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Effect of Professionals Soft-Skills on Construction Project Effectiveness in Abuja Municipal Council (AMAC), Nigeria

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Abstract **Original Research Article**

Construction industry found that 87% of professionals believed that soft-skills play a crucial role in construction practices and 68% stated that these soft-skills are very important as to improve construction project effectiveness globally. The study aimed at assessing the effect of professionals' soft-skills on construction project effectiveness in Abuja Municipal Area Council (AMAC), Nigeria. a quantitative research design was adopted with structured questionnaire designed to collect the primary data of the stud from the 327 construction professionals in AMAC. The research was a quantitative in nature with Architects, Builders, Civil Engineers and Quantity Surveyors as the population of the study. Questionnaire was used as the tool for data collection and the data were analysed using both descriptive and inferential statistical methods of data analyses. The study result revealed that there is positive strong significant effect of construction professionals soft-skills on construction project effectiveness in AMAC, Nigeria with B-value = 0.867 (86.7%) and $p < 0.000$. The study concluded that there is high level of soft-skills of construction professionals in Abuja Municipal Area Council (AMAC), Nigeria with communication skill, integrity skill, self-management/time-management skill, teamwork and networking skill, flexibility/adaptability skill, and creativity and curiosity skill as the most soft-skills of the construction professionals; there is high level of effectiveness of construction projects in Abuja Municipal Area Council (AMAC), Nigeria with client's satisfaction dimension, profitability dimension, learning and development dimension, environment performance dimension, and employee satisfaction dimension as the most construction project effectiveness; there is high performance of construction professionals in AMAC, Nigeria. The study recommended that construction professionals should stress and practice soft-skills in their daily endeavours to ensure construction success and project delivery; policy makers should use the outcome to continually improve level of performance of the construction professionals in the construction industry as the industry is dynamic in nature that can restore the performance of the construction industry; and all stakeholders in the construction industry should wisely join hand together to ensure robust industry so as to derived the full potentials of the industry in terms of economic development to the nation, employment generation, infrastructural development, and so on.

Keywords: Professional's Soft Skills; Construction Effectiveness Dimensions; Theoretical review.

INTRODUCTION

Global study on soft-skills in the construction industry found that 87% of professionals believe that soft-skills play a crucial role in construction practices, and 68% stated that these soft-skills are very important as to improve construction project effectiveness (Ghaleb & Sundram, 2024; van Heerden *et al*., 2023). Globally, construction firms are found to be a vital drive for rapid economic development as there is increased demand for construction of infrastructure and facilities (Haron *et al*., 2017). However, is faced with several challenges which affects numerous stages of construction projects including the company's financial stability, the professionals' psychological well-being as well as their soft-skills (Araya *et al*., 2024). Limited knowledge exists regarding the impact and know-how of these skills challenges required in construction by the construction professionals. Projects form part of organisational activities and have a direct impact on the organization's results

and performance (de Moura *et al*, 2018). Mertens *et al*. (2018) revealed that project success is related to the goals and benefits that are provided in a project.

It was highlighted by international studies that the importance of soft-skills are enormous and acquire direct impact on construction project's successful achievement (Smallwood, 2020). Like in the United States and worldwide, the excellence of soft-skills competencies among construction professionals has become a priority task of education (Jaser, 2016). Therefore, many soft-skills are needed to be acquired by the construction professionals to enable them withstand the challenges of changing environment and to facilitate effective interaction between specialists since many professionals are involved in construction projects (Araya *et al*., 2024). The ability to act according to the pre-defined goals of an organization and related to practicality is known as skills (de Moura *et al*., 2018). Therefore, soft-skills play an ultimate role for a construction professional to execute and deliver project successfully certain soft-skills are highly require like teamwork, leadership, problem-solving, communication, time management, and adaptability are crucial for fostering a positive work environment and achieving project objectives (van Heerden *et al*., 2023).

Effectiveness in among professionals in construction project needs collaboration with diverse expertise for successful construction projects (Mejía *et al*., 2023). Characteristics of the project team members aligned with the environment are factors considered to influence how it work to achieve project effectiveness (Manuel, 2018). Construction project effectiveness is regarded as the degree in which objectives of the construction project are easily achieved that meet the needs of its stakeholders delivered with the needed quality, within the budget, with no addition of the time of delivery (Abdullahi & Tembo, 2023).

Construction project effectiveness in Africa is a complex issue with various factors influencing project success to include lack of stakeholder engagement, ineffective risk management, lack of clear project objectives, and project inefficiency (Ojo, 2017; Olander, 2017; Oladapo, 2016; Kähkönen, 2015). In Nigeria, construction projects often face challenges like delays, cost overruns, and poor quality resulting in low effectiveness (Kerzner, 2017) or leading to reduced effectiveness (Walker, 2015). In Nigeria, construction projects often face challenges like delays, cost overruns, and poor quality. However, professionals with strong soft skills can mitigate these issues (Kerzner, 2017). Communication effectively within the project's stakeholders ensures everybody is carried along to ensure project goals is intact, misunderstandings and errors are reduced. According to Youcef & Nils (2017), in the context of construction projects, effectiveness is critical to ensuring that projects are delivered successfully, as it meets the needs of stakeholders, including clients, users, and the wider community. The work of Susil *et al*. (2017) identified the two classes of construction project success to include broad dimensions such as efficient dimension or short-term perspective which stand to be cost, quality, time, safety, and cash-flow management; while, the second dimension is effective dimension or long-term perspective which stand to be environment performance, client's satisfaction, profitability, employee satisfaction, learning and development in which the current study shall dwell on construction project effective dimension.

