THE CHALLENGE FOR TERTIARY EDUCATORSTO SOLVE THE HUMAN RESOURCE NEED IN THE CONSTRUCTION INDUSTRY

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ABSTRACT

With the current boom experienced in the construction industry in South Africa, a shortage of appropriately qualified senior and middle level managers is experienced.
The University of the Free State (UFS) was approached by the Bloemfontein Building Industry Development Foundation (BBIDF) as early as 1987 to identify incumbants to be trained as future construction managers or line managers to serve the industry as a whole. Various levels of courses were introduced. Accredited programmes were developed and introduced such as Mentoring, Health and Safety, Project- and Facilities Management, to fulfill further needs. These initiatives assisted the University to establish it's role in respect of this type of community engagement.

Initially, a huge influx of participants into the progammes was experienced, which petered out once the level of teaching was realised. Adjustments were therefore implemented in the programmes to assist people from various backgrounds and levels of prior learning. The support of major role players, such as significant construction companies and government became imminent and was shown to be important. The positive attitude and policies adopted by stakeholders and learners was seen as evidence of the need and the success of some of the programmes. The popularity of the programmes is expanding throughout South Africa and support is growing.

Measurement of success may be evaluated by the initial programmes directed at local participants where more than 500 candidates completed these programmes from 1987 to 2007. National accredited programme participants are just short of 1000 since 2002, indicating the growing need for such programmes.

Consideration should be given by tertiary institutions, specifically in Africa, to embark on progammes, contributing towards solutions and the need for empowerment of disadvantaged people. This action could form part of an international development initiative in any area or country. Institutions are in possession of qualified personnel to embark on such initiatives.

KEYWORDS : Construction industry, enable people, entrepreneurs, programmes, development

INTRODUCTION

The construction industry, together with agriculture, mining and government, remains one of the most significant employers the world over. With the advent of the 2010 Soccer World Cup, this position is even more critical in the RSA than before as a high level of activity in construction will be required to fulfil all needs.

Although exact figures are not available, it is estimated that some 25% of the nation's working community is employed in the construction industry.

Dr Charles Martin of the Bureau of Economic Research (BER) in South Africa is of the opinion that, if the informal building sector is taken into consideration, the percentage could be as high as 30%. (Martin, 2006).

Quick response to economic fluctuations in the construction industry, due to interest rate changes makes the industry less attractive as an occupation, which intensifies the need for managers.

Construction sites are also exposed to the elements which also deters people from entering the industry.

MANAGEMENT MODEL

Figure 1 shows the management model.

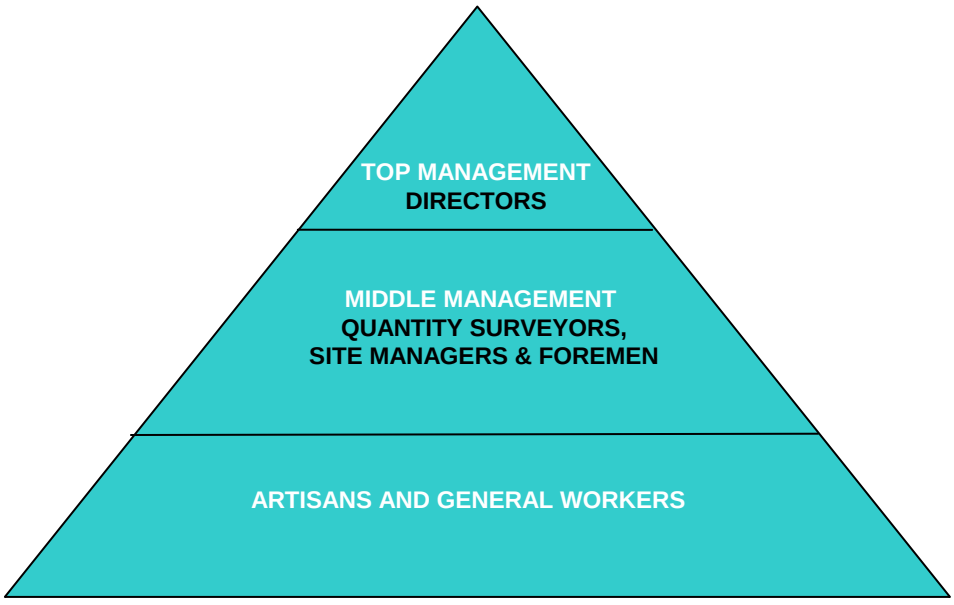

Figure 1.1: Management Model
Source: (Van Zyl, C.H., Van Vuuren, H.J. and Marx, H.J. 2006)

The focus is on the top management and middle management segments of the management model.

