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# **CULTURAL COMPETENCY IN CONSTRUCTION INDUSTRY: A LITERATURE REVIEW**

**Minerva Bonilla** - <sup>1</sup> [mbonilla@tamu.edu](mailto:mbonilla@tamu.edu)

**Chuma Nnaji** - <sup>2</sup> [cnnaji@tamu.edu](mailto:cnnaji@tamu.edu)

<sup>1</sup> *Department of Construction Science, College of Architecture, Texas A&M University, College Station, TX, United States.*

<sup>2</sup> *Department of Construction Science, College of Architecture, Texas A&M University, College Station, TX, United States.*

## **ABSTRACT**

Cultural competency is essential for promoting effective communication and collaboration in the construction industry where diverse teams must collaborate effectively to achieve project success. As the U.S. construction workforce becomes more multicultural, understanding and navigating cultural backgrounds within teams are critical. Although cultural competency has been widely discussed in other fields (e.g., healthcare and education), research specific to the construction industry is lacking. This study examines the existing body of knowledge on cultural competency with particular emphasis in construction industry and educational practices. Relying on a scoping review approach, this study reviewed 54 pertinent publications. Four primary themes were extracted from the review: assessment strategies, professional competencies, organizational culture, and ethics. This review underscores the necessity of cultural competency as a fundamental skill for the sustainability of the workforce and the future of construction professionals. By addressing the gaps presented in this paper, the construction industry can better prepare its workforce to navigate the complexities of a multicultural environment, ultimately improving project efficiency and success.

## **KEYWORDS**

Cultural Competency; Construction Industry; Workforce Diversity; Self-Awareness.

## INTRODUCTION

The construction industry is a major pillar of the U.S. economy, engaging a vast workforce and playing a crucial role in growing the country's economy while building the country's infrastructure (Kolmar, 2023; Querol Cumbreira, 2023). To achieve this, the construction industry is increasingly relying on Hispanic workers, especially in the South. For instance, data from the U.S. Bureau of Labor Statistics (Gallagher, 2022; U.S. Bureau of Labor Statistics, 2015) indicates that while Hispanics made up 18% of the total US work force in 2020, they make up 30% of the workforce in construction, establishing them as the predominant ethnic minority group in this sector (Paxton & Stralen, 2015; Simmons & Yawson, 2022). Specific to construction trades, Hispanics accounted for 47% of construction laborers and 53% of painters and paperhangers (Gallagher, 2022), which is considerably higher than their share of those employed in the construction industry (30%). The National Association of Home Builders (NAHB) also stated that Hispanics are the fastest-growing demographic group in the construction industry, with a growth of 42% from 2001 to 2021 (Zhao, 2022). This is extremely important for the construction industry given the projected increase in labor shortage. According to Hovnanian et al. (Hovnanian et al., 2022), the US construction sector could create 3.2 million new jobs over the next decade, despite current recruitment challenges (Al-Bayati et al., 2018; Gallagher, 2022).

The Hispanic workforce, already substantial to construction labor force, is crucial in bridging the current labor shortage and is set to become even more influential, with projections indicating their presence will increase by about 25% by 2030 (Briana, 2020; Dubina, 2021; Torpey, 2019). Unfortunately, this critical minority group accounts for a disproportionate number of injuries and fatalities in the construction industry (Janicak, 2013). They are at a higher risk of depression and suicide, more likely to be absent, and more difficult to retain (Forte et al., 2018). Key reasons for these troubling rates include a lack of community, a sense of belonging, and inadequate communication between the workforce and management. Therefore, to ensure that this at-risk population is adequately considered, it is imperative that industry leaders are trained to be culturally competent.

Cultural competency is a crucial aspect of effective communication and collaboration in the construction industry. The concept of cultural competency has been widely discussed in various industries, including healthcare and education (Brottman et al., 2020). Cultural competency was first studied in 1989 and refers to the ability to understand, communicate with, and effectively interact with people across different cultures (Cross, 1989). Previous studies revealed the importance of cultural competency in professional settings and the need for tailored educational programs (Andresen & Bergdolt, 2017; Bouraslan, 2015; Pope-Davis et al., 1993). The ability to understand, respect, and work effectively with individuals from diverse cultural backgrounds is essential in today's globalized construction environment (Bauer & Bai, 2018). Studies have shown that enhancing cultural competency among construction professionals can lead to improved communication, collaboration, and overall project outcomes (Bauer & Bai, 2018).

Organizational culture plays a significant role in shaping the cultural competence of companies and their employees (Awolesi & Fabi, 2019). Understanding the cultural profiles of construction companies provide insights into how culture influences behavior, decision-making, and performance (Awolesi & Fabi, 2019; Pabittei & Bhinekawati,

2020). Closely monitoring and assessing cultural competencies of construction organizations provides stakeholders an opportunity to create supportive and inclusive work environments that promote cultural diversity and collaboration (Choi et al., 2015).