Construction professionals' soft-skills play a crucial role in ensuring construction project effectiveness in Abuja, Nigeria with communication, responsibility, integrity, teamwork, and work ethic as the soft-skills essential for construction professionals to deliver projects efficiently. In Abuja, construction projects often face challenges like delays, cost overruns, and poor quality but issues mentioned can be mitigated professionally by effective communication to ensure stakeholders are fully aware and on the same lane with the project goals, reducing misunderstandings and errors (Iroha *et al*., 2024). By prioritizing soft skills development, construction professionals in Abuja can improve project effectiveness, reduce errors, and enhance overall project outcomes.

The effect of professionals' soft-skills on construction project effectiveness in Nigeria is significant, these skills are required for carrying out various construction projects across the globe (Ogunsanmi, 2016). Construction professional with no soft-skill is a disaster to the construction industry as most of the organisational goals will be impossible to be met and this led to the growing global concern in construction management literature about the essential skills a construction manager should possess. Professionals' soft-skills play a crucial role in ensuring construction project effectiveness (Hughes *et al*., 2019; 2018; Müller, 2017; Smith, 2017).

This led to the current research in the study area.

The research aim achieved through the following objectives:

a. To assess the level of construction professionals soft-skills in Abuja Municipal Area Council (AMAC), Nigeria.

b. To determine the level of construction project effectiveness in the study Area.

c. To determine the effect of construction professionals soft-skills on construction project effectiveness in the study area.

LITERATURE REVIEW

Professional's Soft Skills and Construction Activities in Construction Industry

Construction needs adoption of new construction methods with new technology due to ever changing facet and a very vibrant field (Farooqui *et al*., 2010). Thus, construction managers need to be equipped with various essential skills as to be able to prosecute projects. Construction management literature has also indicated that there are so many diverse essential skill requirements for the construction manager (Ogunsanmi, 2016). People are the important machinery in the aspects of construction projects with underlying soft-skills as the essential means for project success, while a study by Durão *et al*. (2017) concluded that soft-skills exerts more impact on

the success of a projects than technical skills have. Generic qualities that are most valued by employers was reviewed by Cicekli (2013), and determined that many of the skills sought by employers are generic or soft-skills; such soft-skills are termed to be organizational effectiveness, teamwork, time management, communication, ability to deal with ambiguity and change, flexibility, motivation, ownership and sense of achievement, leadership, and interpersonal and persuasive (Durão *et al*. 2017). A gap was perceived between what educational institutions are offering and what is needed to deal in projects in the ever-increasingly complex work environment, especially regarding soft skills (International Project Management Association (IPMA), 2015; Ramazani & Jergeas, 2015).

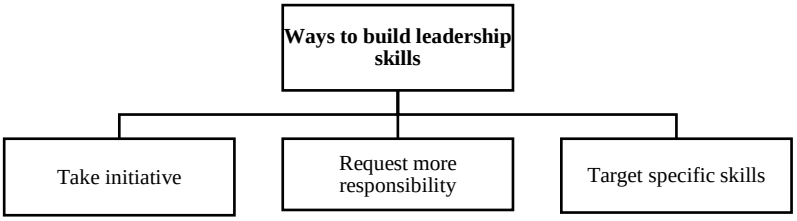

Figure 1: How to Build Leadership Skills
Source: Alison (2022)

More means of reinforcing students to get prepared to managed projects should be explored by educational institutions with emphasize on the project preparation phase such as scope, WBS, risk management, as well as soft-skills (Hefley & Bottion, 2021). This will enable students to demonstrate soft-skills proficiency in practical projects during their academic preparation. Therefore, there are wide range of skills according to Stine (2018) that a project professionals must develop and learn to use at the appropriate time as listed below. According to Gulati (2021), soft-skills also contribute to project management. For example, motivating a team, keeping a team together, being emphatic, and resolving conflicts in a professional manner are all essential for managing a team. The importance of selecting a suitable project manager is widely discussed but equal attention needs to be given to their soft-skills, especially those skills that have a direct impact on the project manager's project success.

a. Communication skill of a Professional

Communication as one of the vital soft-skill of project managers helped to overcome many challenges in the ever-increasing construction environment, as that help keep in-check thereby bringing all the stakeholders to align with the project's goals and maintain an important relationship with employees, customers, suppliers, and other involved parties. Communication is a learned skill, and it is important to develop good communication skill in order to become proficient at working in the construction industry. According to Alison (2022), as a professional (leader) in a construction industry, you need to be able to clearly and succinctly explain to your employees everything from organisational goals to specific tasks. Professionals (leaders) must master all forms of communication, including one-on-one, departmental, and full-staff conversations, as well as communication via the phone, email, video, chat, and social media. Crucially, project professionals must have the capacity to lead and guide the project team members by interacting them efficiently and influence other stakeholders (Manuel, 2018).

