

IMPACT OF CULTURE ON CONSTRUCTION PROJECT DELIVERY IN AKWA IBOM STATE

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ABSTRACT

Purpose: The aim of this study is to understand the impact of culture on construction project delivery (including factors such as project timelines, budget, quality, and stakeholder satisfaction) in Akwa Ibom state in order to improve project success. The study determined the extent of impact of cultural barriers and explored the strategies used to overcome cultural barriers in construction projects in the study area.

Design/methodology/approach: The study adopted an exploratory (qualitative) research design, using a well-structured questionnaire to elicit the perceptions of construction stakeholders on the subject matter of the study. Mean Score Index and Kruskal-Wallis H test of difference were the statistical tools adopted.

Findings: The study found that the most common cultural barriers in the study area were a lack of trust, understanding, communication, and language challenges. These factors hindered effective interaction and collaboration, leading to misunderstandings, reduced engagement, and decreased productivity in diverse settings. Additionally, project scheduling and productivity were found to be more directly impacted by cultural barriers compared to safety concerns and conflict resolution.

Research limitations/Implications: The limitations included limited availability of participants or projects, difficulty in assessing comprehensive data on past projects, limited time for data collection and analysis, the scope of the study focuses solely on Akwa Ibom State thereby restricting broader cultural influences from neighbouring states. The findings of this study contribute to the body of knowledge on the intersection of culture and construction project delivery, offering practical recommendations for stakeholders in the construction industry in Akwa Ibom State and beyond.

Practical implications: The study recommends that the construction industry should pay more attention to the management of cultural differences through cultural sensitivity training, local collaboration and conflict resolution mechanisms.

Originality/value: This study identified the common cultural barriers in construction projects in the study area, the impacts of identified cultural barriers and the strategies used to overcome such barriers in construction projects.

Keywords: Corporate organizations; Lease; Own; Real estate; South-south; Nigeria.

1. INTRODUCTION

Culture is a common method of processing data or interpreting the information within people. This can affect any business if there are cultural barriers. The collaborative dependency is because of the fact that “they constitute a connected system of meanings: a shared definition of a situation by a group”. Cultures control people's thoughts, actions and behaviours, therefore in multicultural teams within a construction project, people get to establish new relationships which can provide positive contributions to the project

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regarding knowledge sharing, innovation, alternative dispute resolutions, and others. Although, there must be thought and consideration for misunderstandings and other negative impacts of multicultural teams (Ogunsanya *et al.*, 2015).

Cultural differences are important as these can help establish a working environment that offers mutual respect, understanding, support as well as the appreciation of individuals and their contributions. Different cultures in a single environment have the ability to exert various influences on the efficient management of projects. The influences of cultural differences have a relationship with the leadership and teamwork of a project. (Emuze and James, 2013). With that said, adverse influences of cultural differences could also ultimately assist in project delivery because lessons are learnt and people overcome their culture shock. Culture shock occurs when people migrate into a foreign culture and become mentally puzzled by the cultural dimensions of that foreign culture. A fundamental phenomenon common to all cultures is the communication aspect, which is a significant contributor towards effective project management and ultimately, the accomplishment of a project. Successful projects are the core attributes of a successful construction company (Ogunsanya, Aigbavboa and Thwala, 2015). Culture and cultural differences are important issues for every organization, in every industry. As Ankrah and Proverbs (2018) stated, these concepts become more critical in construction due to the nature of contracting, internationalization of procurement, joint venturing, and partnering in this industry. Like in other industries, the increase in strategic alliances in construction also increases the significance of cultural differences due to the interaction of people from different cultures (Shore and Cross, 2019).

Cultural differences can have a positive or negative impact on the day-to-day operations of construction enterprises that operate nationally or worldwide, according to prior studies and industry experience (Ernest, 2022). In the construction industry, doing business with people from different culture is becoming more and more necessary. As a result, workers in the construction industry may need to develop the skills necessary to deal with coworkers who hold very disparate viewpoints (Brian, 2019). Managing cultural differences well can improve organizational efficiency and give a company a competitive advantage. On the other hand, failure to address cultural differences can lead to major problems such as construction delays and declining production. Due to the nature of joint ventures, contracts as well as the adoption and transfer of philosophies and new methods, cultural diversity is a crucial issue in the construction industry (Aki, 2015). Understanding and managing cultural diversity can bring several benefits and be crucial to a project's success. On the other hand, if they are not adequately managed, they can cause problems that could threaten the success of the project (Khan, et al., 2018). In project environments, if there are significant cultural value differences, they will last for the duration of the project and their impact on project delivery may be far greater than that of a broader organization, where the influence of the existing corporate culture may be more important (Chipulu *et al.*, 2014). Cultural diversity directly or indirectly affects project delivery, although there is little evidence of this in construction projects (Khan, et al., 2018).

Popescu *et al.* (2014) proposed tools for evaluation of managing diversity in cross-cultural project teams. Kandler and Laland (2009) reported that both independent invention and the modification and refinement of established innovations influence cultural dynamics and diversity. Cultural diversity also has an effect on creativity. Diversity in creativity and cognitive style exists between and among ethnic and cultural groups; there are as many within -group as between - group differences (Oades -Sese and Esquivel, 2011). There exists a relationship between cultural diversity and economic growth. (Ager and Brückner, 2013). Also, it has been established that workforce diversity can improve productivity (Saxena, 2014).

According to Hall (2016), Systematic research into organisational culture has rather been limited, with culture just being utilised as a “black box” reason for most of the industry’s ills for which other reasons cannot be adduced (Fellows and Seymour, 2015).

Over the past 10 years however, culture has emerged as an important issue in construction and there has been a growing research interest into this 'soft' area which is critical to the management of construction businesses and projects, particularly with the increasing use of local procurement. This awareness notwithstanding, the nature of the implied relationship between organizational culture and performance still remains unclear since few studies exist that provide empirical evidence of this. As a result, it has not been possible to definitively identify cultural orientations that influence the process of delivering the products of the construction industry with its peculiar characteristics, and to strongly advocate and build those cultural orientations that improve performance whilst taking steps to mitigate the effects of those orientations that are incompatible with good performance. Culture significantly impacts business activities, and its importance has grown, especially for companies in Akwa Ibom State with employees from diverse backgrounds. Therefore, companies must take cultural factors into account in their daily operations to succeed at the state level.

1.1 Objective of the study

Given the background above, the specific objectives are to:

- i. Determine the extent of impact of cultural barriers on project delivery.
- ii. Explore the strategies used to overcome cultural barriers in construction projects.

The outcome of this study is to understand the impact of culture on construction project delivery (including factors such as project timelines, budget, quality, and stakeholder satisfaction) in Akwa Ibom State in order to improve project success.

1.2 Limitation of the Study

This project is constrained by inadequate time and resources, as well as biases in the case studies and survey responses, which may affect the comprehensiveness and accuracy of the findings. However, the Findings in this research may not be applicable in other regions but is limited to Akwa Ibom state, due to the fact that discoveries from one region may not apply to others due to cultural differences.

1.3 Research Hypothesis

Two hypotheses were proposed for this study. The first hypothesis states that; there is no significant variation in the perceptions of construction stakeholders about the impacts of cultural barriers in construction projects delivery in Akwa Ibom State. The second hypothesis states that; there is no significant variation in the perceptions of construction stakeholders about the strategies used to overcome cultural barriers in construction projects in Akwa Ibom State.

