

Effects of Recruitment, Selection and Training on Construction Project Team Performance in Australia

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Abstract:- The article provides a review and synthesis of previous research findings backed by a pragmatic perspective pertaining to the effects of recruitment, selection, and training on construction project team performance in Australia. The paper has been structured in a manner that includes a brief introduction to the topic, definition of the problem statement and methodology, definition of recruitment, selection and training, importance of recruitment, selection and training for construction projects, investigation of current state of recruitment, selection and training in global construction projects and its relatability to Australian context, ascertainment of shortfalls and challenges of present approaches and how those impact the construction team's performance at present, and finally analysis of existing strategies and novel concepts to overcome the shortfalls of existing recruitment, selection, and training practices. The study has been concluded with actionable recommendations to improve the existing recruitment, selection and training processes in a way that enhances the overall performance of construction projects, which has been verified with the assistance of industry professionals. The author anticipates that the content provided in this article shall be beneficial for effective decision making by organizational leadership as well as human resources personnel to establish and retain high performing construction project teams.

Keywords:- Recruitment, employee selection, employee training, recruitment in construction projects, employee selection in construction projects, training in construction projects, recruitment and high performing construction teams, employee selection and high performing construction teams, training and high performing construction teams, recruitment in Australian construction projects, employee selection in Australian construction projects, training in Australian construction projects.

I. INTRODUCTION

Construction projects are known to be the backbone of the global economy, since most of the other industries are established based on the infrastructure that has come to fruition due to the efforts of the construction industry. Construction industry is the largest, with a direct contribution of up to 6% of the global GDP (Gerbert et al., 2016). However, it is also the industry accounting for the highest number of fatalities and other non-fatal industries and is known to encounter significant

labour shortages and low efficiency in comparison to other industries (Gerbert et al., 2016).

Hence, the above alongside the fact of the significant effort driven nature of construction projects that is carried out by a substantial number of individuals provide evidence about the criticality of proper human resources functionalities to ensure safety of associated individuals whilst maintaining adequate efficiency for on-time, on-budget, compliant delivery of projects.

Further, due to its significant impact on the environment with at least 40% of total GHG emissions stresses the importance of incorporating green human resources management concepts to ensure that a culture that is conducive to sustainability is established within the organization (Yin & Li, 2019).

Employee performance which plays a vital role in influencing the efficiency of a construction project is discerned based on the ability, experience, expertise, and skill level possessed by the employee to align with the objectives and goals of the company (Paais & Pattiruhu, Jozef R, 2020). According to Rozi and Sunarsi (2020), provision of assistance for effective decision making, evaluation of performance goals, provision of upskilling and assistance for adaptation, definition of appropriate lag and lead measures around employees significantly influence employee performance, thereby confirming the relationship of effective and efficient recruitment, selection and training processes with employee performance (Aldhuhoori et al., 2022).

According to Gardi et al. (2020), the performance of an organization is measured using the indicators, efficiency of delivery, effectiveness of product/process, relevance to stakeholders and strategic objectives, and financial viability; and the human resources functionalities namely, recruitment, selection and training should be in alignment with the above parameters.

As per the resource-based theory human resources are the core competency of an organization and their efficiency and effectiveness influence the level of competitiveness of the organization (Davis & Simpson, 2017). Performing effective recruitment processes which include selection of the best fit for positions and provision of training for upskilling to ensure validity of the necessity of the resource falls under the purview of the human resources management personnel of the organization (Abdullah & Othman, 2019). Further adoption of

efficient HR practices has also shown to enhance employee retention within organizations which could be vital due to the high turnover rates experienced in construction projects (Alajlani & Yesufu, Lawal O, 2022).

Prevalence of higher number decision making errors within the construction industry has warranted the need for recruitment and selection of individuals with the appropriate competencies, and continuous training to align their competencies with the changing needs of the organization based on its growth (Jazebi & Rashidi, 2013).

Given the scarcity of literature around effects of recruitment, selection and training on team performance in construction projects, this study focuses on addressing the gap alongside an analysis of the effectiveness of existing as well as proposed strategies whilst providing recommendations that could be adopted to enhance performance of construction project teams in Australia.