b. Stakeholder management skill of a Professional

Stakeholders in construction project can be individuals or groups/organisations that partly have some right or ownership in the proposed project and can contribute to it. That can incur or justify the perceived the benefit or loss directly due to the works during the project or the outcome of the project after the project (Jurbe, 2014). Management of stakeholder in the construction industry is one of the key vital building professional contacts to improve their service. In education, work with the stakeholders to develop a strong skilled workforce for the industry to achieve its goal. In pursuing their interests and expectations on projects, stakeholders can behave in different ways including cooperative potential, competitive threats, opposite position and neutral attitude (Yang *et al*., 2014). Therefore, stakeholder involvement and management should not stop at the front-end project planning stage or at any stage at all but continue throughout the entire lifecycle of the project.

c. Gaining commitment skill of a Professional

Lack of project management commitment leads to many failures in the execution of projects as well as site casualties. Zwetsloot *et al*. (2017) emphasize that, safety

commitment is one of the extent organizations can go deter accident and promote safety and this forms an integral part of an organizational goals and core values with the morale, beliefs and willingness of organizational leadership to represent the organization. Thus, Abubakar *et al*. (2020) stated that, performance in safety is a concept of commitment approach based on establishing safety programs to have a distinction to the traditional approach due motivation stems out from adhering to establish regulations, procedures or policies. Conti *et al*. (2014) generally stated that, professional commitment refers to identifying the profession which includes commitment to the profession, its dedication and acceptance of professional goals and ethics. Samimi (2020) considered the theory of professional commitment as identification of profession and attachment to profession.

d. Time managing skill of a Professional

Project management refers to meeting deadlines and getting task done towards deliverables within time; the art of planning effectively within time management skill (Satellizer, 2016). In construction projects, one of the triple constraints and very important to successful delivery is time. Without time management skills, delay is bound to happen and can cause worst impact to construction delivery (Peter, 2023). Construction project managers must be experts to effectively managed time properly including time of their teams with overall time of the project (Peter, 2023). The major key effective project management is time management so lack of it is termed as weaknesses which will cause delays in project completion (Harold, 2014). Time is what is needs to be controlled in terms of construction projects right from the inception to the completion of the construction process. Therefore, an important soft-skills for project manager is time management for effective work in the construction industry (Aftab *et al*., 2014). One of the toughest jobs is in the construction industry due to its tight schedules and deadlines of project delivery, and therefore that incur pressures that need man-power (people) that can handle the pressure therein. Working in the construction industry, need the project manager to deeply align with the assigned task to ensure the project meets the target period of delivery. Construction industry needs man-power that always track the multiple tasks including different timelines and communicate efficiently the objectives of the project if is inline or not.

e. Information gathering skill of a Professional

A right information is paramount for gathering skill professionals as man-power in the construction industry so much believed that having a right information at the right time and how to utilize it is an added advantage for it served as a weapon (Chudasama & Bhavsar, 2021). To actualise a construction project that can meet client's satisfaction, many information regarding the said project must gathered by the professionals to avoid project abandonment and waste of resources. Process of gathering an information in construction industry is the procedure of collecting and analysing data for an in-depth insight that enable in solving problems, make decisions, such act involves various methods to include research, interviews, surveys, observation and data analysis. For feasibility analysis, information gathering remain a very key part in the process, and that enables any analyst to prepare a precise software for solving a particular problem in an organization due to the information from the fact-finding techniques understood by user (Canals, 2017).

f. Risk appreciation skill of a Professional

Risk appreciation planning of a project is paramount as all projects either small, medium or large projects is inherent to risk. Peter (2023) stated that, executing project needs to the project manager to create a risk management plan to enable them identify, assess and control risk. Once a project manager has the capacity of managing a risk, then there exists a high chances project success. Risk is the product of exposure to occurrence of loss or gain and its respective magnitude. If the probability of the occurrence is 100% then an event is said to be certain, however, if the probability of occurrence is 0% then is referred to as totally uncertain. Therefore, in between these extremes, the uncertainty varies rather widely. Risk in construction industry, these days the risk is assessed through different means and particular type of information (Bon-Gang *et al*., 2014). This signify that for decision-making process in construction industry, risk analysis and management skills are very vital (Shahid *et al*., 2015).

g. Setting effective goals skill of a Professional

Project's nature encountered by the project managers desires wide coordination to enable for various professionals' work for the success and achievement of the objectives (Manuel, 2018). Professionals in the built environment coordinate the execution of the project, with the helped of different project team members that coordinate and managed different units of the project (Thompson & Wilson, 2015). Project team is supervised by the project leader generally and that enables the leader to coordinates the project activities through the divisional leaders that serves as link between the project team, stakeholders and the senior management (Jowah & Tebele, 2012). Disasters due to last-minute changes occurs at work in construction projects, therefore, leaders need to be flexible to accept the changes that might come in the cause of the work, as the ability to accept changes and creatively solve the problem will be highly appreciated (Alison, 2022).

h. Running good meetings skill of a Professional

Coordinating good meetings by the professionals for construction projects by the project managers in a construction industry ensures success. Meeting for the success of any project ensures task are assigned duly to various professionals and that include group maintenance behaviours. Such skills by the project manager allows each participant to be duly updated as due to availability of current information that enhances widespread of understanding and commitment, but this is due to the decisions with transparency and on time make by the project managers. According to Mesch (2023), in a construction company, meetings can determine whether a building project can actually succeed or fails. On the job site, meetings play a

vital purpose in the role of Construction Company, because these meetings allow parties to discuss and coordinate upcoming project activities, also provide a forum in which the parties can discuss project changes and claims. Therefore, parties to a construction contract in the interest of construction success should always run good meetings.