2. LITERATURE REVIEW

2.1. Cultural Barriers in the Construction Industry

Culture is a vastly complex aspect of people's daily lives and thus it remains difficult to conclude its exact meaning. Numerous researchers have their own connotations as to what culture means although it remains a vivid concept. Culture as the collective ways in which groups of mutually understanding people interpret the society and the world as a whole. Chan and Tse (2003) suggested that the essence of culture is the systematic beliefs, views, practices, rules, behaviour, perspectives as well as worldviews shared within a society and it has been carried down from generation to generation ultimately becoming a norm. Goffee and Jones (1996) mention that culture is an outcome of how people relate to one another. It surrounds us and shapes our vision of the world and how we interact with it. Culture is a key determinant of human behaviour, as each culture differentiates itself from others based on background, beliefs, values, and responses to specific situations. As a result, it has been observed that different societies adopt and react to situations in distinct ways (Hofstede et al., 2010).

Projects are the mobilizers of the human resource. Quite often, projects bring individuals and companies together to complete a shared task. In most of these cases, the persons who come together are from various and different cultural backgrounds (Rees-Caldwell and Pinnington, 2013). Many authors have explored the impacts of cultures towards projects and project management systems but have frequently snubbed the internal influences on the people, which ensure project delivery. Meng (2012) argues that project delivery can be vastly affected by the state of workmanship (whether poor or good). The human resource plays a vital role in the production of any project and any mismanagement of this resource causes various delays, cost overruns and other critical effects.

2.2 Impact of Cultural Barriers in Construction Projects

Cultural barriers can significantly impact project delivery and outcomes in various ways. Here are some key areas where cultural barriers can have an effect, supported by relevant citations:

Communication and Language Challenge

Effective communication is vital for successful project delivery, and cultural differences can impede communication channels. Research has shown that cultural diversity can lead to misunderstandings and misinterpretations, resulting in communication breakdowns and delays in project execution (Gelfand *et al.* 2017). Language barriers, including differences in spoken and written language, can further hinder effective communication (Torbiörn, 2015).

Decision-Making Processes

Cultural norms and values influence decision-making processes within project teams. A study by Lu *et al.* (2016) found that cultural diversity can lead to conflicting decision-making styles, making it challenging to reach a consensus and slowing down the decision-making process. Different cultural perspectives and expectations may also impact the prioritization of project objectives and resource allocation (Müller *et al.*, 2013).

Leadership and Management Styles

Cultural variations influence leadership and management styles, which can affect project outcomes. Research by House *et al.* (2004) highlights that leadership behaviours are culturally contingent, and the effectiveness of leadership styles may vary across cultures. This disparity in leadership approaches can lead to misalignment, reduced team cohesion, and decreased project performance (Javidan *et al.* 2006).

Conflict Resolution

Cultural barriers can contribute to conflicts within project teams. Different cultural norms and conflict management styles may result in misunderstandings, reduced trust, and increased tensions. A study by Rahim and Bonoma (1979) emphasizes that cultural differences impact conflict resolution approaches, and the effectiveness of conflict resolution strategies may vary across cultures, potentially hampering project progress.

Work Ethic and Time Management

Cultural differences in work ethic and time orientation can influence project schedules and deadlines. For instance, cultures that prioritize a long-term view may have a different sense of urgency compared to cultures that focus on short-term outcomes. This can lead to misalignment in meeting project timelines (Bücker *et al.* 2018).

Stakeholder Engagement

Cultural barriers can affect stakeholder engagement and collaboration. Cultural differences may impact the level of trust, expectations, and communication styles between project teams and stakeholders. A study by Priemus and Vermoolen (2007)

indicates that cultural diversity can lead to misunderstandings and conflicts with stakeholders, potentially jeopardizing project success.

Trust and Relationship Building

Cultural differences can impact trust and relationship-building among team members, which are crucial for effective collaboration. A research study by Ang and Van Dyne (2015) demonstrated that cultural variations can affect the development of trust within teams, leading to reduced cooperation and productivity.

Varying Work Styles and Practices

Different cultures have distinct approaches to work, decision-making, and problem-solving. When team members have conflicting work styles and practices, it can hinder project progress and decision-making processes. A study by Shenhar *et al.* (1997) found that cultural differences in work practices can lead to misunderstandings, inefficiencies, and decreased project performance.

Differing Values and Norms

Cultural diversity often brings different sets of values, norms, and expectations. These differences can influence how team members prioritize tasks, handle conflicts, and make decisions. When values and norms clash, it can lead to conflicts and hinder the smooth functioning of the project. A research article by Söderlund and Borg (2010) highlights how cultural differences in values and norms can create challenges in cross-cultural project teams.

Lack of Trust and Understanding

Cultural differences can contribute to a lack of trust and understanding among team members. Stereotypes, biases, and preconceived notions about other cultures can hinder effective collaboration and teamwork. A study by Wang, *et al.* (2014) demonstrates that cultural differences can undermine trust and impede knowledge sharing and cooperation among team members.

Ethical and Legal Considerations

Cultural variations in ethical standards and legal frameworks can impact project delivery and outcomes, particularly in international projects. Different cultural perspectives on issues such as intellectual property, bribery, and contractual obligations can lead to misunderstandings and conflicts. An article by McAdam, Reid, and Leonard (2013) discusses the influence of cultural differences on ethical decision-making in project environments.

Conflict and Resistance

Cultural differences can contribute to conflicts and resistance to change within project teams. When individuals hold strong cultural identities, they may be reluctant to adapt to new practices or challenge existing methods. This resistance can impede project progress and compromise outcomes (Gelfand *et al.* 2007).

Safety Concerns

Varied safety practices and risk perceptions due to cultural differences can lead to safety issues on construction sites (Cruz and Marinho, 2019). Safety professionals must develop and carry out work-based safety programs in cross-cultural settings. A recent article in *Professional Safety*, "Safety Across Cultures: Understanding the Challenges," discusses the challenges of cross-cultural safety and health and offers suggestions on how to approach these growing responsibilities.

Project Delays and Cost Overruns

Cultural barriers can contribute to project delays, impacting the project schedule and budget (Ochieng *et al.* 2019). The construction industry is negatively affected by cost and

time overruns which further negatively impacts the contractual stakeholders. Construction delays and cost overruns are a global phenomenon since one of the major problems in the construction industry involves unexpected incurred costs and late delivery of projects.

Reduced Productivity

Cultural barriers may hinder effective teamwork and collaboration, leading to decreased productivity on construction sites (Babin *et al.* 2018). Low productivity creates a cascade of problems. When there are issues with workflow, poor decision-making or scope creep, it can cause low morale within your entire team. Employees don't want to feel like they're wasting their time. If a project's moving at a snail's pace, they often disengage.

Reduced Quality

Cultural barriers can impact the understanding of quality standards and requirements, resulting in lower-quality workmanship (Liu, 2018). Poor quality in building projects is high and increasing. Poor quality can increase the cost of a building by up to more than 50% and can delay a project by up to 50%. This research investigated the poor quality of building elements/components.

Local Regulations and Practices

Cultural barriers may result in difficulties understanding and complying with local regulations, codes, and construction practices in international projects (Fong *et al.* 2016). There are some expected activities to enhance women participation, creating income increase chances for women without burdening their life and empowering women in subproject areas: Enhance women's participation in decision making: in all community participation consultation during subproject implementation, the women should be encouraged to join and give the opinion.