II. METHODOLOGY

The study has been completed in the form of a literature review and synthesis (summary). The literature review has been performed using the keywords “Recruitment in construction projects”, “Effects of selection in construction projects”, “Effects of training in construction projects”, “Effects of recruitment, selection and training on construction team performance”, “Recruitment and construction team performance in Australia”, “Selection and construction team performance in Australia”, “Training and construction team performance in Australia” by utilizing the google scholar search engine. A total of 113 journal articles (including other sources) have been utilized for the review. The findings from the review have then been perused and classified into broader topics “Definition of Recruitment, Selection & Training”, “Importance of Recruitment, Selection & Training for Construction Projects”, “Current State of Recruitment, Selection and Training in Global Construction Projects and its Relatability to Australian Context”, “Shortfalls and Challenges of Present Approaches and how those Impact the Construction Team’s Performance at Present”, & finally, “Analysis of Existing Strategies and Novel Concepts to Overcome the Shortfalls of Existing Recruitment, Selection, and Training Practices” which could be adopted to enhance the performance in construction project management teams. The recommendations have then been verified for relevance and applicability with the assistance of 5 selected industry practitioners who possess at least 10 years of Construction Project Management experience.

III. DISCUSSION

A. Definition of Recruitment, Selection and Training

Recruitment, selection and training are considered as the core functionalities of a human resources department of which recruitment is identified as the primary function as it plays the most pivotal role in attracting adequate amounts of high quality candidates which will then be used to source/select the best fit for the job openings based on the alignment of their

competencies and values with the requirements (Abdalla et al., 2021; Hamza et al., 2021).

Selection and onboarding are often considered a subset of the recruitment process of which selection is the process that is responsible for sourcing the most appropriate candidate out of the pool of applicants to fill the vacancy of a particular role (Herschberg et al., 2017; Hamza et al., 2021).

Training is the functionality that assists in retaining and enhancing the expertise and attitude of employees that is conducive to the well-being of the organization in terms of productivity and overall performance (Alsayyed et al., 2019). Training is influenced by several factors, namely, supplies, emotional and financial support which enable systematic alteration attitudes, expertise and behaviours of employees in a way that aligns with the strategic direction of the firm (Hee & Jing, 2018; Alsayyed et al., 2019).

Out of the training planning techniques used at present, according to Vathanophas (2007), adoption of the “Job Competence Assessment” technique is a common practice within United States to classify employees based on their performance and thereby finding competency areas that are lacked within underperforming employees that could benefit from a relevant training program that shall address it.

Due to the growing need for sustainability and environmental related compliances, green human resources management has risen to prominence through its approach of transforming conventional HRM practices to align with the organization’s environmental and sustainability related requirements (Jabbour, 2013; Jabbour, 2015; Jabbour, & Beatriz, 2016). The effectiveness of green HRM practices is its wholesome approach of aligning organisations human resources performance with the environmental as well as economic performance unlike the traditional practices which centres only on the latter (Tang et al., 2018).

The effectiveness and efficiency of an organization’s environmental approach relies on the degree of alignment of employees’ individual goals with the overall strategy of the organization which manifests the importance of the role that is deemed to be played by the HRM practices through its core functionalities namely, recruitment, selection, training, performance and reward systems (Renwick et al., 2013). This is reflected through recruitment and selection of candidates who possess the inner urge of being an advocate for environmental conservation whilst having the required expertise to achieve the environmental goals, compensating and rewarding in alignment with the accomplishment of environmental goals and exit policies which provide adequate awareness and practice to be carried to other workplaces in the view of influencing the conduct of the global industrial arena in its entirety (Grolleau et al., 2012; Kim et al., 2019; Yusoff, Yusmani Mohd et al., 2020; Nisar et al., 2021).

According to Rayner and Morgan (2018), based on his study surrounding 5 leading Australian construction companies has manifested that the ability, motivation and opportunity to take decisions that impose minimal impact on

the environment have greatly influenced the green/sustainable behaviour of employees. Further, based on studies conducted among an Australian multinational enterprise, it is found that the atmosphere within the organization and the personal values of the employees alongside the overarching leadership style, organizational structure and the culture are key predictors and influencers of the effectiveness and efficiency of the green HRM practices administered by a firm (Dumont et al., 2017; Shafaei et al., 2020). HR teams have also found to consider its environmental conscious approach as a corporate social responsibility (Shafaei et al., 2020).

