractors
Malaysia	National Productivity Centre (NPC)	Building and civil engineering contractors
Philippines	Construction Manpower Development Foundation (CMDF)	Integrated construction industry development
Sri Lanka	Institute for Construction Training and Development (ICTAD)	Integrated construction industry development
Africa (subregional)	Eastern and Southern African Management Institute (ESAMI)	Senior project managers

(2)

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**Prospects for the future :**

The present phase of institution building is making encouraging progress in raising the profile of the industry and demonstrating the scope for improved performance. However, there is still much to be done before the third phase of institutional development has run its course, particularly in Africa. In Asia too much remains to be done, but much has also already been achieved. There is now a reasonable foundation on which to

build a regional network of institutions, with scope for interchange of information, experience and key staff and collaborative arrangements to tackle common problems.

The institutions themselves must take the leading role, since the ILO sees itself essentially as an enabling organisation. In all ILO projects we seek not merely to solve problems on behalf of the client, but also to build up the client's own problem-solving and management development capabilities. It is no accident that the senior ILO expert on a technical co-operation project is described as Chief Technical Adviser, since his or her role is to assist and coach local counterparts and thereby develop indigenous problem-solving, training, consulting and research skills.

Returning to the theme of 'working together', which I described as the hallmark of the ILO approach to construction management, we foresee a future in which national institutions work together to consolidate and advance this new and exciting discipline. Construction will always

remain a risky and demanding industry. New problems and challenges will always arise. It is our task to facilitate individual — and organisational — learning, to ensure that this industry offers increasingly good value to its clients in terms of the unchanging criteria of project quality, time and cost.

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