Although bricklayers, plasterers amongst others, as well as plant operators and scaffolders are of the utmost importance to the industry, it is felt that training of artisans and schooling of operators should be done by technical institutions and private service providers.

This training is also undergoing strain due to a shortfall in government initiative, and that private service providers do not cover the full spectrum (Eicker, 2008:17)

Universities and technicons concentrate on more advanced academic management issues such as:

- Legal issues: contracts, sub-contracts and employment issues.
- Site management: programming and planning.
- Health, safety and environmental aspects.
- Financial aspects: cost control, payments received and made.
- Quality management.

PROBLEM STATEMENT

- A serious need exists for suitably qualified technical and management personnel world wide in the top two segments of the management model. Various factors contribute towards this need.

Figure 1.2 shows the problem statement in view.

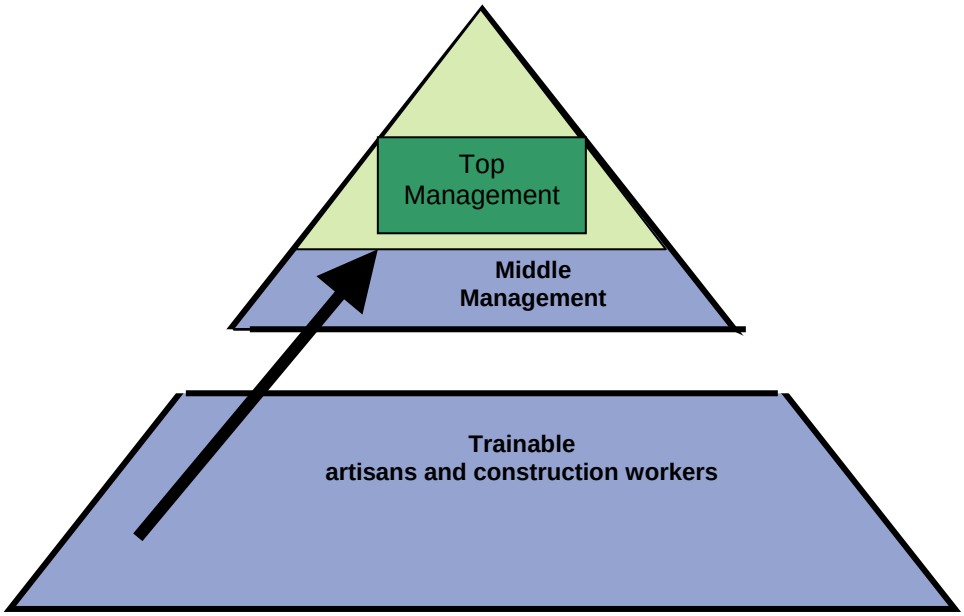

Figure 1.2: Problem statement in view
Source: (Van Zyl, C.H., Van Vuuren, H.J. and Marx, H.J. 2006)

The difficulty that exists is how to transfer incumbents from the bottom level to the top management levels.

- Past training programmes available for incumbents concentrated on trade and operative issues.
- Training programmes for technical and managerial fields were only there for sponsored students or for those that could afford further education and therefore excluded disadvantaged individuals.

CURRENT POSITION WORLD WIDE AND IN SOUTH AFRICA

The current resource need for technically qualified as well as managerial personnel can be attributed to the following factors:

- The favourable economic climate brings about a high level of activity and all indications are that this will remain the position for some time to come (Rode report, 2007:1).
- Employees in the top segment have been forced out of the industry by affirmative action programmes implemented by institutions.

- Early retirements contributed to the shortage of managers.
- Favourable opportunities abroad draw mostly young expertise out of the country (Lambert, 2004).
- The general crime situation in hotspots accelerates the drain towards safer overseas hunting grounds

It is proposed that the need can be softened to some extent by modern technological developments, where fewer personnel are required to execute certain tasks. Patented wall-, ceiling- and glazing systems etc. were developed where the labour shortage has been evident for some time. If fewer tradesmen are required, it filters through to management and therefore some relief on management numbers are experienced.

A paradigm shift in management has also occurred with the use of personal computers. A far greater volume of work can be handled by one person than say, thirty years ago.