Innovation Limitations

Different cultural perspectives may hinder the adoption of innovative construction practices or technologies (Baroudi and De Carvalho, 2017). Innovation often involves significant investments in research, development, and implementation. Because not all new ideas succeed in the market, there is a danger of failure.

Supplier and Subcontractor Challenges

Cultural barriers may also affect relationships with suppliers and subcontractors, potentially affecting the timely delivery of materials and services (Asgari and Fardad, 2019). Unreliable suppliers or non-compliant subcontractors can result in material shortages, sub-standard work quality, and project delays. Insufficient communication and coordination can exacerbate these issues, further impeding project timelines and budgets.

Reputation and Client Relations

Failure to understand and navigate cultural nuances can impact a construction company's reputation and client relations, affecting future business opportunities (Baroudi and De Carvalho, 2017). One of the best ways to help build strong client relationships is to develop a reputation as an independent professional who delivers exceptional results. Make sure that you don't oversell yourself and promise unrealistic results.

Project Scheduling

Different cultural holidays and work practices can affect project timelines and milestones, requiring adjustments to accommodate various cultural practices (Asgari and Fardad, 2019). A project schedule is created during the planning phase and includes the following: A project timeline with start dates, end dates and milestones. The work necessary to complete the project deliverables. The costs, resources and dependencies associated with each task.

2.3 Strategies for Overcoming Cultural Diversity in Construction Project

Solution to Religious Challenge (Tolerance)

To effectively solve the challenge of Safety, health and Environment on the construction site as previously identified, it is essential that the site Manager receive adequate training on cultures of the employees. He needs to know their religious inclinations in order not to offend them such as knowing the time for prayers, fasting or holiday. For example, the site manager for reason of safety may disallow a fasting worker from working on height because he may not be fit enough under such condition. In addition, proper religious orientation should be given to site workers particularly on the issue of health and safety by informing them of the need to observe certain safety rules and regulations on site, for example they could be provided with reflective jacket that would cover their whole body- head to toes, a safety helmet that will cover their entire head, and other dresses that would make them feel adopt to health and safety culture. (Akpan, *et al.* 2019)

Solution to Communication Challenge (Sign Interpretation/use of Images)

In the UK and other countries, the challenge of communication in health, safety, and environmental matters can be addressed by translating safety information, using interpreters, and employing various visual methods such as signs, posters, fact sheets, brochures, guides, forms, logs, and checklists. These tools help effectively communicate essential health and safety information to the migrant workforce.

Solution to Language Barrier (Train and being trained)

Language differences as observed in the literature are issue that has both positively and negatively connotations. Negatively, it has affected the productivity level of an organization particularly when considered within the framework health and safety.

Therefore, to address health and safety challenges on construction sites, site managers should take the following actions (Gibson and Chang, 2019);

- enrol in language courses for the languages most commonly spoken on-site (Tucic and Ruggieri, 2020),
- develop strong listening skills to better comprehend the predominant site language,
- establish a language learning unit to promote ongoing communication improvement,
- sensitivity training (Site managers should use their words very carefully when they talk or write to employees from other cultures (Tucic and Ruggieri, 2020).

Solution to Cultural and Traditional Challenges (Building Good Rapport)

By gaining an understanding of employees' cultural customs and demonstrating genuine interest in their traditions, a manager can build strong rapport with a multicultural workforce. This rapport fosters improved communication, which in turn helps reduce costs and enhance productivity (Hofstede, Hofstede, & Minkov, 2010).

Solution to Technological Challenge (Body language)

Technological advancements and their usage are not the same globally, and these differences can lead to accidents, especially among migrant workers who may lack familiarity with new machines and equipment. Since the equipment may not resemble what they are used to, demonstrating its use through body language or other clear forms of communication can significantly reduce the risk of accidents (Hofstede, Hofstede, & Minkov, 2010).

Intercultural Competence

Intercultural competence involves both linguistic accuracy and social appropriateness in the use of language. Language and culture are inseparable, meaning that if the parties

involved in communication do not consider each other's cultural context, communication is likely to fail. Therefore, improving intercultural competence among staff can help remove communication barriers within an organization. Interpersonal and cross-cultural communication skills can be enhanced through various strategies (Bennet, 2004).

Language Training

Language barrier is the greatest problem encountered in the communication between workers from different cultures. In the event that it is conceivable to give dialect training to employees, particularly the individuals who have more odds of interacting with outsiders, it will without a doubt decrease some pointless misconception and inconsistencies, in spite of the fact that they can't be deleted completely. Then again, non-natives, particularly the foreign administrators in multinational enterprises, can also learn some local languages. This will make it simpler for them to be accepted by the natives and to have a harmonious relationship with them. For a comprehensive dialect training framework, there are a few stages these multinational organizations can utilize. A compelling language training plan ought to be given. It should usually cover the following contents: firstly, there should be practical training topics such as Basic Communication, Quality Management, Project Management, and Marketing & Sales; secondly, lots of members should attend the language training program; thirdly, to meet different training targets, appropriate subject, depth of training, and techniques for clarification ought to be embraced; in conclusion, a criticism on audit and talk of the organizations' dialect training system ought to be taken as an issue of incredible importance, as this will give more encounters and exercises to alternate activities done in these ventures.

Cross-cultural Knowledge Training

Dialect isn't just the bearer of culture, yet in addition part of it. Cross-cultural communication incorporates verbal and non-verbal communication, among which dialect is the most fundamental. It tends to be said that everybody, be he a local or nonnative, wants to speak with other individuals (Patria and Marc, 2001), however they will most likely be unable to do as such straightforwardly. Issues, in this way, emerge if such a man utilizes an interpreter or a mediator as in specific words may not be utilized as precisely as the individual needs.

Cross-cultural knowledge training implies recognizing and conceding the presence of contrasts between cultures. Such differences mainly include differences in perceptions, and interpretation and evaluation of social circumstances and the general population who make them and act inside them. These differences have to be named, described, explained, and understood. Recognizing the culture of a colleague is considered to be the first condition of mutual understanding and good cooperation. This step is definitely not common or easy.

Sometimes, both parties use the foreigner's own language, but there could still be misunderstanding as a result of behavioural differences given the cross-cultures. If this lasts for long, both parties will begin to suspect each other. If there is an irrational individual, he will cause more problems for the enterprise. As time goes by, more misunderstandings and contradictions may arise, which will surely destroy the cooperation between both parties and cause great damage to the development of the enterprise. Therefore, cross-cultural knowledge training is needed for both the native and the foreigner.

Creating and Establishing New Enterprise Culture

By understanding different cultures and adapting to the native culture, different enterprises should establish a new enterprise culture on the basis of mutual understanding of culture and the requirements of the enterprises' development strategy. To build up the multicultural enterprise culture, both parties should find out the common aspects of their cultures and use them as the basis for building the new one. The ultimate purpose of every

enterprise is to earn money. In this case, the management concept and mode may be similar in different cultures. Therefore, if these common grounds are identified, a certain kind of new enterprise culture can be established and accepted by both parties (Peng *et al.*, 2005). In other cases, a new method must be developed to effectively harmonize different cultures. Generally speaking, if cultures vary a lot among multinational enterprises, the native culture and the foreign culture will be both encouraged and saved to reduce cultural conflicts at the beginning of the establishment of enterprise culture and ensure smooth running of the operations of the enterprise.