i. Negotiation skill of a Professional

A project manager with a good and strong negotiating skill stands the chance to get many tasks done based negotiation is one of the communication skills, but negotiation deserves its own space separately. Negotiation in project management is a vital skill for conflict resolution and stakeholder management (Peter, 2023). It is highly desirable for a project manager in the construction profession either at lower, middle or top management to do everything possible to become an effective negotiator. The World Economic Forum (WEF) identify negotiation as one of the top 10 skills needed to thrive in the future workforce (Matt, 2019). Therefore, improving negotiation for deal-making skills in the construction industry is paramount as it helps to secure value for your organization when at the round-table negotiating for any cost of construction work or advocating for a higher starting salary or raise.

j. Dealing with conflict skill of a Professional

Conflict is bound to happen in any construction work as development of relationships by human beings on the basis of their operation (Manuel, 2018). Any project incurs its conflict and the need for each stage of construction work to be engaged with the right expertise to operate in that capacity of the life cycle of the project as well as the elements or WBSs of the project. A group of more than one individual are called group and that attracts conflicts. If this conflict is not managed properly, it escalates to even destroy the project team, disrupt operations of the entire group and disrupt the process of achieving the laid objectives. A project manager with an improper conflict management skill may turn out to be harassment by the project team members which can demotivate the project team members (Manuel, 2018).

k. Budgeting skill of a Professional

It takes lots of money to successfully execute a construction project and lots of stages to its completion, for healthy project costs estimate and budget creation is paramount as it formed part of the planning stage of project management. Project budget ensures the project to avoid cost-overrun and that is a skill needs to possess by the project manager because a project budget, and use budget management skill enable control of costs through the execution stage (Peter, 2023). Any project professionals must undoubtedly, master to complete projects within budget during the project life cycle (Henkel *et al*., 2019; Jones, 2018). Planning, budgeting, organising, staffing, controlling and directing for project is the task conducted by the project manager. These tasks in relation to what needs to be done for the success of the project, has its breakdown such as when is it supposed to be done, how much resources are needed for each task based on the available resources that can efficiently use or is acquired to effectively perform these outlined tasks by the project managers.

l. Planning skill of a Professional

Reflecting on the historical dictum of Dwight Eisenhower which stated that plans are nothing, yet planning is everything. This means that for a project success to be achieved, the initial original plans with the project goals must be changed to address the dynamics caused by uncertainty during project execution. Project manager with the skill of planning ensures project performance and project success (Shahzad *et al.*, 2018). With the dynamic nature of construction environment and project, change is inevitable. When changes occur, plans also change, as different reasons cause changes in project either due to client or due to project team members as a result of new and better ideas or due to the dictate of a new manager which initially was not there but comes at a later stage to impose their own twist to the project (David *et al.*, 2019). Pedro (2013) opines that planning process create a project plan that consists of 48% of all the processes which performed by the project manager during the project life cycle.

CONSTRUCTION EFFECTIVENESS DIMENSIONS FOR CONSTRUCTION PROJECT SUCCESS IN CONSTRUCTION INDUSTRY

The construction industry is an industry with humans as the engine of success or failure of its product with their activities comprising of overabundance of interrelated tasks drawn from different sectors (Ofori, 2012). Al Kazaz and Shibani (2016) highlights that, global construction industry and the extraordinary difficulty of mega construction projects increases at an alarming rate, leading to the needs for well-organized and operative project managers to developed their leadership skills. Overtime, there is practice of working on multiple projects simultaneously with the important call for managing all the projects effectively and efficiently in order for all projects be accomplished within the stated plan (Collyer & Warren, 2019). Kissi *et al*. (2019) assert that, there is high-risk situations tormenting the construction sector which in turn affect construction projects and therefore, demands systematic processes to meet project objectives and ensure profitability. Even though within the developing countries faced both macro challenges (socio-economic stress, lingering resource shortages, institutional weaknesses, and, general inability to deal with issues head-on) and micro challenges (no performance liability, low-fixed capital requirements, unpredictable weather, seasonal effects, uncertain ground conditions, cost overruns, and, government interventions in project delays) (Kissi *et al*., 2019).

It is viewed as paramount practice for a project organisation to learn from one project in order to improve from what was not done rightly during the execution of the project (Owusu-Manu *et al*., 2021). Youcef and Nils (2017) stressed that, concepts of efficiency, effectiveness and efficacy are usually used interchangeably but hardly defined. These terms were used by many researchers when describing how to improve project

management methodology itself (Coetzer, 2016; Joslin & Müller, 2016; Lahdenperä, 2016; Ssegawa & Muzinda, 2016; Badi & Pryke, 2015; Messner, 2015; Haji-Kazemi & Andersen, 2014; Mullaly, 2014), as were applied by some authors on how to improve some parts of project management practice including communication, project teams, organisation, leadership, cost, time, quality, support tools, and project member as an individual.