Hence, as mentioned above, it is vital that recruitment, selection, and training alongside other human resources management practices are being administered in a manner that enables all construction projects to diminish their detrimental effects on the environment whilst ensuring realisation of project objectives thereby, resulting in improved overall performance of projects through sustainable improvements of team performance by adopting concepts such as green human resource management (Anton et al., 2016).

B. Importance of Recruitment, Selection, & Training for Construction Projects

It is a well-known fact that a company's human resources, and the core functionalities of the human resource management processes play the most significant role in establishing and maintaining the competitive advantage of the business over its competition (Darvazeh et al., 2022). This is manifested by the practice of almost all successful and accomplished organizations that tend to recognize employees as their greatest asset and are hence, on a mission to continuously improve their levels of expertise, motivation and overall performance (Suriyanti, 2020).

Recruitment, which is considered as the most critical component of human resource management functionalities, is responsible for attraction and selection of superior talent to enable the organization to obtain the competitive edge (Ore & Sposato, 2021). With the increasing costs of candidate acquisition due to competition, and costs linked to eventuation of risks due to recruitment of non-compatible/incompetent individuals to roles, successful organizations have paid close attention to improving the recruitment and selection processes in a way that is conducive to the strategic direction of the business (Armstrong & Taylor, 2023).

Based on the research done on Nigerian construction industry, it is found that employee selection which is often considered as part of the core recruitment functionality plays a significant role in influencing the overall performance of employees through selection of candidates that are best fit for the roles in terms of the level of competency as well as the working attitude to perform the duties delegated to them (Aldhuhoori et al., 2022). As per the person-job fit approach/theory, effective employee selection processes enhance performance not only due to compatibility but also since it motivates the employee to perform at the best of his/her abilities which could also result in increased employee retention (Aldhuhoori et al., 2022).

According to Aldhuhoori et al. (2022), based on the study done on UAE public sector construction corporations, employee training is found to influence employee performance than its close followers, recruitment and selection. Workplace training has resulted in increased sales and productivity alongside job growth which has subsequently enhanced job satisfaction among employees (Rui et al., 2015; Detsimas et al., 2016; Aldhuhoori et al., 2022). This is proven by DanviladelValle et al. (2019), based on the study conducted on employees from Lebanese construction through which it manifests the increase in employee retention within those companies through effective training and upskilling processes. Effectiveness of the training practices of the organization result not only in increasing the performance of employees but also their motivation to perform better as proven through the study done among Jordanian construction contractors (Alsayyed et al., 2019). According to Sendawula et al. (2018), nearly 50% of employee performance in the Ugandan health sector is influenced by the companies training and engagement approach thereby proving the importance of training for improved employee performance. Effective training and upskilling practice enhance the self-directedness of employees, self-confidence, interpersonal communication and relationships, effective and efficient decision making which immensely contribute to the overall performance of the organization (Alsayyed et al., 2019).

Further, based on the study done on ISO-14001 certified Malaysian firms, integrating environmental and sustainability requirements with the conventional recruitment, selection, training and other human resources management practices practiced in the construction industry has provided employees with relatedness and meaningfulness of their role thereby increasing the overall job satisfaction and deriving a competitive advantage for the entire organization (Kim et al., 2019; Yong et al., 2019; Khan et al., 2020; Shafaei et al., 2020; Darvazeh et al., 2022).

Construction firms are known to possess a significantly less employee retention rate compared to organizations in other industries which directly influences the drawbacks in terms of overall performance of construction projects leading to various consequences such as delayed deliveries, budget overruns, non-compliances etc. Hence, this is the exact reason as to why possessing effective recruitment, selection and training processes is vital for construction companies.

C. Current State of Recruitment, Selection and Training in Global Construction Projects and its Relatability to Australian Context

According to Khan and Abdullah (2019), the existing recruitment process comprises of finding the requirement, defining the role (job description), attracting candidates to the opening, screening, selection, and onboarding of the employee into the organization (Abdalla et al., 2021). This is the traditional approach that is being widely adopted globally including Australian construction firms.