Enforcement of Mutual Benefit Policy

As Berger (1996) posits, in the long-term process of business development, multinational enterprises should concentrate on the mutual benefit of both parties and workers' rights should be respected in order to achieve a win-win goal. Human management will help to boost the spirits of the whole workers both natives and foreigners. In this way, the staff can feel the warmth of the enterprise, the inner source of the development being the workers' inspiration. With the mutual benefit policy, not only the foreign workers, but also the natives can get more than they expect. Usually, workers pay great attention to salary and other welfare packages because this means further development of themselves and their family. If these can be achieved, all the workers will work conscientiously with great effort to earn the greatest benefits. Then the long-term healthy development and success of the enterprise will be achieved.

Culture Caution and Awareness

Culture is increasingly becoming a critical issue on construction projects. The project management role requires a high level of professional expertise and awareness of the cultural influences and theories. Many construction companies are suffering from the plight of cultural differences affecting their projects (Jiang and Pretorius, 2011). An initial step to managing cultural differences is being aware of the cultures that exist in the company/ project, cultural similarities and differences and the issues which are affecting the culture at that moment.

Management and Teamwork

The successful completion of a construction project depends heavily on the effectiveness of the management systems in place. Evidently, the cultural differences encountered on every project have an effect on the system (Kivrak *et al.* 2009). According to Kivrak *et al.* (2009) the management of cultural differences should vary by the nature of the project. Although, the authors also mentioned that maintaining good communication and building trust with workers is imperative. The management of projects is therefore very crucial. In a typical construction project, the top management would usually comprise of the Project Manager, who leads the projects along with other men who are co-managers. The co-managers form part of management as these have a contribution to the project and the decision-making.

Leadership Style

Leadership styles are associated with the abilities of how people interrelate with the human resources from whom performance is expected. This includes the relations of Client-Project Manager, Project Manager- Co-managers, and Co-managers-employees. These leadership styles, according to Goetsch and Davis (2006), are autocratic leadership, democratic leadership, participative leadership, goal-oriented leadership, and situational leadership. The leadership styles mentioned above are easily influenced by culture as well as other macro-economic factors such as politics. According to Khumalo & Thwala (2009), the team leader must possess sound understanding and awareness of cultural differences to lead the team in a productive manner. Various cultural influences can impact on the choice of leadership style in construction projects.

Regular Team Meetings

Organizing regular team meetings to discuss concerns and challenges related to cultural differences can promote awareness and empathy (Asgari and Fardad, 2019). Regular team meetings are a great way to develop team alignment. When people connect frequently, they're more in sync with what they're working toward together and each of their roles in that mission. Team meetings are also an effective way to help your team understand its objectives, goals, and responsibilities.

Respect for Cultural Norms

Acknowledging and respecting diverse cultural practices and customs can foster a more inclusive and harmonious work environment (Baroudi and Carvalho, 2017). Acknowledge each person as a unique individual rather than assuming they conform to cultural stereotypes. Grasp Basic Etiquette: Familiarize yourself with fundamental cultural etiquette, including greetings, gestures, and acceptable conduct. This demonstrates your respect for and recognition of their cultural norms.

Cultural Liaison

Appointing cultural liaison officers or facilitators who can bridge gaps between different cultural backgrounds can be beneficial (Luiz, 2018). Cultural Liaison means a person who is of the same racial, cultural, socioeconomic, or linguistic background as the student. To begin relationship building, Community Liaison Workers conducted a needs analysis of the men in their communities, and then implemented strategies in response to those needs. Example strategies included:

- conducting listening circles
- Providing one-on-one support for community members (mobile phone counselling, internet-based chatrooms)
- Developing and producing culturally appropriate resources around men and family relationship topics of interest.

Cultural Sensitivity in Decision-Making

Making decisions that take into account cultural factors can lead to more informed and inclusive outcomes (Goa, Shen and Chong, 2019). Decision makers must also avoid acting upon perceived opportunities and threats that are in fact non-existent. Ultimately, perceptions of one's environment determine whether the individual makes a decision at all, for better or for worse.

Cultural Mediation

Employ cultural mediators or interpreters to facilitate communication and understanding between team members from different cultures. (Liu *et al.*, 2020). Cultural mediation describes a profession that studies the cultural differences between people, using the data in problem solving. It is the process of cross-linking the cultural and social spheres, and the building of new relationships between policy, culture and public space. It covers a vast array of practices and is ultimately intended to make everyone a cultural player.

Localization

Compared to globalization, localization is a useful way to solve the cross-cultural differences (Escobar, 2001). The basic point for localization is that the locals have their own advantages in international business. Jacobs (1996) claims that through localization, which is attending to local and taking local seriously, foreigners will fully understand the power of locals. Gibson-Graham (1996) also addresses that local practice is economically meaningful, and it makes visible practice of cultural differences which be treated as a basis for alternative. As Escobar (2001) states, the localization could have many aspects, such as capital, the state, techno science, communities, etc.

Cross Cultural Conflict Avoidance

Cross cultural conflict avoidance means avoiding the big differences in cultures between foreigners and host country, in case the conflicts in these sensitive areas. According to Morris *et al.* (1998), avoiding certain cross-cultural conflict involves the skills and knowledge to avoid the conflict in ahead. Leung (1988) claims that conflict avoidance is positive for cross cultural performance. It is especially useful when dealing with religious problems.

Acculturation

Redfield *et al.* (1936) has defined acculturation “comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups”. However, even though in the definition, the changing is both-side, the acculturation trends to change more in one group than the other (Berry, 1990). As a result, acculturation is mainly about how one culture generally influences the other one. In international business, the companies sometimes would change the value of workers in host country, even the culture in host community (Berry, 1990).

Culture Assimilator

According to Mendenhall *et al.* (2004), culture assimilator may be one of the most popular and earliest ways to manage barriers caused by cross cultural differences. Bhawuk and Brislin (2000) also state that culture assimilator is an effective way to solve the barriers. As Triandis (1995) describes, it concerns about puzzling cross-cultural interactions and explanation in order to avoid the emerging misunderstandings. In other words, it deals with the “intercultural interactions between a sojourner and a host country national that depict a misunderstanding because of cultural differences among people”. It helps foreigners and locals to distinguish cultural differences from individual differences and find way to cope with cultural differences.

2.4 Area of the Study

This research work was carried out in Akwa Ibom state where information needed for this study could be obtained. Akwa Ibom State is located in the coastal Southern part of Nigeria, lying between latitudes 4° 32° E and 5° 33° N and longitudes 7° 33° N and 7° 25° E and 8° 25° E. The state is bordered on the east by Cross River State, on the west by Rivers State and Abia State and on the south by the Atlantic Ocean. Its population is over 5 million people (National Population Commission, 2020). The above area has a large volume of construction works, undertaken by both the private and public sectors.

3. METHODOLOGY

This study adopts exploratory research using quantitative approaches. Cooper and Schindler (2006) described exploratory studies as a tool that enables a researcher to develop concepts more clearly, establish priorities, develop operational definitions and improve the final research design. It is therefore used in this study to generate a framework to address the problems of the study. The quantitative survey approach involved the use of structured questionnaires. The target population comprised of the construction professionals such as the Architect, Quantity Surveyors, Builders and Engineers. The list of professionals was obtained from their respective professional bodies: the Nigerian Institute of Architects had 150 members, the Nigerian Institute of Quantity Surveyors had 53 members, the Nigeria Society of Engineers had 215 members, the Nigeria Institute of Building had 47 members, giving a population size of four hundred and sixty-five (465). The sample will be drawn from the population indicated above using relevant sampling technique. The data were analysed using percentage, mean score and Kruskal-Wallis H Test.