Several studies have explored the development and assessment of cultural competence in various fields. Andresen & Bergdolt (2017) conducted a systematic literature review on the definitions of global mindset and cultural intelligence, merging two different research streams. Their findings revealed a scarcity of literature addressing cultural intelligence in the context of specific industries, including construction. This knowledge gap represents an opportunity for future research to delve into the factors that influence cultural competency within the construction industry. Particularly, there is a need to document assessment strategies and efforts to enhance cultural competency in construction companies and construction education programs.

In construction engineering and management programs, the development of cultural competency among students is vital to prepare them for the diverse and multicultural nature of the construction industry (Clevenger et al., 2016; Deardorff & Berardo, 2023). By integrating cultural competence training into the curriculum, educational institutions can equip future construction engineers and managers with the necessary skills to navigate cross-cultural interactions and effectively lead diverse teams (Aigbavboa & Aliu, 2017).

Previous studies have investigated the impact of international service-learning experiences on students' cultural competency (Kohlbray, 2016; Wall-Bassett et al., 2018). Findings suggest that such programs contribute to the development of cross-cultural skills and awareness among participants. Engaging in interdisciplinary international service learning allows students to broaden their cultural perspectives, enhance their communication skills, and become more adept at working in diverse environments. These experiences benefit students not only in terms of cultural competence but also in preparing them for the globalized nature of the construction industry. Geerlings et al. (2018) investigated cultural competence in clinical psychology training, shedding light on the experiences of students and academics in cross-cultural training and practice. Research from Aigbavboa & Aliu (2017) indicated that graduates with strong cultural competence are better equipped to address the challenges and complexities of working in multicultural construction environments. These studies reinforce the concept that promoting cultural competency within construction programs is crucial for fostering an inclusive workforce and enhancing project performance.

Recognizing the significance of cultural competency in various professional settings is crucial, especially within the construction industry. Given the industry's reliance on a diverse workforce, particularly Hispanic workers, enhancing cultural competency is essential. This improvement is vital to promoting effective communication and fostering a more inclusive and efficient workforce. A review will provide valuable insights that can be applied to the construction industry and related educational programs. Therefore, the goal of the present study is to evaluate the current state of knowledge at the nexus of cultural competency and construction management. The specific objectives of this study is to (1) identify relevant trends and clusters at this intersection, and (2) propose new research directions.

## RESEARCH METHODOLOGY

The methodology employed in this study involves three steps: (1) obtaining and screening peer-reviewed publications (journal articles or conference proceedings) on cultural competency, (2) identifying current practices that enhance cultural practices, and (3) identifying the research gaps and future research needs.

The first step involved obtaining literature using search engines such as Google Scholar and Web of Science, narrowing down into targeted construction engineering and management journals and other disciplines. The focus was on cultural competency in construction, particularly industry and educational practices. Using select keywords such as “cultural competency,” “cultural intelligence,” “construction education,” “construction management,” the authors reviewed and analyzed peer-reviewed publications from 1990 to 2024. In addition to identifying papers on cultural competency in the construction industry, the authors included papers published in other industries such as health care, education, and manufacturing to capture best practices implemented in those industries. This search resulted in 54 relevant articles, and these articles were reviewed in detail to achieve the research goal.

Second, based on the literature review, the authors identified and summarized the most relevant studies that focused on cultural competency. From the analysis, the authors focused on published work related to construction industry and education programs and identified research themes. Third, based on the identified research themes, the authors suggested recommendations for future research directions.

## FINDINGS

Research work on cultural competency was performed to provide a comprehensive overview of key studies addressing various aspects of cultural competency. These studies were classified in four key themes: assessment and intervention, professional competencies, organizational culture and industry challenges, and ethical considerations and professional practices. The references pertain to each key area are displayed in Table 1. These studies collectively contribute to identifying barriers and strategies to cultural competency, aiming to foster importance and effective practices. The following subsections focus on relevant findings on each of those areas.

**Table 1.** Key Studies in Cultural Competency in Construction

Key Areas	Select References
Assessment and Intervention	Almutairi & Dahinten (2017); Bauer & Bai (2018); Campinha-Bacote & Campinha-Bacote (1999); Comu et al. (2011); Goulding et al. (2015); Mistry et al. (2009); Truong et al. (2014)
Professional Competencies	Bašková & Struková (2017); Domenech Rodríguez et al. (2019); Kivrak et al. (2009); Kwofie et al. (2015); Obaju, Fagbenle, & Amusan (2022); Kwofie et al. (2016)

Organizational Culture and Industry Challenges	Aigbavboa & Aliu (2017); Ankrah & Langford (2005); Awolesi & Fabi (2019); Choi et al. (2015); Hutajulu et al. (2021); Liu et al. (2006); Oney-Yazıcı et al. (2007); Robinson Fayek et al. (2016)
Ethics and Professional Practices	Brottman et al. (2020); Chan & Owusu (2017)

## THEME 1: ASSESSMENT AND INTERVENTION

Assessment and intervention are essential for identifying cultural gaps and implementing strategies to address them. Regular assessments can help identify areas where cultural competency is lacking, allowing for targeted interventions to improve communication, teamwork, and project outcomes. In construction education, assessments can help educators understand the cultural backgrounds of their students, enabling them to tailor their teaching methods to better meet the needs of a diverse student body. Effective interventions can foster an inclusive environment, promoting mutual respect and understanding among all stakeholders.