A recruitment process could commence in relation to filling up of a vacated position or establishing a new position (Abdalla et al., 2021). Upon approval of the higher management or the board of directors, the job description is created, and the relevant concurrence of the related technical/operational stakeholders is obtained alongside a deadline by which the position should be filled up to minimize the impacts on the usual business operations and then followed by an ascertainment whether the recruitment to be carried out internally or externally (Abdalla et al., 2021).

Internal recruitment is a common practice that is being adopted across the board due to the provision of the ability to fill up roles immediately with the assistance of immediate judgement based on the past performance of the employee and the attitude towards work (Ali & Anwar, 2021b; Ali & Anwar, 2021c). Job bidding, posting and direct employee references are some widely used methods pertaining to internal recruitment that are in use at present (Ali & Anwar, 2021a).

Some companies opt in to utilizing external recruitment as they are of the view that an acceptance of a position through internal promotion by an existing employee may solely be based on salary increments and prestige thereby resulting in higher and ongoing demands whereas, an external recruit may accept the position for other reasons such as job quality, autonomy, relatedness, etc (Abdalla et al., 2021). Conditions of the labour market, legal framework and the corporate image of the company are some prominent factors that are considered during external recruitment (Ganeshkumar et al., 2019).

The selection process which is considered the most vital component of the recruitment process deals with a plethora of steps namely, preliminary screening of the CVs/applications, administration of tests (psychometric and aptitude, if applicable), interviewing, medical examinations, background and reference checks, shortlisting, negotiations and finally the decision of hiring the best fit (Abdalla et al., 2021).

According to Abdalla et al. (2021), based on his research conducted on Kurdistan telecommunication companies which also include construction projects has argued that the race and gender of the candidates are not being used as grounds for selection or rejection of candidates which is positive as it ensures equal opportunities to the individuals.

Although detailed interviews are key for managerial and technical roles, a brief discussion is found to be sufficient for applicants pertaining to lower-level roles (Abdalla et al., 2021).

According to Wong (2020), utilization of competencies for recruitment, selection, training and retention of human resources are being practiced widely across all the industries at present. This has also been concurred by Heinsman et al. (2006), stating the importance of adopting competency management to assess individuals during recruitment and selection, appraise performance during employment, develop a training programme and for succession planning. Human resources processes based upon competency are effective as it provides a wholesome view of an individual pertaining to self-

concept, knowledge/skills level, traits and motives compared to that competence which only focusses on skills and expertise (Chouhan, Vikram Singh & Srivastava, 2014).

Further, utilization of multi-criteria decision-making approach using a utility factor determined by higher management based on the alignment with strategic direction, is popular adopted for recruitment in construct projects, especially around selection of project leadership such as construction managers due to the complexity around the plethora of criteria that should be considered during assessment (Afshari, 2017).

Training related to green approaches such as, development of soft and hard skills to improve the environmental and sustainability related performances, are in the surge across the construction industry to comply with the growing regulatory directives (Liebowitz, 2010; Teixeira et al., 2012; KolaOlusanya, 2013). KPIs are being developed pertaining to achievement of environmental objectives and employees are appraised against in and rewarded in the light of attracting best talent, retention and motivation of high performers (Teixeira et al., 2012). According to Phillips (2007), around 8% of UK-based organizations reward their employees financially for their green advocacy.

Talent management in the private sector is focused on developing innate abilities of individuals to outperform each other in a way that aids enhancement of overall corporate performance whereas, that of public sector is focussed on developing the competencies of individuals to align with the core principles of the public sector and accomplish the objectives that are directed towards the common good (Nijs et al., 2014; Alferaih, 2018; CrowleyHenry & Ariss, 2018; Kravariti & Johnston, 2019). According to Kravariti and Johnston (2019), the performance of top 10% employees (high performers) contributes the most to the company-wide achievements. Private sector talent management is found to adopt an exclusive approach of using performance management through appraisals to evaluate the performance of employees thereby distinguishing those who can add value to company's efforts to accomplish its organizational goals and providing curated training plans and rewards based on their individual performances whereas, the public sector often adopts an inclusive approach of using employee engagement instead, to ensure equality among employees and provision of common awareness and training sessions focused on the common good (Thunnissen & Buttiens, 2017; Kravariti & Johnston, 2019). Private sector adopts the exclusive talent management approach due to lesser costs and lags associated with the approach compared to that of the inclusive approach (Kravariti & Johnston, 2019). However, the countries namely, Canada, United Kingdom, Thailand and Malaysia have shown to effectively adopt both approaches in the government sector on a case-by-case basis (Kravariti & Johnston, 2019).