4. PRESENTATION AND DISCUSSION OF RESULTS

4.1 Questionnaire Distribution Analysis

Two hundred and fourteen (214) copies of questionnaire were distributed to the sampled population and one hundred and sixty-nine (169) were returned. This indicates 79.00% response rate as shown in Table 1. The sufficiency of the response rate to represent the targeted population was based on Assad *et al.* (2020) which explained the consensus of many previous researchers in the field of construction management that the range of 20% to 30% is acceptable as construction industry is known for lack of participation in questionnaire survey. Therefore, the response rate of 79% achieved by this study satisfied the conditions of acceptable response rate in the field of this study.

Table 1: Questionnaire Distribution Analysis

Description	Total number	Percent
Questionnaire sent out	214	100
Questionnaire received	169	79

4.2 Respondents' Characteristics

The respondents' demographic attributes were analysed to decipher the suitability of the data derived for this study. Figure 1 captures the various types of establishments to which the study respondents belong.

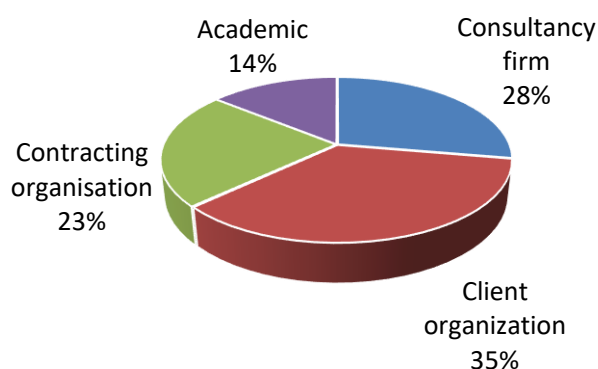


Figure 1: Types of Establishments respondents are affiliated to

Figure 1 shows that about 28% of the respondents were engaged with consultancy firms, 35% are working in client based organisations, about 23% are hired by contracting organisation and 14% are employed in academic institutions.

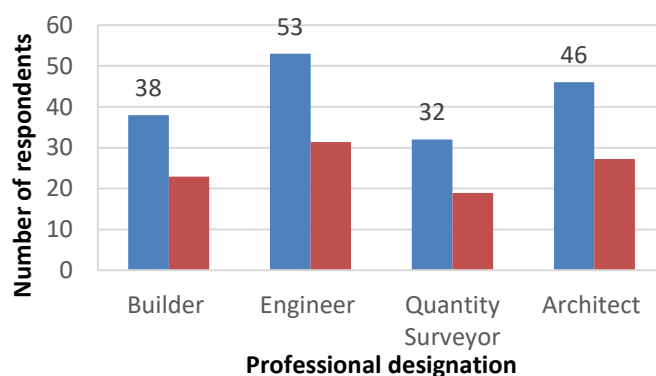


Figure 2: Designation of Respondents in the Establishments

Figure 2 shows the designation or profession of the respondents, and it is indicated that 22.49% are Builders, 31.36% are Engineers, 18.93% are Quantity Surveyor and 27.22% are Architect.

Table 2: Highest Academic Qualification Obtained

Academic Respondent	Qualification	of Frequency	Percent
OND		9	5.33
HND		15	8.88
B. Sc/ B. Tech		28	16.57
PGD		23	13.61
M. Sc/ M. Tech		65	38.46
PHD		29	17.16
Total		169	100

Table 2 shows the highest academic qualification of respondents, and it indicate that 5.33%% of the respondents were OND holders, 8.88% were HND holders, 16.57% were B.Sc/B.Tech holders, 13.61%% were PGD holders, 38.46% were MSC/M.Tech holders and 17.16% were PHD holders.

Table 3: Year of experience in the construction Industry

Year of experience of Respondents	Frequency	Percent
1-5	20	11.83
6-10	51	30.18
11-15	50	29.59
16-20	32	18.93
21 and above	16	9.47
Total	169	100

Table 3 indicates that 11.83% of the respondent have working experience of 1-5 years, 30.18% of the respondents have working experience of 6-10 years, 29.59% have working experience of 11-15 years, 18.93% have working experience of 16-20 years, while 9.47% of the respondents have working experience of more than 20 years.

Table 4 shows that 12.43% of the sample population have participated in construction projects between 0-5, 32.54% of the respondents have participated in construction projects between 6-10, 30.77% have participated between 11-15, 17.16% have participated between 16-20 and 7.10% % have participated in more than 21 and above construction projects.

Table 4: Number of Executed Project Involved

Number of Project Executed	Frequency	Percent
0-5	21	12.43
6-10	55	32.45
11-15	52	30.77
16-20	29	17.16
21 and above	12	7.10
Total	169	100

Figure 3 shows that 35.50% of the respondent participated in residential building project, 24.85% participated in educational building project, 17.16% participated in institutional building project, 11.83% participated in religious building project and 10.65% participated in others construction project

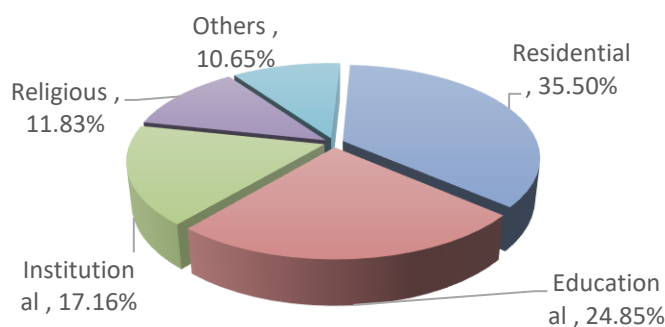


Figure 3: Type of Building Project Respondents Participated

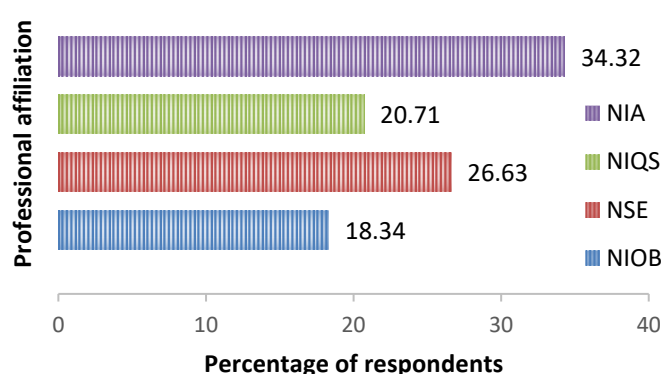


Figure 4: Professional Affiliation of Respondents

Figure 4 shows that 18.34% of the respondent were affiliated to NIOB, 26.63% were affiliated to NSE, 20.71 were a affiliated to NIQS and 34.32% were affiliated to NIA.

Table 5: Membership Level

	Frequency	Percent
Graduate member	71	52.10
Corporate member	98	57.99
Total	169	100

Table 5: shows that 42.01% of the respondents' population are graduate member in their institution while 57.99% are corporate members in their institution.

