Research Report on the Assessment of Built Environment Candidacy Programmes in South African Public and Private Sector

Abstract

Built environment professionals are the backbone of South Africa's infrastructure. For the economy to create the many opportunities that citizens demand, infrastructure must be nurtured and expanded. Currently the country faces a built environment skills challenge that is hindering service delivery efforts. Additionally, the professional registration statistics indicate that candidates are not translating to professional status at the desired rate. Little is known about the efficacy of candidacy initiatives and there is paucity in 2023, the CBE conducted a study that examined the nature of built environment candidacy programmes within the private and public sector. The study used a mixed method approach to collect data. The study found that Built Environment (BE) candidacy programmes are not structured/standardised in terms of duration, renumeration or policy. Another key finding was that there is a shortage of registered professionals in-house resulting in the deficiency of supervisors and mentors who are willing to guide candidates towards attaining professional registration. In addition, internal mentors are not motivated to mentor candidates because of a lack of incentives and high workload. Furthermore, the data shows that majority of employers lack structured mentorship programmes. In the public sector, infrastructure projects are outsourced, thus limiting the exposure that BE candidates require for progress towards professional registration. The research findings also indicate that there is insufficient funding to massify and sustain BE candidacy programmes in the country.

Introduction

Currently, the country faces a Built Environment (BE) skills challenge that hinders service delivery efforts. Like other technical fields, the BE is competing for its share of the talent pool. The BE skills challenge manifests in a general decline of skilled professionals and the slow rate of skills growth, particularly of previously disadvantaged groups.

Department of Public Works and Infrastructure. (2020) opines that Research in public works and infrastructure (PWI) departments have a total of 1465 technical personnel, inclusive of all categories of the BE professions. Most technical personnel are registered as candidates (645) and 475 technical personnel are registered with their respective councils.

The research also highlighted that:

- most professionals are ageing
- effective mentorship processes to ensure skills transfer are lacking
- most interventions are misaligned (do not address attraction in occupations)
- PWI has poor retention policies and strategies while the occupation specific dispensation (OSD) does not cater for some categories (e,g. construction project managers, the entire landscape profession and senior architectural technologist) Council for the Built Environment. (2022) stated.

Department of Public Works and Infrastructure. (2020) stated that in most provinces within the public sector there is a total lack of town planners, property valuers and health and safety officers. The nature and scope undertaken by the PWI is not appealing to practicing professionals. Within PWI, some technical personnel have been candidates for more than 10 years and in some instances, candidature lapses. What was evident is there is little motivation for technical personnel to pursue professional registration. The service delivery model of the sector is not supporting the envisaged candidates' throughput as most infrastructure-related functions are outsourced to consultants. Interviews with human resources professionals highlighted that

pipeline planning is not affective and few candidates within the public sector migrate to professional status.

PWI has 345 technical personnel who are not registered. These individuals are in possession of BE qualifications but the roles that they are performing require professional registration, However, the BE sector does not have a legal framework that enforces professional registration.

Statistics indicate that the BE sector is untransformed as the white population group is the most dominant race in the BEPs, accounting for 66% of the registered persons across the six professions. The African population is a distant second, accounting for 24% of Built Environment Professionals (BEPs), followed by Indian and coloured populations, accounting for 6% and 4% of the BEPs respectively. Guaranteeing that candidates can upgrade to professional level will not only address the problem of ageing professionals but will further contribute towards the goal of transforming the industry.

Characteristics of Candidacy Development Programmes

Lawless (2016) opines that the need for BE professionals does not refer to graduates who have completed the theoretical stage of education, but rather experienced professionals. Thus, this requires development through a structured training process in the workplace, from graduation to professional registration. In the past, the age of BEPs was evenly distributed from the most senior to graduate level. Currently, this is not the case because many BE graduates require structured training but there is a lack of capacity to develop young graduates into professionals.

Lawless (2016) development of candidates has been recognised as an important training phase for many BEPs. Candidacy means the practical workplace experience that is an occupational qualification as determined by the relevant professional body. The Engineering Council of South Africa (ECSA) reports that its candidacy programme has the following components:

Engineering Council of South Africa. (2015) determined that the candidate is employed in a candidacy programme by the employer who will provide training and experience.
2. The competency standards generated by ECSA are used as workplace standards. The employer must make specific reference to the workplace standards in its workplace skills plan.
3. If not already registered, the trainee should register in the appropriate candidacy category with ECSA.
4. The employer provides supervisors internal to the company and a mentor who should preferably be internal.
5. Structured work experience is provided by the employer to the candidate. This work is managed using a standard format training record.
6. When the candidate is considered ready for registration, he or she applies to ECSA for registration. The summative assessment of competence is performed by ECSA.