All the existing recruitment, selection and training approaches as specified above that are adopted at present are highly applicable to the Australian context however, those still possess gaps and shortfalls that require improvement

especially within construction firms which contains the highest turnover rates compared to any other organizations.

D. Shortfalls and Challenges of Present Approaches and how those Impact the Construction Team's Performance at Present

The quality of the applicants attracted by an organization critically influences the quality of the human resources possessed by that organization, as the final selection for positions is performed from the pool of available candidates (Aldhuhoori et al., 2022). The brand image of the organization plays a major role in attracting quality applicants, especially with the increased use of recruitment/headhunting platforms, Western Australian construction companies with bad track records around their conduct have struggled to attract quality, competent applicants which has impacted the business continuity within those firms.

Although organizations tend to adopt an external recruitment approach due to its benefits such as acquisition of new skills, talents and ideas, it too has a critical drawback around the duration taken by a new employee to get accustomed to culture of the organization (Anwar & Abdullah, 2021). These cultural frictions might often end up in the new employee leaving the organization prematurely. The wide use of online recruitment and resourcing platforms has provided access to a wider group of talent; however, it has also increased the inflow of applications of non-compatible applicants as well (Du Plessis, AJ & Frederick, 2012).

According to Aldhuhoori et al. (2022), exercising unethical agendas backed by nepotism and favouritism during selection and training stages have shown to be detrimental to the overall performance of the organization, especially in construction firms as most of the roles are technical and managerial and due to dynamic and complex nature, it is crucial to select and upskill employees who are best fit for the purpose. Further, lack of transparency and ineffective communication within organizations pertaining to their selection approach often results in disappointing employees due to losing an opportunity to get promoted to an external party regardless of the degree of efforts exerted to perform their duties (Demir et al., 2021).

According to Suhairom et al. (2014), although companies have adopted competency-based assessments for recruitment, selection and training, this is found to be challenging in construction firms as the professions and positions are highly diverse and complex.

Continuous-improvement approaches around recruitment and selection based on historical insights from human resources management systems are widely adopted by companies. However, scarcity of practitioners with the aptitude pertaining retrieval and utilization of these insights has made it a critical challenge (Marr, 2018; Ore & Sposato, 2021).

The construction industry has been in the forefront in terms of the contribution to the Australian economy and the jobs it has been able to create. However, it is also popular for

its high employee turnover rate compared to other industries. According to Hussain and Huei Xian (2019), commitment, justice, reputation, communication and organizational politics have found to affect employee turnover of which, organizational politics and justice around definition of salaries, appraisals, decisions around promotion have shown the greatest impact (Yean, 2016). Further, effective communication has shown to reduce the turnover intentions within employees (Hussain & Huei Xian, 2019). According to Hussain and Huei Xian (2019) and Yean (2016), employees with good political skills have shown the ability to overcome interpersonal friction whilst assisting the institution to meet strategic goals.

Further, according to Nally et al. (2019), Western Australia also known as the mining hub and a key state in Australia that is known to run high valued construction projects is 8.2% higher than the national average pertaining to the gender pay gap, which highlights the gender pay gap issue that is prevalent in the Australian construction industry. Although, Australia has shown significant improvement in filling up the voids around gender equity, certain states still have room for improvement to match the national averages (Nally et al., 2019).

Although certain countries have shown progress in adopting a combination of inclusive and exclusive talent management approaches, generally, managers from the public sector have shown hesitancy to adopt an exclusive approach for the risk of being accused of favouritism and preferential treatment (Kravariti & Johnston, 2019). This could in return result in impacting the overall performance of teams due to lack of accountability within team members (Kravariti & Johnston, 2019). Further, lack of effective training programs, financial allocations, buy-in of higher management, and inefficient needs assessments have worsened the challenges around training within public organizations, especially public infrastructure related institutions that carry out construction projects (Alsayyed et al., 2019). The amount of efforts exerted on training and upskilling within the construction companies are at bare minimum and is done only if mandated through the governing laws hence, the primary objective of companies are to train employees for the sake of obtaining the license instead of the intention of upskilling workers to align with the strategic direction of the organization which in return has resulted in inadequately skilled workers who contribute to most of quality issues and subsequent project failures (Alsayyed et al., 2019).