4.3 Results of Impact of Cultural Barriers in Construction Projects delivery

Table 6 shows the result of the ranking of the Impact of Cultural Barriers construction projects. The Architect ranked project scheduling as the most severe impact of cultural barrier with 0.774 mean score followed by reduced productivity with 0.748 mean score while conflict resolution was the least with 0.443 mean score. The Engineers ranked project scheduling with 0.794 mean score followed by lack of trust and understanding with 0.732 mean score while varying work style and practice was the least with 0.498 mean score. The Quantity Surveyors ranked reduced productivity with mean score of 0.813 mean score followed by project scheduling with 0.794 mean score while conflict resolution was the least with 0.438 mean score.

Table 6: Impact of Cultural Barriers in Construction Projects delivery

Impact of Cultural Barriers	Architect		Engineer		Quantity Surveyor		Builder		Combined	
	MSI	R	MSI	R	MSI	R	MSI	R	MSI	R
Project scheduling	0.774	1	0.762	1	0.794	2	0.826	1	0.786	1
Reduced productivity	0.748	2	0.672	13	0.813	1	0.784	2	0.744	2
Innovation limitations	0.726	4	0.713	3	0.750	3	0.758	3	0.734	3
Stakeholder Engagement	0.743	3	0.709	5	0.738	4	0.742	5	0.731	4
Ethical and Legal Considerations	0.722	6	0.702	8	0.738	4	0.721	6	0.718	5
Lack of Trust and Understanding	0.678	9	0.732	2	0.713	8	0.700	9	0.707	6
Local regulations and practices	0.683	8	0.675	11	0.719	7	0.705	8	0.692	7
Differing Values and Norms	0.691	7	0.649	14	0.731	6	0.716	7	0.691	8
Decision-Making Processes	0.665	10	0.709	4	0.694	9	0.684	10	0.689	9
Trust and Relationship Building	0.722	5	0.630	18	0.631	16	0.753	4	0.683	10
Work Ethic and Time Management	0.661	11	0.672	12	0.688	10	0.679	11	0.673	11
Project delays and cost overruns	0.652	12	0.683	10	0.675	12	0.668	12	0.670	12
Communication and Language Challenge	0.639	15	0.702	7	0.656	14	0.653	16	0.665	13
Supplier and subcontractor challenges	0.648	13	0.645	15	0.669	13	0.663	13	0.654	14
Conflict and Resistance	0.630	16	0.709	6	0.631	16	0.605	18	0.650	15
Reduced quality	0.622	18	0.630	19	0.681	11	0.663	13	0.645	16
Reputation and client relation	0.626	17	0.626	20	0.650	15	0.637	17	0.633	17
Varying Work Styles and Practices	0.643	14	0.498	21	0.500	19	0.658	15	0.574	18
Leadership and Management Styles	0.543	19	0.642	16	0.519	18	0.537	19	0.568	19
Safety concern	0.478	20	0.642	17	0.500	19	0.521	20	0.543	20
Conflict Resolution	0.443	21	0.683	9	0.438	21	0.416	21	0.511	21

*MSI = Mean Score Index;

R = Rank

The Builders ranked project scheduling with 0.826 mean score followed by reduced productivity with 0.784 mean score while conflict resolution was the least with 0.416 mean score. The overall ranking of the stakeholders shows that project scheduling was the most severe impact of cultural barrier with 0.786 mean score followed by reduced productivity with 0.744 mean score while conflict resolution was the least with 0.511 mean score.

4.3.1 Test of Hypothesis One

Hypothesis one states that there is no significant variation among construction stakeholders about the impacts of cultural barriers in construction projects in the study area. The objective was to evaluate whether stakeholders' perception about the impacts of cultural barriers in construction projects vary. The data was developed from Table 6 above and the test statistics was Kruskal Wallis H test.

Table 7: Kruskal Wallis H Test of Perceptions Stakeholders on Impacts of Cultural Barriers in Construction Projects Delivery in Akwa Ibom State

	Respondents Group	Mean Rank
Mean Rank of each Group of Respondent	Architect	38.64
	Engineer	41.50
	Quantity Surveyor	44.48
	Builder	45.38
Chi-Square	0.995	
Df	3	
Asymp. Sig.	0.803	

Table 7 indicates that the stakeholder's perception about the impacts of cultural barriers in construction projects do not vary since the level of significant is greater than

0.05. the null hypothesis was therefore accepted because the level of significance is greater than 0.05.

4.4 Results on Strategies to Overcoming Cultural Diversity in a Construction Project

Table 8 shows the result of the ranking of the Strategies to Overcoming Cultural Diversity in construction projects. The Architect ranked solution to language barrier as the most important strategy for cultural barrier with mean score of 0.778 followed by management and team work 0.748 mean score while language training was the least with 0.443 mean score. The Engineers ranked acculturation with 0.762 mean score followed by respect for cultural norms with 0.732 mean score while creating and establishing new and enterprise culture was the least with 0.468 mean score. The Quantity Surveyors ranked cross cultural conflict avoidance with 0.813 mean score followed by solutions to cultural/traditional challenges with 0.794 mean score while cross cultural knowledge training was the least with 0.438 mean score.

Table 8: Results of Strategies to Overcoming Cultural Diversity in a Construction Project

Strategies to Overcoming Cultural Diversity	Architect		Engineer		Quantity Surveyor		Builder		Combined	
	MSI	R	MSI	R	MSI	R	MSI	R	MSI	R
Acculturation	0.678	9	0.762	1	0.750	5	0.784	1	0.742	1
Solution To Language Barrier (Train and being trained)	0.778	1	0.642	15	0.719	8	0.753	2	0.718	2
Cultural liaison	0.743	3	0.713	3	0.631	18	0.721	4	0.708	3
Cross cultural conflict avoidance	0.691	7	0.675	8	0.813	1	0.668	12	0.704	4
Solution To Communication Challenge (sign interpretation/use of images)	0.683	8	0.709	4	0.669	14	0.742	3	0.702	5
Culture Caution and Awareness	0.652	13	0.709	4	0.775	3	0.679	10	0.699	6
Solution To Cultural/Traditional Challenges (Good rapport)	0.639	16	0.683	7	0.794	2	0.658	13	0.686	7
Solution To Technological Challenge (Body language)	0.665	10	0.672	9	0.656	16	0.716	6	0.677	8
Management and Teamwork	0.748	2	0.630	17	0.663	15	0.653	14	0.673	9
Solution To Religious Challenge (Tolerance)	0.648	14	0.702	6	0.650	17	0.679	10	0.672	10
Leadership style	0.726	4	0.498	21	0.731	7	0.684	8	0.646	11
Respect for cultural norms	0.661	11	0.732	2	0.738	6	0.416	20	0.643	12
Intercultural Competence	0.543	20	0.638	16	0.694	10	0.700	7	0.637	13
Regular team meeting	0.626	18	0.649	13	0.713	9	0.537	17	0.630	14
Cultural sensitivity in decision-making	0.722	5	0.626	18	0.500	21	0.632	16	0.630	15
Cultural mediation	0.643	15	0.645	14	0.675	13	0.521	19	0.622	16
Localization	0.661	11	0.555	20	0.519	19	0.721	4	0.614	17
Cross-cultural Knowledge Training	0.722	5	0.555	19	0.438	22	0.684	8	0.607	18
Cultural assimilator	0.626	18	0.660	10	0.694	10	0.416	20	0.602	19
Enforcement of Mutual Benefit Policy	0.478	21	0.657	12	0.763	4	0.416	20	0.574	20
Language Training	0.443	22	0.660	10	0.519	19	0.653	14	0.573	21
Creating and Establishing New Enterprise Culture	0.630	17	0.468	22	0.688	12	0.537	17	0.569	22

*MSI = Mean Score Index; R = Rank

The Builders ranked acculturation with 0.784 mean score followed by solution to language barrier with 0.753 while respect for cultural norms, cultural assimilator and enforcement of mutual benefit policy was the least with 0.416 mean score. The overall ranking of the stakeholders shows that project scheduling was the most important strategy for cultural barriers with 0.742 mean score followed by solution to language barrier with 0.718 mean score while creating and establishing new enterprise culture was ranked least with 0.569 mean score.