In general, and to their own detriment, today's construction staff work much longer hours than their predecessors, due to the identified need.

The shortage of personnel in middle management can be addressed by the identification of incumbents with entrepreneurial skills who can then transform from a trades person to a manager and manage his own business, or a section in a larger organisation

It is, however, of utmost importance that once such a person is identified, the appropriate technology for his field is transferred to him. The training of this person in the skills of management principles, financial management, personnel aspects, health and safety and legal issues is even more important.
Training opportunities and modules are available, but the shortage of specialist lecturing staff is a problem. The active commercial market hinders the flow to academic posts, the remuneration of lecturers being the main reason.

CURRENT POSITION SUMMARISED

The current position can be summarised in Figure 1.3.

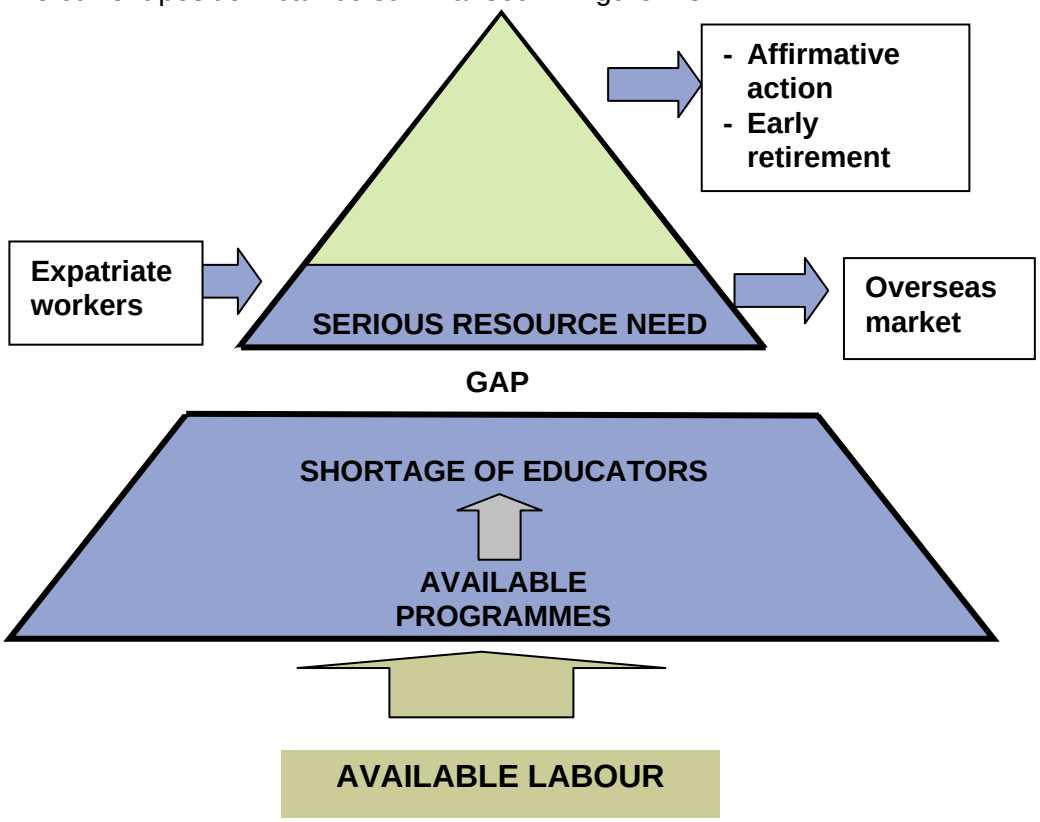

Figure 1.3: Summary of current labour position
Source: (Van Zyl, C.H., Van Vuuren, H.J. and Marx, H.J. 2006)

UNIVERSITY OF THE FREE STATE (UFS) APPROACH

With the problems identified, the UFS approach is used as a basis or hypothesis for a possible contribution towards solving some of the stated problems. This paper aims at the historical contributions of some of the initiatives in respect of training of construction stakeholders. The historical leasons may contribute to solutions.

As early as 1987, the UFS, in conjunction with the Bloemfontein Building Industry Development Foundation (BBDF), identified the need for training of entrepreneurs and managers of small construction firms. A process was initiated to identify suitable candidates for training as entrepreneurs in the construction industry.

The first programme developed was known as “The UOFS & BBDF Building Contractors course”. In 1994, this training initiative was renamed “The Centre for Construction Entrepreneurs” (CCE).