Project efficiency is related to performance based on cost, time and quality the satisfaction level of clients (Ferrada *et al*., 2013). Also, Yamin and Sim (2016) buttressed that, construction project efficiency cautiously explained the extent to which the project executed sustained lowest expenses but meet project goals. However, in this research, only construction effectiveness dimension is considered as displayed in the figure 2 below.

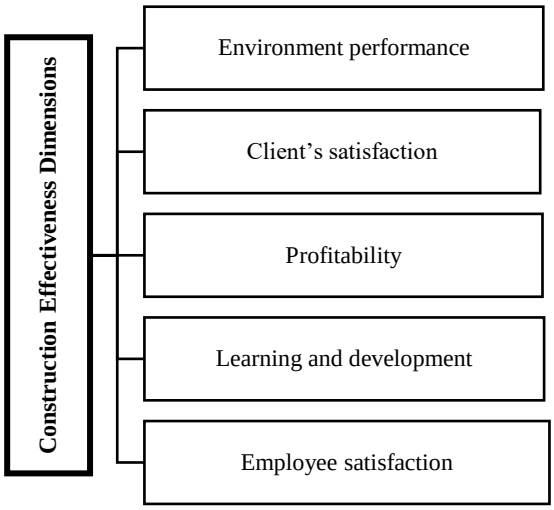

Figure 2: Dimension of construction effectiveness
Source: Silva *et al*. (2016)

i. Environment performance dimension

Bruno *et al*. (2017) made an attempt to summerised a construction industry to be a complex system with clients, consultants, contractors, manufacturers and distributors, suppliers, sub-contractors and end – users, and so on as the composition of the stakeholders. The composition of building works includes residential, commercial, industrial and so on; composition of civil and heavy engineering works includes roads, railways, bridges, servers, dams, airports, jetties, cofferdams, caissons, tunnels, refineries, power station and so on; while, composition of construction training establishments include research Institutes, Polytechnics and Universities. For various phases of building construction, the key environmental performance indicators include: water quality, water use and conservation, air quality, environmental compliance and management, construction waste management, land/soil pollution, light and noise pollution, impact on biodiversity and ecology, and energy use and conservation.

ii. Client's satisfaction dimension

Client is the owner and initiator of a construction project or buyer/seller of products or services. According to Haddadi *et al*. (2016), client often referred as person/organisation that procured a project in construction. In construction business world, construction is a world of competition with the intensity and capacity to get the business tighter and sharper is increasing day by day (Ahadian *et al*., 2021). According to Arumugam *et al*. (2020), client's satisfaction is an attitude adopted by the client that specifies the extent to which brands, products and services fulfil the client's expectations and requirements. Satisfied client is described as those that expresses positive remarks about their experience's gratification in a buying context and potentially advises other people to partronise such product or services (Cakici *et al*., 2019). Also, ensuring client's satisfaction attracts their loyalty in every business. According to Tolba *et al*. (2016), client's loyalty is influenced by how consumers perceive the quality and fairness of the complaint handling process. The five key factors influencing client's satisfaction are: product quality, service quality, emotional factor, price, and ease and cost of accessing products or services (Asriadi & Aqli, 2024).

iii. Profitability dimension

Due to significant role always play by construction sector for development, construction industry always maintained and affirmed its position to serve as one of the key economic sectors and made important contributions to the achievements of economic development (Lea *et al*., 2020). Profitability dimension is paramount in construction effectiveness. According to Bureau of Labor Statistics (BLS, 2020), and National Institute of Building Sciences (NIBS, 2019), profitability dimension of construction effectiveness is viewed as the ability of construction project to create profits for the stakeholders involved in the business. Such business's profitability got influenced by various factors which include: a

financial structure, financial leverage, size and age of enterprises, business characteristics, mong others. Profitability is an indicator of the company's performance in utilising the entire wealth to generate profits (Wahana *et al*., 2020).

iv. Learning and development dimension

In construction industry, the need for learning, training and development is emphasised in recent time. Most importantly, learning and training in an organisation is due to changing the environment and job characteristics, innovation, developments in terms of technology, workforce diversity and global economic competition (Ba Uwain & Abd Wahab, 2023). Therefore, keeping with the change is indispensable for employees to acquire and develop the various skills needed are essential to ensure success and attractiveness of the organisations (advances in technology may require employees to understand new computer and technical skills). Uncertainty and challenges in the work environment due to global competition and organisational restructuring, employees need to be well prepared and thus may need to equip themselves with high-level organisations skills such as leadership and psychological skills. The importance of employee training in construction company cannot be underestimated (Roblek *et al*., 2018; Lee *et al*., 2017).

v. Employee satisfaction dimension

Due to the complexity nature of construction industry, its employees need satisfied with their jobs to ensure the achievement of the set goals (Monday & Samuel, 2020). The challenge for most managers today is to keep the staff motivated in order to perform well at the workplace, and by understanding the needs of employees', particularly in the construction supply chain, managers can understand what rewards to use to motivate and keep them satisfied (Emmanuel *et al*., 2015). Monday and Samuel (2020) reasoned that employees productivity ensures success of construction projects to a large extent as the ability of a project managers to motivate the employees ensures success of the organisation. For a construction firm to excel despite the tense competition existing in the environment, the firm must have existing advantage over its sister firms which scholars posed that the advantages should come through working effectively with efficient efforts, creative, and innovative so as to attracts the client's choice that eventually entice the clients' loyalty through its products or services produced (Ahadian *et al.*, 2021).