4.4.1 Test of Hypothesis Two

Hypothesis two states that; there is no significant variation in the perceptions of construction stakeholders about the strategies used to overcome cultural barriers in construction projects in Akwa Ibom State. The objective was to evaluate whether strategies used to overcome cultural barriers varies among construction stakeholders in the study area. The data is developed from Table 8 above and the test statistics is Kruskal Wallis H test.

Table 9: Kruskal Wallis H Test of Perceptions of Stakeholders on Strategies for Overcoming Cultural Barriers in Construction Projects Delivery in Akwa Ibom State

	Respondents Group	Mean Rank
Mean Rank of each Group of Respondent	Architect	43.07
	Engineer	40.27
	Quantity Surveyor	52.16
	Builder	42.50
Chi-Square	2.794	
Df	3	
Asymp. Sig.	0.424	

Table 9 indicates that the stakeholder's perception about the strategy of overcoming cultural barriers in construction projects do not vary since the level of significant is greater than 0.05. the null hypothesis was therefore accepted because the level of significance is greater than 0.05.

4.5: Discussion of Findings

Impacts of cultural Barriers in Construction Project

On the impact of cultural barriers in construction project, the results reveal that professional's perception on project scheduling, reduced productivity, innovation limitation and stakeholder's engagement are rated high as the most severe impact of cultural barriers existing among professionals in the construction industry. Effective communication in construction projects requires understanding diverse communication styles. Cross-cultural training and clear communication protocols can mitigate these challenges, leading to smoother collaboration and fewer project delays. Stakeholders should be encouraged to actively engage in culturally adaptive communication practices to ensure better understanding across teams.

The result shows the mean rank of 4 professionals as 38.64, 41.50, 44.48 and 45.38 respectively. The Table 7 further shows that there is no significant variation among the four-construction professional of this study on the impact of cultural barriers as the P-value 0.803 is greater than the critical value of 0.05. Thus, the null hypothesis is accepted. This implies that the professionals are in agreement, on the impact of cultural barriers among construction professionals, in construction projects, in Akwa Ibom State.

Strategy for Overcoming Cultural Barriers in Construction Projects

In construction projects, cultural differences among stakeholders can significantly impact various aspects such as communication, leadership, decision-making, and conflict resolution. Understanding and addressing these cultural differences is crucial for successful project outcomes, especially in multinational or culturally diverse teams. Cultural barriers can influence how teams collaborate, manage resources, and approach critical elements such as timelines, budgets, risk, and sustainability. Therefore, it is essential to implement strategies that foster an inclusive environment, enhance communication, and adapt management practices to accommodate diverse cultural perspectives.

The following strategies aim to overcome these cultural barriers by promoting awareness, flexibility, and collaboration in key areas such as communication, leadership, project management, and conflict resolution.

1. **Regular Cultural Sensitivity Training:** Invest in regular cross-cultural training that highlights the unique attributes of various cultures represented in the team. This ensures better interpersonal understanding and smoother collaboration.
2. **Flexible Project Management:** Adapt project management approaches to be flexible and culturally sensitive, especially regarding timelines, budgets, leadership, and decision-making.
3. **Clear Communication and Inclusive Practices:** Foster an environment of open communication where all cultural perspectives are welcomed and valued, ensuring clarity in expectations and outcomes.

Diversity in Leadership: Ensure that leadership roles are diverse, reflecting the cultural makeup of the team. This ensures that decisions are made with cultural awareness in mind and helps in understanding the team's collective strengths.

5. CONCLUSION AND RECOMMENDATIONS

Culture has a profound influence on the delivery of construction projects, affecting critical areas such as communication, team dynamics, decision-making, and overall project outcomes. In the construction industry, culture encompasses the shared values, practices, and behaviors that shape how project stakeholders—including managers, contractors, and clients—approach their tasks. These cultural influences can vary significantly between regions, organizations, and even among individuals within the same project.

One of the most noticeable impacts of culture on construction projects is communication. Differences in cultural norms can lead to varying expectations around how information is shared. For example, some cultures emphasize direct, explicit communication, while others prefer more indirect, context-based exchanges. These differences can result in misunderstandings, delayed responses, or errors in execution, which can jeopardize project timelines and quality.

Cultural attitudes toward time, cost, and risk also play a crucial role in project delivery. In certain cultures, there is a strong focus on adhering to strict schedules and budgets, while in others, flexibility and a more adaptive approach may be prioritized. These cultural variances can create friction between stakeholders, especially when it comes to project timelines and managing unforeseen risks. Furthermore, different cultures have diverse risk tolerances, with some opting for cautious, conservative strategies, while others may embrace more experimental or risk-taking approaches.

Leadership style is another area where cultural differences are evident. In hierarchical cultures, authority tends to be more centralized, with leaders making key decisions and delegating responsibilities. In contrast, cultures that value equality may favor more collaborative, decentralized decision-making processes. These differences can impact team cohesion, productivity, and conflict resolution, influencing the overall success of the project.

To mitigate the challenges posed by cultural diversity, construction teams must prioritize cultural awareness and sensitivity. This can be achieved through cross-cultural communication training, fostering an inclusive environment, and adapting project management approaches to accommodate varying cultural expectations. By embracing these differences, teams can harness diverse perspectives, enhance creativity, and improve collaboration, ultimately leading to better project delivery.

Recommendations from the study are as presented below.

1. **Promote Cross-Cultural Training:** Implement regular training sessions for all

project stakeholders to enhance cultural awareness and improve communication. This can help reduce misunderstandings and improve interaction between team members from different cultural backgrounds.

2. **Encourage Flexibility in Project Management:** Adopt flexible project management practices that account for varying cultural attitudes toward timelines and risk. This includes adjusting expectations for deadlines and budgets based on the cultural context of the team members involved.
3. **Foster Inclusive Leadership:** Encourage leadership styles that embrace inclusivity and adapt to the cultural context of the team. Leaders should be trained to balance authority with collaboration, ensuring that all team members feel valued and are able to contribute to decision-making processes.
4. **Strengthen Communication Channels:** Establish clear, consistent, and culturally sensitive communication channels. Use a variety of communication tools (e.g., meetings, emails, visual aids) to ensure that messages are accurately understood by all stakeholders, regardless of their cultural background.
5. **Embrace Diversity in Problem-Solving:** Leverage the diverse perspectives brought by different cultures to foster innovative solutions. Diverse teams are more likely to think creatively and solve complex problems effectively, which can enhance the overall success of the project.
6. **Create a Collaborative Environment:** Encourage teamwork and mutual respect by creating a collaborative environment where different cultural perspectives are valued. This will help in resolving conflicts more effectively and building stronger relationships among stakeholders.

In conclusion, culture plays an integral role in shaping the success of construction projects. Understanding and addressing cultural differences—whether in communication, decision-making, or leadership—can help ensure smoother project execution, stronger stakeholder relationships, and more effective project outcomes. By implementing these recommendations, construction teams can optimize project delivery and capitalize on the benefits of cultural diversity.