Hence, to drive the performance of construction project teams in Australia, it is vital that these shortfalls and challenges are adequately addressed through the adoption of effective and efficient strategies.

E. Analysis of Existing Strategies and Novel Concepts to Overcome the Shortfalls of Existing Recruitment, Selection, and Training Practices

The Human resources department plays a critical role in ensuring that the expertise and competencies of the human resources of the organization adequately aligns with the strategic direction of the organization by executing effective and efficient strategies to bridge the gaps around competencies

through attraction and selection of talent alongside training and retention to retain the competitive advantage whilst enhancing the performance of the organization (Gardi et al., 2020).

Utilization of recommendations from existing high performing employees, word of mouth (referrals) from industry leaders, and recruitment agencies have shown to be more effective in employing individuals who are of greater alignment with the objectives of the organization (Tizhe et al., 2017). Further, since these selections are usually done based on mutual understanding through better clarification and agreements pertaining to the requirements of the role, this informal approach aids in better selection than the conventional formal approaches (Abdullah & Othman, 2016).

Adoption of psychometric tests that evaluate personality and behavioural aspects of individuals coupled up with aptitudinal tests that assess the relevant skills create a framework to analyse the competency of candidates, which has shown promising results in terms of effective selection compared to the conventional aptitudinal approach that only evaluates the skills (McClelland, 1973). This has been confirmed by a study done on telecommunication companies in Kurdistan (Abdalla et al., 2021). The competencies that will be assessed against are required to be defined based on their contribution to successful performance and the ease of development of those (Spencer & Spencer, 2008). According to Spencer and Spencer (2008) If the competency is difficult to improve and contributes to the successful performance, individuals who inherently possess this competency should be selected and assigned to PM roles whereas, if the competency is not difficult to improve, yet, contributes to the success, should be given prominence in the training/upskilling plan. This has been confirmed by Moradi, Kähkönen, Klakegg, et al. (2020), based on the study done on Norwegian and Finnish construction projects.

Performing a thorough need analysis to define the most suitable job description and the approach to be used for selection (internal or external, with the prioritization) and effective communication within the organization thereby ensuring transparency, is vital to improve the clarity trust within the organization (Abdalla et al., 2021; Demir et al., 2021).

Adoption of human resources management systems and resource platforms alongside artificial intelligence (AI) has shown the potential to automate algorithmic tasks such as screening of resumes, email communication, reminders, scheduling of interviews thereby providing the HR personnel more room to utilize their intellect on strategic functionalities such as analysis of historical data based on previous hiring decisions gathered by the systems to improve their resourcing and training approaches in alignment with the strategic direction of the company. Although AI has been criticized pertaining to discrimination, ethical and moral grounds, selection of applications that are similar to profiles of existing employees, and its inability to consider humanistic elements, such as empathy and emotion, these AI models can be programmed with biases in an ethical manner as suitable to

align with the organizational objectives (Bryson & Winfield, 2017; Leong, 2018; Marr, 2018; Upadhyay & Khandelwal, 2018; Johnson et al., 2020; Ore & Sposato, 2021; Eubanks, 2022). Definition of boundaries and a proper code of conduct is vital to ensure that AI is not utilized beyond its mandated functionalities in a way that could pose ethical issues which could eventually result in detrimental effects on the brand image of the organization (Fernandez, 2017).

Attraction and selection of individuals who value environmental conservation and establishing feedback loop to continuously improve their performance within the organization and a reward system to not only encourage action but also ideation is a strategy that is currently in use, especially within infrastructure related firms to obtain a competitive advantage in terms of its alignment with global sustainability goals (Yong et al., 2020; Darvazeh et al., 2022)

According to Afshari (2017), based on his study around the adoption of fuzzy linguistic evaluation approach in a large-scale Iranian construction firm has proven the ability of the approach to be effective for qualitative evaluations pertaining to selection of construction project managers. This method which converts linguistic variables into fuzzy triangular numbers has enhanced the efficiency of decision-making pertaining to selection of employees by reducing the margin of error around qualitative variables (Afshari, 2017). Adoption of the fuzzy linguistic measure upon defining the selection parameters using the DELPHI method that consists of multiple rounds of ideation, feedback and prioritization which is being built up from previous rounds, with the assistance of a selected panel of experts, has proven to be successful in defining most appropriate selection parameters and converting qualitative values to workable numbers for efficient decision making (Wang, 2006; Nworie, 2011; Afshari, 2017).