THEORETICAL REVIEW

The current research employed and pinned the study on the following theories: Bayesian theory and, social exchange theory as shown below.

i. Bayesian Theory

Bayesian theory follows the format of an initial assessment estimates that captured with the recording of its continual improvement to compare the outcomes (Enhassi *et al*., 2020). The essence of this theory is to allow for the record of the presence and knowledge of soft-skills within a construction firm and to assess their performance. observing the utilization of soft-skills ensure the basis of data collection by the Bayesian theory as informed in this study. Hence, observations are critical to this study which is recorded without bias or subjectivity. Observations conducted in compliance with the definition of soft-skills to recognize their application and effectiveness.

ii. Social Exchange Theory

Social exchange theory is a theory used for determining the relationship that exist between two parties (project managers and team members). This stated theory, according to Khattak and Mustafa (2019) determine the relationship effectiveness that exist between project managers and their teams for smooth running of a construction project. The theory interprets the communication, continuous improvement, and behaviors of the construction team. Relational relationships between project managers and project teams are paramount as it contributes to the organizational success. Project team's success validates the organizational success. The effectiveness of the project team is determined by the project manager's effectiveness as it build trust, resolve conflicts, and communication (Bausell *et al*., 2020). Effective communication by the Project managers relates to building of relationships with other stakeholders and organizational leaders later run.

METHODOLOGY

The study adopted a quantitative survey research design with 1,196 population comprised of 1,196 registered Architects, Builders, Civil Engineers, and Quantity Surveyors obtained from their respective professional bodies. The study utilized 360 sample sizes of professionals determined using the Cochran (1977) guideline percentages of 10%–30% for determining sample size as used by Li (2020) in his study soft-skills for construction professionals in African and Ogunsemi (2020) in his study impact of soft-skills on construction project effectiveness in Nigeria; because the population is finite. However, for precision, 30% was used to determine the sample size in this study. The study utilized a purposive sampling technique in selecting the construction professionals in Abuja Municipal Area Council (AMAC) of the Federal Capital Territory (FCT) as respondents for the study. The study employed the use of a questionnaire instrument as a tool for primary data collection, validated by the supervisor and expert in measurement and evaluation with the overall acceptable reliability with ($\alpha = 0.77$). Both descriptive statistical method (frequency counts and percentages, mean score and standard deviation) and inferential statistical method (regression analysis) were utilized to analysed the collected data. SPSS software was utilised as a tool for the analysis.

Table 1: Sample frame

SN	Profession	Registered Members	Sample size
1	Architects	380	114
2	Builders	293	88
3	Civil Engr.	291	88
4	QS.	232	70
	Total	**1,196**	**360**

RESULT AND DISCUSSION

The study administered 360(100%) questionnaires and retrieved 327(90.8%) questionnaires duly filled for analyses [Architects = 103(28.6%), Builders = 80(22.2%), Civil Engineers = 80(22.2%), and Quantity Surveyors = 64(17.8%)]. According to Mugenda and Mugenda (2003), any response rate of 70% and above is termed excellent for meaningful analysis.

Objective 1: To assess the level of construction professionals soft-skills in Abuja Municipal Area Council (AMAC), Nigeria

Descriptive tools such as mean score and standard deviation was used to analysed the level of construction professionals soft-skills in Abuja Municipal Area Council (AMAC), Nigeria.

Decision:

0.00 – 1.49 = Very Low (**VL**); 1.50 – 2.49 = Low (**L**); 2.50 – 3.49 = Moderately Low (**ML**); 3.50 – 4.49 = High (**H**) & 4.50 – 5.0 = Very High (**VH**) as adapted from Lea *et al*. (2020).

Table 2 below displays the level of construction professional's soft-skills in Abuja Municipal Area Council (AMAC), Nigeria.

Communication skill is assessed to be a construction professionals soft-skill with a mean score (X) = 4.2844 and standard deviation (SD) = 1.3761; Integrity skill is assessed with X = 4.2355 and SD = 1.3032; Self-management/time-management skill is assessed with X = 4.1223 and SD = 1.0143; Teamwork and networking skill is assessed with X = 3.9358 and SD = 0.1101; Flexibility/adaptability skill is assessed with X = 3.9358 and SD = 0.1101; Creativity and curiosity skill is assessed with X = 3.9266 and SD = 1.1212; Negotiation skill is assessed with X = 3.9052 and SD = 1.1773; Responsibility skill is assessed with X = 3.7767 and SD = 1.1679; Emotional intelligence skill is assessed with X = 3.7615 and SD = 1.1187; Problem solving skill is assessed with X = 3.7584 and SD = 1.1446; Decision making skill is assessed with X = 3.6942 and SD = 1.1384; Cross-cultural relationships skill is assessed with X = 3.5810 and SD = 0.1926; Conflict management skill is assessed with X = 3.5749 and SD = 0.1667; Work ethic skill is assessed with X = 3.5627 and SD = 0.1599; Courtesy skill is assessed with X = 3.5505 and SD = 0.1994; Enthusiasm & positive attitude skill is assessed with X = 3.5413 and SD = 0.1786; Workplace professionalism skill is assessed with X = 3.5352 and SD = 0.1797; and Client management skill is assessed with X = 3.5199 and SD = 0.2112.

