



CAPACITY BUILDING IN PROJECT MANAGEMENT EDUCATION AND TRAINING AT KENYATTA UNIVERSITY

Joanne Nyaguthie Mahugu^{1*}, Dr Juliet Muiga¹

¹ Construction and Real Estate Department, Kenyatta University, P.O. Box 43844-00100, Nairobi

* Email: n.mahugu@gmail.com

Abstract

Major social and economic developments in Africa, specifically in Kenya are delivered through infrastructural projects funded by the Kenya Government and donor agencies. There is a paradigm shift from the traditional way of running infrastructure projects with architects and civil engineers being the project managers to construction project managers being recognized as the lead champion in execution of these projects. Consequently, a great need of project management skills has been created in Kenya. Specifically, there is a great need to train construction project managers to provide objective, accurate and reliable cost assessments for investment funding and project administration as well as ensuring the timely execution of especially large scale infrastructure projects. The paper discusses how a response to this need was developed in Kenya. In particular, it focuses on the undergraduate Construction Management and Real Estate Programme developed at the Kenyatta University.

Key words: *Construction project management, training, education, Kenyatta University.*

1 Introduction

The building construction sector in Kenya has been growing at a rapid rate. According to the Kenya National Bureau of Statistics (KNBS), the quantity of cement produced in Kenya increased from 353,488 MT in June 2012 to 742,252 MT in June 2021. Consumption of cement in the real estate industry for example, rose from 285, 379 MT in June 2012 to 727,478 MT in June 2021. This growth can be attributed to: Infrastructural developments such as improved and new roads; service utility connections such electricity and water; upgrade of key airports; demographic trends such as rapid urbanization at 4.4% p.a against the world's 2.5% and population growth averaging at 2.6% p.a. There is increased awareness of the role of construction project managers in the growth and transformation of Kenya and the importance of professionally-trained project managers to manage these projects.

2 The challenges of managing and leading projects in Kenya

For several decades in Kenya especially where large projects are concerned, it has been noted that these projects take a long time to begin, experience delay in completion and disputes and extra costs are a common feature. Major infrastructure projects are usually economic (e.g., buildings, roads) or social nature (e.g., hospitals, schools) (Love et al., 2020). As Stiglitz (1998) noted an economy needs institutional infrastructure to succeed. George et al. (2016) also noted that the greatest challenge to projects in Africa emanates from institutional voids. This simply means the absence of project-supporting institutions, contract-enforcing mechanisms and efficient transport and communication networks. African Union in its 2063 Agenda, has identified weak capacity in public and private sectors and at individual, organization, society levels as “the missing link” for the successful project delivery in Africa (African Union, 2015). These deficits in capacities include shortages of critical individual project management skills, lack of astute leadership, inhibiting mindsets as well as weak institutions. (ACBF, 2016; Chrysostome, 2019).

Projects in Africa often underperform in terms of the timelines as well as their contract budget. Additionally, sometimes they fail in terms of their benefits as well and stakeholder and/or beneficiary expectations (Ika, 2012, 2018; Einhorn et al., 2019; Higginbottom et al., 2021). An example is the Nairobi-Mombasa Expressway in which Kenya signed a deal with US firm Bechtel for construction of a Sh300 billion



expressway between Nairobi and Mombasa. The two parties are yet to agree on the project financing. Kenya wants the 473km road to be built through the Public Private Partnership (PPP) model while Bechel is opposed to it as it concludes that the project will cost Sh540 billion over next 25 years.

Such project underperformance in Africa may be due to structural (political, economic, physical/geographic, sociocultural, historic, demographic, and environmental), institutional (e.g., collusion/corruption, capacity building, lack of political support, too much political interference, governance) and managerial (initiation, planning, implementation, and monitoring and evaluation) problems (Ika, 2012).

3 Discussion

3.1 Construction Project Management Training in Kenya

In Kenya, the challenges in project implementation in the last two decades, clearly highlighted a need for project management training. A competent construction project manager depends on his/her motivation, work ethic, training and knowledge. Motivation is greatly influenced by the working environment which is influenced by the employer and the response of the employee to that environment. The work ethic attribute also has some relationship with an organization culture. For example, a construction project manager who is employed in a government facility has a different work ethic from one employed in a private competitive sector. A national culture and an employee's moral values also contribute to their work ethic.

The last two factors of competence namely education and training are usually the responsibility of a training institution such as universities. Education provides the knowledge related to the occupation, the external environment and the organization culture. For example, civil engineers attend five years in the university learning various aspects of engineering e.g. structures design, civil works design of roads, water works etc. Training provides skills that are directly linked to the processes or tasks of the working environment e.g. creating bar bending schedules when designing a structural floor slab. Another example is medical doctors spend six years in university attending lectures on the human anatomy as part of their medical education. Medical doctors' skills and techniques are only developed when they attend practical sessions with patients in clinics or hospitals.

3.2 Kenyatta University Response Strategy

The Department of Construction and Real Estate at the Kenyatta University was established in 2015 to meet the increasing demand for construction project managers in the country. The department has two programmes namely: the Bachelor of Science in Real Estate and the Bachelor of Science in Construction Management. The specific objectives of the department are:

- Provide students with sound theoretical knowledge and practical skills to enable them think analytically and conceptually in finding solutions to problems in building and civil engineering construction.
- Train students to provide independent, objective, accurate and reliable capital/operating cost assessments for investment funding and project administration and control;
- Create the capability to analyze investments and developments for the guidance of project owners, financiers and contractors.
- Provide training in specialized skills and techniques which students to interact with other professionals in the construction and real estate sector;
- Train students on techniques for oversight in the organization, scheduling.

This paper will focus on the Bachelor of Science in Construction Management. Some of the key units taught in this undergraduate programme include: soft skills such as communication skills and critical thinking; construction equipment and methods; construction materials and testing; structural analysis; construction contract administration; cost analysis; construction planning and scheduling to name a few.

The two courses offered at the Department usually take four years to complete undergraduate studies. During the four year study, the students are also expected to attend three industrial attachment so that they can see the application of their education through training. The basic admission requirement to enrol is the minimum entry



requirements set for entry into the public universities, which is at least an average grade of C+ in the Kenya Certificate of Secondary Education (KCSE).

3.3 Quality and Programme Performance and Review

Quality assurance ensures that the graduate produced is competent to handle work place issues and challenges in a more efficient, effective and innovative way. Kenyatta University usually does this through: programme development approval and review; recruitment of competent lecturers with minimal education of Masters; student selection who meet set criteria; course delivery; student assessments and compulsory industrial attachments.

The programme continuously seeks to increase its global appeal through soliciting of international students, developing international linkages e.g. IASTE student exchange programme as well as seeking accreditation from relevant accredited government bodies and also raising awareness of the programme in international events such as the annual international IEK conference.

4 Conclusion

The need for project management skills is ever increasing because of a paradigm shift of all economic sectors. Organizations, whether private or public in nature, have realized that the most economic, efficient and effective way of running projects especially large scale projects involves construction project managers. The leadership of construction project managers is crucial for success, both short-term and long-term (Diallo and Thuillier, 2004; Ika et al., 2010; Kaboré et al., 2021). At Kenyatta University, the Department of Construction and Real Estate Management was created to offer long term training in project management skills, from undergraduate level to PhD level. Despite numerous challenges, the programme is now in its sixth year of enrollment.

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