According to AITokhais (2016), having routine communication with employees by Human Resources personnel could effectively forecast the turnover intentions thereby, planning any potential future recruitment requirements and succession (replacements).

Based on the job characteristics theory, provision of avenues to develop a variety of skills, assignment of tasks of significance, adequate autonomy and feedback ensures meaningfulness, responsibility and retain the urge for mastery which could result in increasing the performance of an organization (Shafaei et al., 2020). Creation of jobs, and definition of job requirements with these factors in mind could not only increase the number of quality applicants but also retention of them upon recruitment in the long run.

Proactive job analysis through routine surveys from managers to determine if the definition of competency is still valid for the role/nature of work, and if the subordinates are achieving the required competency goals or require further training has enabled organisations to review and update their competency measurements during recruitment as well as training programs for continuous improvement to align with the strategic direction of the organization (Siddique, 2004).

The critical incident technique, which consists of 5 steps namely, determination of the task goal, development of a guideline for collection of relevant incidents pertaining to that task, data collection, analysis, interpretation and reporting of the requirements, has been used widely across all industries, especially construction and manufacturing for preparation of training plans and operating procedures (Flanagan, 1954).

The BEI technique backed by the STAR interview approach that follows a pattern of enquiry namely, situation → task → action → result has been beneficial for organizations to determine the level of competency acquisition and performance through identification of characteristics of employees who have actually performed well instead of relying on the inputs of employees who perceive to have performed well (McClelland, 1998; Spencer & Spencer, 2008; Uddin et al., 2012).

Further JCA (job competency analysis) technique which consists of the steps, definition of the measurement criterion, analysis of job elements, performing BEI interviews, selection of tests and obtain measurements, development and validation of the model too is being widely used at present alongside the classic competency study which follows a similar structure (Spencer & Spencer, 2008).

According to Adami, Rodrigues, Woods, Becerik-Gerber, et al. (2021), prominent organizations related to the construction industry such as 3M, Caterpillar, Volvo, Komatsu, PIXO and Antycip, have shown tendency to utilize Virtual Reality to offer an immersive near real-life training experience for construction workers especially related to safety and heavy machinery operation. Virtual Reality (VR) is considered as a safer and affordable alternative to real life training approaches which enables the workers to get the exposure of high-risk tasks which also could have been impossible in real life (Adami, Rodrigues, Woods, Becerik-Gerber, et al., 2021). Providing training in tasks related to an offshore rig, mine etc. can be considered as some examples. Based on the studies done by Adami, Rodrigues, Woods, Becerik-Gerber, et al. (2021) and Wu et al. (2020) on construction workers has proven that VR-based training has not only ensured the safety of the employees but also shown an increase in the knowledge, and expertise acquired not only among experts but also among non-experts, compared to that of the conventional training approaches thereby manifesting its effectiveness around training the incoming workforce.

Due to the dynamic, complex and high-risk nature of construction projects, simulating the exact atmosphere of real-life through virtual reality can be very complicated resulting in trainees not obtaining the actual hands-on experience prior to joining the workforce (Adami, Rodrigues, Woods, Becerik-Gerber, et al., 2021). However, VR-training possess the ability to exemplify hazards that are normally overlooked at construction sites such as (electricity) thereby providing the workers with an effective learning experience alongside interactive means such as audio and imagery thereby, increasing concentration and engagement as well (Sacks et al., 2013; Eiris et al., 2020).

Although VR-based training carries a significant share of benefits, its implementation has been challenging considering the lack of lingual proficiency within workers in the construction industry which, however, has been addressed to an extent through localization and other audio-visual mechanisms (Evia, 2011). Due to the provision of a safe atmosphere to be creative and innovative through risk-free failure and instant feedback inclusive of haptics have proven the effectiveness of VR-based training and has further manifested its efficiency through supplementation with hands-on teacher student relationships (Habibnezhad et al., 2019; Huang et al., 2020; Habibnezhad et al., 2021).