The average mean score reveals a value of 3.7873 which means that, there is high level of soft-skills of construction professional in the study area.

Table 2: Construction professional's soft-skills in AMAC, Nigeria

Construction professionals soft-skills	X	SD	Decision
Communication skill	4.2844	1.3761	High
Integrity skill	4.2355	1.3032	High
Self-management/time-management skill	4.1223	1.0143	High
Teamwork and networking skill	3.9358	0.1101	High
Flexibility/adaptability skill	3.9358	0.1101	High
Creativity and curiosity skill	3.9266	0.1212	High
Negotiation skill	3.9052	0.1773	High
Responsibility skill	3.7767	0.1679	High
Emotional intelligence skill	3.7615	0.1187	High
Problem solving skill	3.7584	0.1446	High
Decision making skill	3.6942	0.1384	High
Cross-cultural relationships skill	3.5810	0.1926	High
Conflict management skill	3.5749	0.1667	High
Work ethic skill	3.5627	0.1599	High
Courtesy skill	3.5505	0.1994	High
Enthusiasm & positive attitude skill	3.5413	0.1786	High

Workplace professionalism skill	3.5352	0.1797	High
Client management skill	3.5199	0.2112	High
Average Mean Score = ∑M / 18 = 68.1713 / 18	**3.7873**	**0.3409**	**High Soft-skills**

N = 327. X = Mean, SD = Standard Deviation.

It was revealed from table 2 above that there is high level of soft-skills of construction professionals in Abuja Municipal Area Council (AMAC), Nigeria is high with mean score (X) of 3.7873, with the 5 most high level of construction professionals soft-skills in Abuja Municipal Area Council (AMAC), Nigeria to include communication skill with X = 4.2844, integrity skill with X = 4.2355, self-management/time-management skill with X = 4.1223, teamwork and networking skill with X = 3.9358, flexibility/adaptability skill with X = 3.9358, and creativity and curiosity skill with X = 3.9266.

The findings corroborate with the result of van Heerden *et al*. (2023), Wen (2023), Tahir (2019), van Heerden *et al*. (2018), Crawford and Dalton (2016), Mahasneh and Thabet (2016), Taylor (2016). This also validates the assertion of Durão *et al*. (2017) that soft-skills have more influence on projects' success than do technical skills. Because the construction industry is one of the toughest jobs with its tight schedules and deadlines, its professionals need to be able to clearly and succinctly explain to employees everything from organisational goals to specific tasks (Alison, 2022), and they have to be experts in managing their time, their team's time and the overall time of the project (Peter, 2023).

Objective 2: To determine the level of construction project effectiveness in the study Area

Descriptive tools such as mean score and standard deviation were used to analysed the level of construction project effectiveness in Abuja Municipal Area Council (AMAC), Nigeria.

Decision:

0.00 – 1.49 = Very Low (**VL**); 1.50 – 2.49 = Low (**L**); 2.50 – 3.49 = Moderately Low (**ML**); 3.50 – 4.49 = High (**H**) & 4.50 – 5.0 = Very High (**VH**) as adapted from Lea *et al*. (2020).

Table 3 below displays the level of construction project effectiveness in Abuja Municipal Area Council (AMAC), Nigeria. Client's satisfaction dimension is determined to be a construction project effectiveness with a mean score (X) = 3.9052 and standard deviation (SD) = 1.6794; Profitability dimension is determined to with X = 3.9021 and SD = 1.5773; Learning and development dimension is determined with X = 3.8991 and SD = 1.354; Environment performance dimension is determined to be relevant with X = 3.7706 and SD = 1.2673; Employee satisfaction dimension is determined to be relevant with X = 3.6972 and SD = 1.3731; Productivity performance dimension is determined to be moderately relevant with X = 3.4924 and SD = 1.4553; Risk management performance dimension is determined to be moderately relevant with X = 3.4893 and SD = 1.1944; Achieving goal performance dimension is determined to be moderately relevant with X = 3.4801 and SD = 1.1926; Out-put performance dimension is determined to be moderately relevant with X = 3.4740 and SD = 1.1799; and Human resource performance dimension is determined to be moderately relevant with X = 3.4587 and SD = 1.1819.

The average mean score reveals a value of 3.6569 which means that, there is high level of effectiveness of construction projects in the study area.

Table 3: Construction project effectiveness in AMAC, Nigeria

Construction project effectiveness	X	SD	Decision
Client's satisfaction dimension	3.9052	1.6794	High
Profitability dimension	3.9021	1.5773	High
Learning and development dimension	3.8991	1.3854	High
Environment performance dimension	3.7706	1.2673	High
Employee satisfaction dimension	3.6972	1.3731	High
Productivity performance dimension	3.4924	1.4553	Moderately Low
Risk management performance dimension	3.4893	1.1944	Moderately Low
Achieving goal performance dimension	3.4801	1.1926	Moderately Low
Out-put performance dimension	3.4740	1.1799	Moderately Low
Human resource performance dimension	3.4587	1.1819	Moderately Low
Average Mean Score = ∑M / 10 = 36.5687 / 10	**3.6569**	**1.3487**	**High Effectiveness**

N = 327. X = Mean, SD = Standard Deviation.