Programmes were mainly funded through sponsors. Financial support was, and is still received from and The Association of South African Quantity Surveyors (main sponsor), the Canadian Embassy, Alpha Cement (now Holcim), the Independent Development Trust and the members of the BBDF.

As part of the University’s community service programme, all study material, venues for classes, transport to and from classes, and refreshments were supplied free of charge to participants.

The following Programmes were introduced:

- Level 1 – Basic Building Orientation
- Level 2 – Construction Entrepreneurial Skills
- Level 3 – Advanced Construction Entrepreneurial Skills/Site management
- Level 4 – Specified Skills Development Programmes
    - 4.1 Housing development & maintenance
    - 4.2 Financing
    - 4.3 Property maintenance management
    - 4.4 Property valuation

These programmes culminated into the introduction of a two-year Certificate programme, with bi-annual intakes.

Table 1.1 indicates the number of students that successfully completed the programmes.

Table 1.1: Programme success table.

PROGRAMME	YEAR	NUMBER of STUDENTS.
UOVS/BBDF Building contractors programme	1987-1993	150
CCE Level 1, 2 & 3	1994-2006	256
CCE – 2-year Certificate Programme	1994-2006	107

Source: (Van Zyl, own table) University of the Free State: Centre for Construction Entrepreneurs annual reports, 1994-2006.

To prevent participants losing valuable time at work, all the above-mentioned courses are conducted in the evenings.

Advice bureau

An advice bureau was founded to assist past students as well as entrepreneurs. The main emphasis of supplied advice was for general management practices.

Short courses

As part of the UFS continued education programme, several short courses are available. These courses cover fields such as:

- **Facilities Management:** The objectives of the programme are to distinguish between asset management, property management, facilities management, maintenance management and to equip delegates with a knowledge base suitable for structuring and executing a facilities management strategy. Delegates should be able to develop a manual for facilities management for their enterprises and introduce it as a working guide to enhance services offered.

- **Health and Safety Programme for Construction Managers (HSPCM):** The HSPCM is an intensive programme for construction/project managers and client bodies and has been structured to provide delegates with a thorough practical understanding of contemporary

legal and other occupational health and safety requirements in the building/construction industry. The course covers the broad field of Occupational Health and Safety (OH&S), with the specific outcome that management can structure and introduce OH&S policies and procedures.

- **Intensive Project Management Programmes (IPMP):** The IPMP has been structured to provide delegates with a thorough understanding of project management and the application thereof in practice. The objective of the course is to cover the proven generic areas of project management and to introduce delegates to the more innovative and novel practices in project management. On completion of the course, delegates should be able to utilize the relevant concepts when executing projects and contribute towards future development of project management as a strategic tool in their enterprises.

VALUE OF CURRENT SHORT PROGRAMMES

Evaluation of short programmes by students and attendees indicated a strong need for, and a positive outcome of, the various training, development and mentoring programmes. (UFS training results, 2000-2006).

It is however suggested that mentoring of providers of training should be introduced. Evaluation of courses should continuously be done, to determine success and the levels of improvement and should be relocated to the various areas of the construction industry.

MENTORSHIP PROGRAMME

It became clear to the UFS that training alone does not provide the required levels of success and that a process of mentoring and mentor training is also needed.

Standards for the mentorship programme

Mentorship students are normally construction professionals or persons with extensive experience. These courses are of a high academic standard and go as far as to include psychometric testing. On completion of the curriculum, students are subjected to an official examination and if successful, a certificate is issued.

Supporters of the mentorship programme

The importance of the training and mentorship programmes is emphasised by the attitude and policies adopted by the following bodies and institutions, and the support that is received from these bodies, including positive support on government level:

- Construction Industries Development Board.
- Broad Based Black Economic Empowerment.
- Expanded Public Works Programme.
- Construction Education and Training Authority.

Unique programme/model

The mentorship programme is one of a kind in the country and is currently a model which was developed in conjunction with the Eastern Cape Development Corporation (ECDC) and has expanded throughout the Eastern Cape Province. (Lazarus, S. 2007:3). This model is now also in the process of being introduced nationally.

Success of the programme

Previously, it was found that contracts undertaken by small contractors with NQF level 2 CETA training, were unable to complete allocated contracts. Trained mentors from the programme were introduced, and surveys undertaken. It became apparent that what was learned in the classroom did not comply with what was needed on site to successfully execute the work. Management models were introduced to address the problem areas and shortcomings.