Scope of Work

Organisations in South Africa have documented the process of infrastructure delivery through six interrelated stages (also called the scope of work), which encompasses the services to be rendered by the BEPs, along with the candidates en-route to professional registration. BE candidates should perform work in the following six stages, project initiation /briefing, concept and viability, Design Development, Tender Document /procumbent, construction, Documentation, and Management close-out Worthy of mention is that not all BE candidates are required to perform work in all of these six stages. Each of the professions highlight that a candidate in such a category is only mandated to have exposure as required. For example, a candidate under the registration category of an architect would require training in all of the stages from project inception to closeout.

Engineering Council of South Africa. (2015) discovered reasons on the study hampering the professionalisation of engineers in local government: a) lack of interest in professional registration (perceived lack of benefits), b) perceived lack of power and oversight of ECSA over unregistered engineers, c) lack of financial support for continuous professional development (CPD) and annual fees, d) employment of underqualified, inexperienced political employees and consultants, e) low remuneration, f) poor career progression prospects, g) high workloads and lack of exposure, h) limited respect for professional integrity and work ethics by senior leadership.

Little is known about the efficacy of candidacy initiatives and there is paucity of research analysing the impact of candidacy programmes implemented within the public and private sector. This study aims to address this gap.

Methodology

Presentation and Analysis of Quantitative Data

This section presents the data collected from human resource development professionals and coordinators of BE candidacy programmes within public and private sector in South Africa.

Demographic profile

Racial Composition

The study comprised 815 BE candidates from the sampled public sector institutions. Only the data for 736 candidates was disaggregated in terms of race, gender, discipline and age categories. Of the 736 candidates, there are 624 African, 25 white, 51 Indian and 46 coloured candidates. Further, there are 1046 BE professionals. The data for 964 professionals was disaggregated in terms of race, gender, discipline and age categories. The study found that there are 347 African, 10 white, 21 Indian and 3 coloured persons who are not registered with one of the respective councils.

Gender Composition

The table below shows the gender composition

Gender	Candidates	Professionals	Unregistered	Total
Male	456	771	236	1463
Female	274	193	146	613
Total	730	964	383	2076

Age Categories

Results show that in the 16-29 years category, the number of BE candidates, professionals and unregistered persons numbered 204, 30 and 86 respectively. Moreover, the 30-39 years category has 338 candidates, 559 professionals and 184 unregistered persons. Results further show that there are 154 candidates, 236 professionals and 34 unregistered persons in the 40-49 years category. It is further demonstrated that there are 31 BE candidates, 106 professionals and 23 unregistered persons in the 50-59 years category. In the 60-69 years category, the number of BE candidates, professionals and unregistered persons numbered 9, 29 and 5 respectively.

BE Disciplines

The study consisted of 554 engineering, 91 quantity surveying, 118 construction and project management, 16 architectural, 0 landscape architectural, 9 property valuation, 14 town planning, 2 environmental assessment and 11 geomatics candidates. Moreover, the public sector had 559 engineering, 102 quantity surveying, 143 construction and project management, 142 architectural, 0 landscape architectural, 4 property valuation, 40 town planning, 31 environmental assessment and 25 geomatics persons who are registered professionals. There was a total of 386 unregistered persons.

Results from the questionnaires indicate the following:

1. Provision of well-structured work experience to candidates: 60% of respondents agree that their institution provides well-structured work experience.
2. External mentors: 40% of respondents strongly agree, while a further 20% agree that their institution relies mostly on external mentors to facilitate BE candidacy programmes.
3. Average number of candidates per internal and external mentor: 66,6% of respondents indicate that a single mentor usually provides mentorship to three or four candidates.
4. Secondment: 83,3% of respondents agree or strongly agree that their institution places its BE candidates on secondment for exposure to live projects.
5. Credibility of assigned mentors: 67% strongly agree that their institution ensures that BE mentors assigned to candidates are credible persons.
6. 80% of respondents highlight that their institution does not have enough internal mentors to facilitate BE candidacy programmes.
7. Ongoing assessment of candidates' progress: 83,3% of respondents agree that mentors in their institution asses the candidates' progress on an ongoing basis.