REFERENCES

- Asgari, A., & Fardad, M. (2019). Management of cultural diversity in construction projects: Challenges and opportunities. *Procedia Engineering*, 196, 1017-1024. <https://doi.org/10.1016/j.proeng.2017.07.274>
- Ager, P., & Brückner, M. (2013). Cultural diversity and economic growth: Evidence from the US during the age of mass migration. *European Economic Review*, 64, 76-97. <https://doi.org/10.1016/j.eurocorev.2013.03.002>
- Atkinson, R. (1999). Project management: Cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria. *International Journal of Project Management*, 17(6), 337-342. [https://doi.org/10.1016/S0263-7863\(99\)00033-9](https://doi.org/10.1016/S0263-7863(99)00033-9)
- Ankrah, N. A., & Proverbs, D. (2018). Treading the softer areas of construction management: A critical review of culture. In F. Khosrowshahi (Ed.), *20th Annual ARCOM Conference* (pp. 551-558). Heriot-Watt University. Association of Researchers in Construction Management.
- Baroudi, B., & De Carvalho, R. B. (2017). Assessing the impact of cultural dimensions on project management performance. *Procedia Engineering*, 196, 553-559. <https://doi.org/10.1016/j.proeng.2017.07.273>

- Bücker, J., Maier, G. W., & Wolff, C. (2018). Culture's impact on project management communication: A literature review. *International Journal of Project Management*, 36(8), 1077-1093. <https://doi.org/10.1016/j.ijproman.2018.07.003>
- Clarke, S. (2003). The contemporary workforce: Implications for organizational safety culture. *Personnel Review*, 40–58. <https://doi.org/10.1108/00483480310467655>
- Egan, J. (2016). *Rethinking construction*. Construction Task Force, London: HMSO.
- Emuze, F., & James, M. (2013). Exploring communication challenges due to language and cultural diversity on South African construction sites. *Acta Structilia*, 20(1), 44-65. <https://doi.org/10.18820/24150487/acta20.1.3>
- Ernest, J. (2022). *The impact of culture on construction projects: A comprehensive study*. Oxford University Press.
- Fellows, R., & Seymour, D. E. (Eds.). (2015). *Perspectives on culture in construction* (CIB Report).
- Gelfand, M. J., Erez, M., & Aycan, Z. (2007). Cross-cultural organizational behavior. *Annual Review of Psychology*, 58, 479-514. <https://doi.org/10.1146/annurev.psych.58.110405.085559>
- Gao, R., Shen, L., & Chong, H. Y. (2019). Decision-making in intercultural construction teams: A cultural perspective. *Engineering, Construction and Architectural Management*, 26(11), 2533-2549. <https://doi.org/10.1108/ECAM-01-2018-0030>
- Hall, M. A. (2016). *International construction management: The cultural dimension* (PhD. Thesis). Liverpool John Moores University, Liverpool.
- Jiang, D., & Pretorius, L. (2011). Cross-cultural communication behavior in international engineering projects: Chinese and South African perspectives. *South African Journal of Industrial Engineering*, 22(2), 54-67.
- Kandler, A., & Laland, K. N. (2009). An investigation of the relationship between innovation and cultural diversity. *Theoretical Population Biology*, 76(1), 59–67. <https://doi.org/10.1016/j.tpb.2009.03.001>
- Krishna, S., Sahay, S., & Walsham, G. (2004). Managing cross-cultural issues in global software outsourcing. *Communications of the ACM*, 47(4), 62-66. <https://doi.org/10.1145/986213.986220>
- Kulkarni, S. (2012). A study on cultural diversity management for Indian organizations. *Procedia - Social and Behavioral Sciences*, 37, 267–276. <https://doi.org/10.1016/j.sbspro.2012.03.229>
- Kivrak, S., Ross, A., & Arslan, G. (2009). Impacts of cultural differences on project success. In *Proceedings of 25th Annual ARCS Conference* (pp. 53-61). Nottingham, UK.
- Liu, Y., Wang, E. T. G., Tsai, S. B., & Li, X. (2020). Cultural diversity, collaboration, and individual learning performance: The mediating role of shared team goals. *International Journal of Project Management*, 34(7), 1192-1205. <https://doi.org/10.1016/j.ijproman.2020.06.005>
- Liu, A. M. (2018). The role of cultural liaison in managing cultural diversity on construction projects: Evidence from Hong Kong. *Construction Management and Economics*, 36(1), 1-13. <https://doi.org/10.1080/01446193.2017.1379324>
- Larson, E. (2020). Partnering on construction projects: A study of the relationship between partnering activities and project success. *IEEE Transactions on Engineering Management*, 44, 188-195. <https://doi.org/10.1109/TEM.2020.3000176>
- Maphosa, S. G. (2015). *The impact of cultural differences on construction project performance* (M. Ing. Thesis). Department of Engineering Management, University of Johannesburg.
- Mahalingam, A., & Levitt, R. E. (2007). Safety issues on global projects. *Journal of Construction Engineering and Management*, 5(2), 43-49. [https://doi.org/10.1061/\(ASCE\)0733-9364\(2007\)133:2\(156\)](https://doi.org/10.1061/(ASCE)0733-9364(2007)133:2(156))

- National Population Commission. (2020). *Demographic statistics bulletin: 2020 edition* (Report No. 2020-01). National Population Commission. <https://www.npopc.gov.ng/demographic-bulletin>
- Bennett, M. J. (2004). Developing intercultural sensitivity: An integrative approach to communication across cultures. In D. L. Samovar & R. E. Porter (Eds.), *Intercultural communication: A reader* (pp. 175-186). Wadsworth.
- Tucic, L., & Ruggieri, J. (2020). Enhancing safety through effective communication on construction sites: A multicultural approach. *Journal of Construction Safety and Health*, 37(2), 45-52. <https://doi.org/10.1016/j.jocs.2020.02.004>
- Gibson, M., & Chang, L. (2019). Overcoming language barriers for improving safety in construction. *International Journal of Occupational Safety*, 42(1), 18-27. <https://doi.org/10.1016/j.ijost.2019.01.002>
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd ed.). McGraw-Hill.
- Oades-Sese, G. V., & Esquivel, G. B. (2011). Cultural diversity and creativity. In *Encyclopedia of creativity* (2nd ed.). Elsevier Inc.
- Popescu, A.-D., Borca, C., Fistis, G., & Draghici, A. (2014). Cultural diversity and differences in cross-cultural project teams. *Procedia Technology*, 16, 525–531. <https://doi.org/10.1016/j.protcy.2014.10.074>
- Proverbs, D. G., Holt, G. D., & Olomolaiye, P. O. (2020). Productivity rates and construction methods for high rise concrete construction: A comparative evaluation of UK, German and French contractors. *Construction Management and Economics*, 17(1), 45-52. <https://doi.org/10.1080/01446193.1999.11439649>
- Priemus, H., & Vermoolen, M. (2007). How cultural diversity affects spatial planning. *Environment and Planning B: Planning and Design*, 34(3), 503-518. <https://doi.org/10.1068/b33085>
- Patria de L. J., & Marc, H. (2001). Promoting the utilization of performance measures in public organizations: An empirical study of factors affecting adoption and implementation. *Public Administration Review*, 6(6), 123-138.
- Peng, S., He, Z., & Zhu, J. (2005). The management mode of cultural value and clashes between humans. Retrieved from <http://www.ruanzixia.diy.m>