Construction Management Skills for the Global Market

By: Khairul Salleh Bin Baharudin, Head Department of Civil Engineering, KLIUC

Nature of Work

Construction management is a challenging and demanding profession. Construction management professionals deal with time, money, equipment, technology, people and materials in managing a construction project. They organise these resources into activities, execute the activities in logical sequences and manage to complete the projects within the stipulated time and budget.

Often times, these resources are constraints which conflict with one another. Insufficient funds, for example, may delay the completion time of these projects. Bad weather is the natural factor that affects construction activities. Economic inflation may abruptly increase the cost of construction. Having unskilled and incompetent workers for projects will jeopardise the quality of construction. All factors, either natural or man-made, which affect the construction process, must be taken into consideration by construction professionals. They must plan, strategise, execute, monitor, and control, taking into account of all factors and risks involved, in order to ensure the success of a project.

Construction professionals manage the construction process to meet the needs of clients with legal, cost and environmental constraints. They have to look into the whole building cycle from inception to end of economic life, dealing with the procurement, construction, design or property management, recycling and disposal of building, and balancing the often conflicting requirements of clients, users and the community.

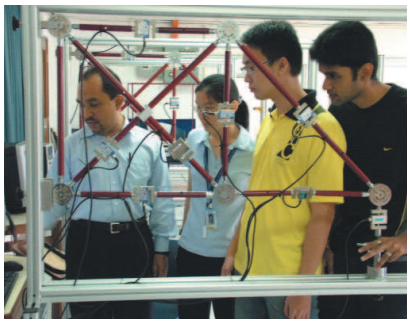
Knowledge and Skills Required

Construction professionals need to have the knowledge and understanding in the various aspects of the construction industry. Basics of construction technology and materials; equipments and machinery; measurement and documentation; construction cost and estimations, construction economics and finance; management; communication; construction laws and contracts; construction safety and health; mechanical and electrical services; and value engineering are some of the essential knowledge required of them.

Other skills required are the understanding of engineering, architectural, and other construction drawings; good oral and written communication skills; and leadership skills. Good working relations with diverse groups of people, as in with the owners, other managers, designers, supervisors, and tradesmen are most important for construction professionals.

The major work required in construction management is planning, organising, scheduling, implementing, managing, monitoring, controlling, and tracking the construction projects. Construction professionals must learn the various project management areas or body of knowledge. The Project Management Institute of USA divided the project management's body of knowledge into nine areas, namely project integration management, project scope management, project time management, project cost management, project quality management, project human resource management, project communication management, project risk management, and project procurement management. All these cover the whole project cycle starting from as early as project plan development, project initiation, planning, executing, and activity sequencing, managing the time, cost, quality, and human resources for the projects, up to the procurement activities until the contract closes-out.

Most of the problems in construction management that lead to project failures are due to the ineffective execution of the project management areas as described above. A successful project depends very much on the construction professionals to act as an effective project manager. They should act as a generalist and a facilitator when coordinating projects. They must be a good communicator in handling mediation, managing conflict and negotiating terms with various stakeholders in the project. Their leadership skills should provide



Apart from basic construction skill sets, future construction engineer exports also require diverse global understanding

direction, purpose and focus. They should be analytical when managing the personnel outside their area of expertise namely the architects, engineers, contractors, suppliers, and many other trade personnel.

At times, the construction managers must be cheerleader, motivator and resource finder to the workers at site. Sometimes it is necessary for the construction managers to help resolve workers' personal problems in order to ensure no unnecessary interruptions to the project's execution. Workers on site must be given due recognition or rewards in response to their job achievements. Motivational talks may boost the workers' morale in doing their jobs. Having good inter-personal skills such as being a good listener, and having keen political sensitivity are essential characteristics of an effective project manager. All in all, these skills help in ensuring that the construction projects are successfully completed on time and within budget.

Construction professionals should be readily flexible and be able to work effectively in a fast-paced environment. Some construction works may have to be executed round-the-clock for days, or even weeks, to meet special project deadlines or when faced with unexpected delays, bad weather, or incidences at the site. On top of that, they must be capable in making decisions and work well under pressure.

Career Positions and Prospects

Construction management professionals may hold job positions as project manager,

project engineer, construction superintendent, construction manager, project executive, site supervisor, or site agent. They may be owners or employees of a construction management or contracting firms overseeing construction projects on behalf of the owner, developer, contractor, or management firm. They manage a whole project or just a subdivision of a project.

Graduates of construction management may embark on a career in construction companies or consultancies concerned with management and business aspects of producing building surveying, property development or facilities management. Opportunities exist with multidisciplinary consultancies, construction companies, corporate organisations in service industries, government agencies, local authorities and development companies.

Historical market trends for year 2005 sees the Malaysian construction industry focusing on two things: the implementation of Industrial Building System (IBS); and the export market opportunities of the construction industry overseas.

The implementation of IBS is evident in the endorsement of the IBS Roadmap 2004–2010 by the government. Precast concrete framing, steel formwork or framing systems, prefabricated timber framing systems and blockwork systems are examples of IBS. By implementing IBS, site labour, material wastage, and site materials usage may be kept to a minimum, thus providing a cleaner and safer environment, products of controlled quality, shorter construction duration and reduced construction costs. Eventually, this may help reduce the dependency of foreign workers for the industry as IBS is less labour intensive.

Local construction industry players realise that there are abundant and wider opportunities in securing construction jobs overseas. Big players like Gamuda Bhd, Road Builder Holdings (M) Bhd., IJM Corp. Bhd. and Bina Puri Holdings Bhd. have exported their expertise to India, Thailand, Papua New Guinea, the Maldives and the Middle East. With the rising economy in Qatar, Bahrain and United Arab Emirates, opportunities in exporting construction expertise to these countries are bright. Other countries that may have potential in this sector are Sri Lanka, Indonesia, Vietnam, Iran, Sudan, Bangladesh, Saudi Arabia and South Africa. Thus, the exporting of construction expertise overseas seems likely to be the future trend and survival of construction companies.

Realising the above trends, graduates must be readily adaptable to the increasing complexity of construction projects. They should prepare for the sophistication of technology; advances in building materials and construction methods; and the proliferation of laws setting standards for buildings and construction materials, worker safety, energy efficiency, and environmental protection.

In preparation for the global economy, graduates should learn and understand the language and the cultural diversity of the countries where they will be located. This is above and beyond other soft skills that are required of them in communication, leadership, and teamwork. ■