APPRENTICESHIP SCHEME AS A SUSTAINABLE MECHANISM TO BRIDGE THE SKILLS GAP IN INDIAN CONSTRUCTION INDUSTRY

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ABSTRACT

Innovation-oriented knowledge creation has become a priority for Higher Education Institutions that address the challenges of low employability. The situation is worse in India due to the unemployability of graduates higher than that of other youth. In India, a major skills and knowledge gap in the Built Environment (BE) has been highlighted and one of the recent reports states that the graduates' skills and employer requirements as crucial to address the gap between skills demand and supply to boost the growth (Rooj, 2022). The majority of the construction organizations operating in India face problems in recruiting staff, noting that graduates lack qualifications, skills, knowledge, and motivation and they are not fit for the job. Apprenticeship programs offer a combination of education and skills to the student, create an innovative employer-funded financing model, help organizations create their talent pipeline, and help universities embed employability for their courses. Linking the HE programs to learning-by-doing and learning-while-earning will make HE more inclusive and demand-driven. This paper addresses the potential of introducing apprenticeship models in collaboration with HE institutions and the industry. Apart from the detailed literature review, data was collected from 10 interviews among academics and industry professionals and analyzed through NVivo 14 software. The results identified the current skills gap in most of the built environment disciplines (real estate and infrastructure) and emphasized developing close ties or strengthening the existing ties between industry and academia, modernization curriculum to accommodate sustainable apprenticeship programs towards minimizing such skills gap in the industry. The results further highlight the importance of policy-level backing to initiate such innovative models.

Keywords: Skills gaps, skills demand, apprenticeship programs, built environment, Indian construction sector etc.

BACKROUND AND RATIONALE

Construction Industry is India's one of largest industries, second only to the agriculture sector. The sector employs around 33 million people, both directly and indirectly (IMACS, 2022) in real estate and infrastructure (together consider as built environment) sectors, where real estate sector accounts for 24% of India's construction GDP, while the infrastructure sector accounts for 76%. During the 2021 financial year, the industry gained approximately 7.9 billion U.S. dollars of foreign investment equity inflow (IMACS, 2022). With this emerging economy, demand for commercial real estate in terms of office space, hotel space, warehouse space, and retail shopping centres has increased. The increase in the demand for commercial office space is largely attributed to the expansion of the outsourcing and information technology sectors, as well as organized retail. Housing demand is expected to increase and is projected to expand over the 2025-2030 period, with an estimated value of Rs 2,171 billion (IMACS 2022).

As India being the largest populous nation in the world with 1.43 billion population (Countrymeters, 2023) and nine metropolitan cities known for their rapid pace of life and large

urban population densities. This population growth has triggered the demand for real estate and urban infrastructure, which subsequently has created opportunities for employment in all sectors of construction industry.

The industry is currently facing a number of challenges due to lack of skilled labour (Hussain, Xuetong and Hussain, 2020) especially professionals with required skills and knowledge to fit for the existing market needs (TAGGD & CII, 2021). The skills gap is identified as a significant issue leading to many more professionals to be reskilled or up skilled to survive in the industry. Some of the recent reports have introduced the required skills set for some of the job roles; however, this has limited to a few due to lacks in clarity in some of the job roles and specifications. Around 26.5 % of graduates from civil engineering and architecture disciplines are employable in the industry (The Ministry of Statistics and Programme Implementation, 2023); however, the rest of the graduates are awaiting long time to find their appropriate jobs or change their job roles due to lack of opportunities or being unemployed. In fact, this has become a huge burden to the nation. On the other hand, the industry professionals continuously blamed that the graduates who secured jobs in the market do not have required skills and competencies to survive in their jobs unless they trained appropriately. Hence there are some mismatches in their education and the industry needs, which need to be addressed immediately.

ADOPTED RESEARCH METHODS

In addition to a preliminary literature review in relation to skills gap in construction industry, the study adopted interviews among the construction industry professionals and academics in India to identify the current debate on skills gap and explore mechanisms to solve the issue in certain extent.

The industry experts represented small to large scale organizations with over 10 years of professional experience. The professionals are from varied disciplines in the built environment such as architects, civil engineers, developers, contractors, MEP consultants, facility managers, construction/project managers, and proprietors of construction company and academics Interviews were undertaken both online (Zoom, MSTeams) and face to face. All interviews were recorded, transcribed and analyzed through NVivo 14 software to develop appropriate themes.

FINDINGS

The literature explains that some of the immediate graduates lack key competencies that are required to help companies grow, innovate, produce products and services in a timely manner, meet quality standards and comply with environmental and social regulations (IMACS, 2022; Yadav & Indrakumar, 2015; TAGGD & CII, 2021; Directorate General of Employment, 2022). On entering the workforce for the first time, the graduates are taught ‘how to do something’; however, they lack the depth of experience and strategic thinking skills that come with formal education.

As a sustainable learning model, the paper proposes apprentice scheme during their study period at particular educational institution. Apprenticeship programs offer a combination of education

and skills to the student, create an innovative employer funded financing model, help organizations create their talent pipeline and help universities embed employability for their courses. By linking the HE programmes to learning-by-doing and learning-while-earning will make HE more inclusive and demand-driven. Therefore, Industry Academia co-operation is highly needed to deliver such innovative models as they are resource intensive. The interviewees agreed on the proposed new model and some of them have suggested implementing this in the policy level and cascade this into the organizational levels with some financial incentives. Most of the interviewees accepted the need to collaborate with each party (industry – academia) in achieving such long-term goals, even though, it is still challenged by the factors like lack of strategic management, difficulties in providing appropriate employability skills for students and the staff of HEIs.

CONCLUSION

The paper acknowledges the current skills gap in Indian construction industry and emphasises the urgent need for a practical solution to overcome such problems. The apprenticeship scheme has been proposed as a practical method to mould the graduates industry ready by connecting both the industry and the academia in built environment education. The challenges like a need of new curriculum, assessment strategies and funding for apprentices have been acknowledged.

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