It was revealed from table 3 above that there is high level of effectiveness of construction projects in Abuja Municipal Area

Council (AMAC), Nigeria with a mean score (X) of 3.6568; and 5 most construction project effectiveness to include client's satisfaction dimension with X = 3.9052; profitability dimension with X = 3.9021; learning and development dimension with X = 3.8991; environment performance dimension with X = 3.7706; and employee satisfaction dimension with X = 3.6972.

The findings corroborate with the result of Silva *et al*. (2016). Bruno *et al*. (2017) summarised construction industry as a complex system of construction stakeholders, building works, civil and heavy engineering works, and construction training establishments. Therefore, Owusu-Manu *et al*., 2021) validates the possibility to learn and improve from one project to the next as something that any project organisation should be interested in doing. Of course, the fundamental intent of every business entity is to produce goods and services that satisfy the unfulfilled needs and wants of a target audience at a profit (Obasan *et al*., 2015).

Objective 3: To determine the effect of construction professionals soft-skills on construction project effectiveness in the study area

Regression was utilized in analysing the effect of construction professional's soft-skills on construction project effectiveness in Abuja Municipal Area Council (AMAC), Nigeria.

Decision:

Tested at p-value < 0.05 as statically significant it becomes.

Table 4 exhibits the model summary of the linear regression coefficient of the effect of construction professional's soft-skills on the construction project effectiveness in AMAC, Nigeria. Regression coefficient R^2 = 0.645 (64.5%) explains that the level of influence between the construction professionals soft-skills (independent variable) on construction project effectiveness (dependent variables) is strong, thus an increase in the independent variables leads to an increase in dependent variables, and vice versa. The adjusted R^2 = 0.639 shows that an increase in the independent variable will increase significant factors by 63.9% and vice versa. Thus, 63.9% variation in significant factors is explained by construction professional's soft-skills and 36.1% could be due to other factors which were not considered in the study.

Table 4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.830[a]	.645	.639	3.95653
a. Predictors: (Constant), Construction project effectiveness				

Table 5 exhibits the analysis of variance (ANOVA) regression coefficient of the effect of construction professional's soft-skills (independent variable) on construction project effectiveness (dependent variable) in AMAC, Nigeria. The table displays the influence of the independent variable are statistically significant at 5% (p < 0.05) level of significance on dependent variables with a calculated F-value of 72.876 being greater than the theoretical F-value. Hence, there is enough statistical evidence to conclude that the construction professional's soft-skills (independent variable) has positive significant strong effect on construction project effectiveness (dependent variable).

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1675.696	1	1675.696	72.876	.000[b]
	Residual	2534.797	326	7.775		
	Total	4210.493	327			
a. Dependent Variable: Construction project effectiveness						
b. Predictors: (Constant), Construction professionals soft-skills						

Table 6 displays the linear regression coefficient of the effect of construction professional's soft-skills on construction project effectiveness in AMAC, Nigeria. Finally, the omission of the constant value in the regression equation shows that Construction project effectiveness (CPE) cannot be achieved in the study without the effect of the independent variables (construction professional's soft-skills). B-value of 0.867.

Table 6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.496	3.846		1.949	0.054
	Construction professionals soft-skills	0.867	0.103	0.670	8.425	0.000
a. Dependent Variable: Construction project effectiveness						

It is deduced from Table 4 that the regression coefficient R^2-value of 0.645 (64.5%) meant that there is a positive strong effect of construction professionals soft-skills (independent variable) on construction project effectiveness (dependent variable) in AMAC, Nigeria. Tables 5 and 6 revealed the construction professional's soft-skills (independent variable) has positive strong statically significant effect on construction project effectiveness (dependent variable). Therefore, with the B-value of 0.867(86.7%) revealed that, construction professionals soft-skills has effect on construction project effectiveness in AMAC, Nigeria.

The findings corroborate with the result of van Heerden *et al*. (2023), Wen (2023), Tahir (2019). Project management soft-skills has a significant impact on project effectiveness.

CONCLUSIONS

The conclusions of this study are based on the research findings as follows:

a. There is high level of soft-skills of construction professionals in Abuja Municipal Area Council (AMAC), Nigeria with communication skill, integrity skill, self-management/time-management skill, teamwork and networking skill, flexibility/adaptability skill, and creativity and curiosity skill as the most soft-skills of the construction professionals.

b. There is high level of construction projects effectiveness in Abuja Municipal Area Council (AMAC), Nigeria with client's satisfaction dimension, profitability dimension, learning and development dimension, environment performance dimension, and employee satisfaction dimension as the most construction project effectiveness.

c. There is positive strong significant effect of construction professionals soft-skills on construction project effectiveness in AMAC, Nigeria with B-value = 0.867 (86.7%) and $p = 0.000 < 0.05$.

RECOMMENDATIONS

The recommendations of this study are based on the research conclusions as follows:

i. Construction professionals should stress and practice soft-skills in their daily endeavours to ensure construction success and project delivery.

ii. Construction professionals should always be mindful of construction project effectiveness to ensure all stakeholders satisfaction without compromising profitability of the industry and the environment.

All stakeholders in the construction industry should wisely join hand together to ensure robust industry so as to derived the full potentials of the industry in terms of economic development to the nation, employment generation, infrastructural development, and so on.

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