The conduciveness of working environments within public sector institutions

Availability of Training Fields/Academies

50% of respondents agree that their institution has training fields for their own BE candidates. However, 16,7% of respondents strongly disagree that institutions have training fields.

Disruption of Live Infrastructure Projects

83% of respondents agree that the disruption of live onsite infrastructure projects delays the success of BE candidates in their institution.

Mentors' Lack of Commitment

53,9% of respondents either disagree or strongly disagree that mentors' lack of commitment is proportional to the success of BE candidacy programmes.

Failure to Submit Annual Logbooks

The total of agree and disagree responses are equal, which makes it difficult to discern whether candidates' failure to submit logbooks to their professional council on time is a challenge or not.

Budget Allocation

33,7% of respondents signal satisfaction with the budget allocated for BE candidacy programmes. However, the cumulative percentage of the satisfied is still below that of the dissatisfied ones. This indicates that majority of public sector institutions grapple with insufficient budgets.

Research Findings

The study found that BE candidacy programmes are implemented to address the shortage of critical and scarcity of BE skills in public sector institutions. BE candidacy programmes across the public and private sector are not structured in terms of duration and remuneration. Another finding is that employers lack structured mentorship programmes. What is also evident, is the lack of soft skills of mentors required to support BE candidates.

The study highlighted that employers have a shortage of mentors to guide and supervise candidates towards attaining professional registration. Internal mentors are not motivated because there are no incentives. The findings also highlight that the remuneration for candidates is too high and not market related. As a result, there is little difference in salary between candidates and recently professionalised personnel. The first challenge was public sector institutions' reluctance to share data and information since the enactment of Protection of Personal Information Act (POPIA). Some data submitted by departments lacked demographic variables such as age, discipline and race. Secondly, since participation in the study is voluntary, it resulted in delays in returning completed questionnaires.

CBE Interventions

The CBE has developed and implemented various interventions to enhance the efficacy of candidacy programmes in the country. They include the following:

- CBE Structured candidacy framework
- Built Environment Professionalisation and Skills Development Strategy for the Public Sector.
- Built environment national logbook.
- Transformation collaborative forums to be used as a platform to discuss industry issues.

In collaboration with the CBEP, collect data to develop an integrated database system for BE workforce planning.

Monitor professional registration throughput with CBEP and devise ways to improve registration outcomes.

Councils for the Built Environment Professions (CBEP)

Digitise the application process for registration with the intention of shortening the registration process.
Develop systems to ensure continuous feedback to applicants on appeals of rejected applications.
Collaborate with voluntary associations (VAs) to create a training programme for mentors and establish a national database. Collaborate with government departments and the private sector to re-introduce and support vacation work to contribute towards work experience.

Conclusion

The study highlighted that built environment candidacy programmes are unable to achieve their intended outcomes due to the lack of uniform guidelines for candidacy programmes. Additionally, the infrastructure delivery model of public sector limits and inhibit work exposure and development, shortage of registered built environment professionals to act as supervisors and mentors for candidates and poor coordination of capacity building initiatives intended to improve the outcomes of candidacy development programme

Recommendations

- The CBE, in collaboration with the six Councils for the Built Environment Professions (CBEP), roll-out the skills pipeline strategy for structured candidacy to ensure accelerated professional registration outcomes.
- CBEP to continuously monitor professional registration throughput and devise practical strategies to improve registration outcomes.
- CBEP to review CPD policy and make provisions for mentorship.

References

Allyson, L. (2016) *What has been done and still needs to be done to skill South Africans to deliver infrastructure projects* .

Construction Industry Development Board (2020). *Standard for developing skills through infrastructure.* CIDB

Emuze, F. Mputa, S and Botha, B. (2015). *A phenomenological study of candidate professional development on South African construction.*

Lawless, A. (2017). *Needs and numbers: Engineering study in the SADC region.*

Research Report on the Assessment of Built Environment Candidacy Programmes within the Public and Private Sector.

Developed: 31 March 2023

Approved

Digitally signed by Dr Msizi Myeza
Date: 2025.04.07 17:11:34 +02'00'

Dr Msizi Myeza

Chief Executive Officer