According to Ellingrud et al. (2020), the construction industry has shifted its focus towards automation of at least half of the tasks with the intention of countering the impacts of labours market shifts, safety regulations and to improve the productivity rates. Nearly 7000 robots are forecasted to be commissioned at construction sites by 2025, through which the manpower will be more utilized on strategic, intellectual and altering tasks that cannot be automated or performed by a robot (Ellingrud et al., 2020).

Construction workers are often subject to two distinct methods of training namely, on-the-job training, which are usually training pertaining to technical know-how and site-based inductions and off-the-job training, which are usually pertaining to hands-on operational skills (Alsayyed et al., 2019). According to Alsayyed et al. (2019), the systematic approach to ensure effectiveness of training is first performing a needs analysis followed by the development of the objectives and finally defining the techniques and methodologies to be used.

Establishment of an atmosphere that is conducive to learning and upskilling with optimum duration of training programs that also provides employees to pick and choose the recommended training programs and the dates to undergo the training ensures that employees stay self-directed and engaged instead of considering it as an additional burden (Alsayyed et al., 2019). It is often found that staff are reluctant to undergo training as it could add new responsibilities into their existing role with no/minimal financial return which is why companies should have a proper sit down with the employees and try to ascertain in an open-minded manner as to why the employees are not willing to go through change and take up the new duties, and then try to collectively workout solutions to remove the barriers, instead of forcing them to commit (Alsayyed et al., 2019). Further the higher management should also ensure that they stay committed to their fair share of undertaking pertaining to the agreement.

Another major issue that impacts project performance is lack of awareness pertaining to site-based activities within office-based roles, which could be addressed by providing routine awareness sessions and site-visits (Alsayyed et al., 2019).

Hence, based on the above and the study done by Soliman and Altabtai (2023), if the company could provide some sense of job security through ethical and effective

recruitment, selection and training processes, it could drastically influence the motivation factor of employees in construction companies than that of any salary increments and promotion arrangements thereby enhancing the overall output of the entire project team.

IV. CONCLUSION

Considering the rate at which the work environment and its context change at present, development and reviewing competencies required for roles and positions alongside enhancements within recruitment, selection and training approaches have turned out to be a never-ending process. The ability of an organization to attract and retain talent greatly relies on the culture that is portrayed within the organization, which is significantly linked to the values, beliefs and behaviors of the employees. The culture of an organization is given rise by the employees' behaviours that have stemmed from the overarching ideology which has turned into habits over time. Hence, HR processes should play a vital role in ensuring that employees portray a behavior that is conducive for high performance and the HR team, and their core processes should act as an example.

Accordingly, this study has defined recruitment, selection and training based on past literature and the importance of recruitment, selection and training for construction projects has been discussed at length with special mentions pertaining to the ability of construction firms to attract quality talent and upskill them in a way that their competencies remain valid alongside the changing requirements and demands within the industry such as sustainability and environmental conservation. The current practice pertaining to recruitment, selection and training has been discussed and is found to be in alignment with the Australian context based on the verification of the chosen industry leaders. Shortfalls and challenges around the existing processes have then been discussed along with the areas of changing job demands and structure with the transformation into the information era, novel technologies such as Artificial Intelligence (AI) and its ethical dilemmas, nature of construction projects and the sectorial classification (private/public), focus on taboo areas such as gender equality, etc.

And finally, the strategies to be adopted to address these shortfalls have been discussed and their relatability has been verified through the chosen industry professionals. Of those, the following can be considered as prominent actionable recommendations – Have more inclination to seek referrals from high performing employees to fill up vacancies, adoption of psychometric tests alongside other measures that are adopted to ascertain the skill levels of candidates, adoption of a negotiation based approach instead of the traditional one-sided interview approach, adopt accepted practices to develop competency requirements, conduct routine surveys to ensure the validity of the competencies of employees, conduct routine surveys to ascertain job satisfaction, adoption of AI to automate operational tasks, adoption of VR-based training during onboarding inductions with adequate localization and interactive features, adoption of a pull system to undertake

training by providing the employee autonomy and psychological safety instead of the standard push system.

Accordingly, these findings shall be significant for higher management and Human Resources personnel in Australia to make informed decisions to structure the recruitment, selection and training process in a way that is conducive to improve the construction team performance.

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