The success of the mentorship programme is now generally recognised and supported, and may become a development model for emerging contractors. University of the Free State research has drawn considerable interest in the construction industry, being the first to measure the development of emerging contractors. The results of this study presently form part of an assessment by the Construction Industry Development Board (CIDB) as a possible "best practice model" for South Africa

Figure 1.4 shows the Global Averages of running a small business

Figure 1.4: Global Averages of running a small business.

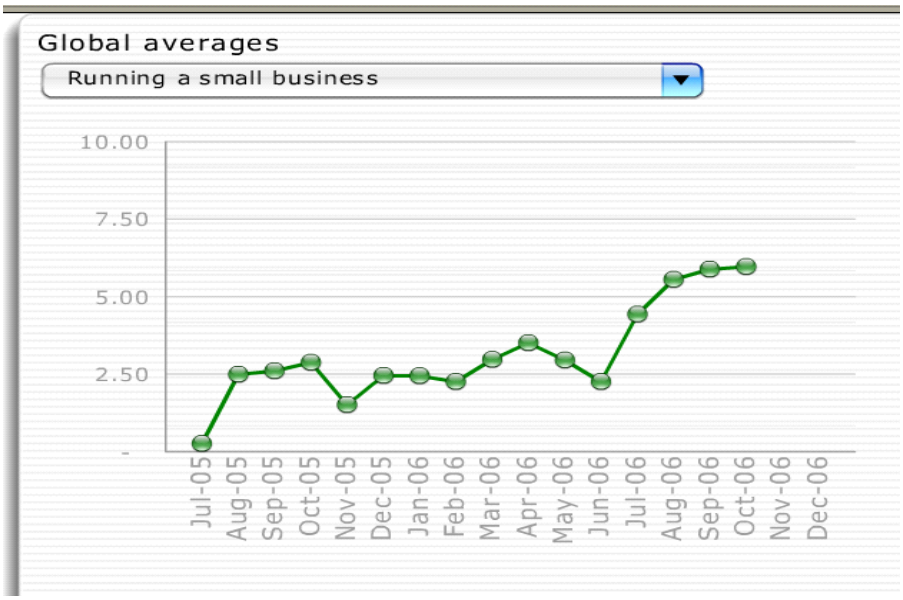

Figure 1.4: Running a Small Business – Global Averages
Source: Hauptfleisch 2007.

From the above Figure 1.4, it can be seen that intervention by mentors since June 2006 has shown a significant improvement in the performance of small business contractors (between 50-70%).

The experience learned from the UFS initiatives clearly indicates the need for such programmes, but also the levels of success and may show the way forward in respect of the contribution training providers may make in solving some of the critical resource needs in the industry.

ANSWERS FOR A BETTER RESOURCE NEED IN SOUTH AFRICA

The following answers may be important in respect of future development:

- The courses discussed make it possible for participants with no prior formal training to be trained in respect of construction industry needs. Real development can be achieved.
- Knowing the needs is important as this enables follow-up support.
- Mentorship programmes are well supported by the government, this may lead to further improvement and marketing.
- Education and training relieves fears of competition from outsiders and enhances income levels.
- Trained people may be encouraged to stay in South Africa and assist in the development of the country. This in turn may help to improve socio-economic problems that exist.

RECOMMENDATIONS

The following are proposed in respect of future training possibilities:

- The shortfall in middle management in the construction industry must be addressed, it is imperative that the building- and civil industries realise that funding for training is their responsibility, and that total buy-in by them is required.
- Education facilities like universities and technicons should avail their technical staff to facilitate training of people who are in employment.
- It is also important that institutions participate in a national programme, perhaps under the guidance of central government, to ensure that a uniform standard is maintained.
- Further development of training programmes for adult learners in the industry is encouraged.
- The UFS model may assist providers of training to develop their own programmes and in so-doing add to the solutions of the training problem.

CONCLUSION

The discussed programmes offered by the University of the Free State strives to satisfy all three key performance areas of a tertiary institution, namely:

- EDUCATION in the construction field.
- RESEARCH of construction industry needs.
- COMMUNITY SERVICE by improving the socio-economic status of disadvantaged individuals.

Community engagement and training of adult learners in the construction industry may be a realistic contribution to tertiary education institutions in Africa. This may dynamically add to the solutions of resource problems in the construction industry.

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