In the construction industry, there has been limited work addressing the assessment and intervention practices for cultural competency. However, models such as the one proposed by Campinha-Bacote & Campinha-Bacote (1999), and also used by Bauer & Bai (2018), have proven to be effective. These two studies were applied to improve cultural competency among graduate students, provide a framework for assessing cultural competence by focusing on categories such as cultural awareness, knowledge, skill, encounters, and desire. Similarly, on a study by Comu et al. (2011) it was found that cultural and linguistic differences posed challenges, suggesting the development of training programs to enhance cultural competence. Mistry et al. (2009) also highlighted the importance of aligning programs with community cultural norms for enhanced effectiveness, exploring how programs operationalize cultural sensitivity standards. To validate the assessment of cultural competency, Almutairi & Dahinten (2017) utilized the Critical Cultural Competence Scale (CCCS), which proven to be an effectively measure to evaluate the cultural competency levels of individuals within the healthcare sector. However, their findings are relevant and could be useful to replicate on construction sector.

Upon identification of the areas that need to be reinforced to achieve cultural competency, it is important to know how to effectively implement intervention strategies. Truong et al. (2014) conducted a systematic review to explore interventions aimed at improving cultural competency in healthcare settings. They found that cultural competency interventions encompass a wide range of strategies, including training programs, diversity policies, and organizational initiatives. In their intervention strategies, Truong et al. (2014) were able to enhance healthcare professionals' ability to understand and engage with patients from diverse cultural backgrounds. This finding underscores the importance of targeted interventions in developing cultural competency, which could be applicable to the construction industry.

## **THEME 2: PROFESSIONAL COMPETENCIES**

Developing professional competencies is critical for ensuring individuals in the construction industry and construction education programs are equipped with the necessary skills to effectively navigate cultural differences. Kwofie et al. (2015) and Kwofie et al. (2016) highlighted the importance of identifying and developing professional competencies to enhance performance and competitiveness in the construction industry. These studies emphasize the need for continuous improvement and validation of best practices and competencies to ensure optimal outcomes and maintain competitiveness.

In addition, studies by Bašková & Struková (2017), Kivrak et al. (2009), Domenech Rodríguez et al. (2019), and Obaju et al. (2022) underscore the importance of continuous competency development to meet the evolving challenges and demands in construction industry. Bašková & Struková (2017) discussed specific competencies expected from Construction Technology and Management graduates, advocating for educational enhancements aligned with industry demands. Kivrak et al. (2009) compared cultural dimensions' impact on construction practices, urging integration of cultural competence into construction education. Domenech Rodríguez et al. (2019) assessed cultural competence among students, emphasizing the need for ongoing evaluation and adaptation of training programs. Obaju et al. (2022) identified essential competencies in building production management, calling for further research on their practical application.

## **THEME 3: ORGANIZATIONAL CULTURE AND INDUSTRY CHALLENGES**

Organizational culture plays a significant role in shaping the behavior and attitudes of individuals within an organization. In the construction industry, fostering a culture that values diversity and inclusion can lead to improved collaboration, innovation, and project success. With respect to cultural competency, multiple studies examined the impact of organizational and cultural factors on the performance of construction companies. Awolesi & Fabi (2019) highlight the significant influence of organizational culture on company performance, using factor analysis to identify key contributing factors. They recommended focusing on positive contributing factors to improve organizational culture since it enhances overall operational effectiveness and project outcomes.

Similarly, studies by Hutajulu et al. (2021), Choi et al. (2015), Ankrah & Langford (2005), Liu et al. (2006) explored the relationship of safety culture and job satisfaction in construction firms linking them to cultural competence. Various factors identified in their studies included: leadership, competence, and the work environment, which play a crucial role in building a robust safety culture, which in turn enhances job satisfaction. Hutajulu et al. (2021) explored the relationship between organizational culture and project performance in construction through surveys and statistical analysis, identifying the need for a standardized framework to assess cultural competence in construction management programs. Choi et al. (2015) identified key cultural dimensions affecting construction projects highlighting the importance of cross-cultural competence for project success. Ankrah & Langford (2005) analyzed the effects of cultural diversity on project management and contractual arrangements through literature reviews and case studies, calling for more research on the role of cultural competence in conflict resolution within

construction projects. Liu et al. (2006) also emphasized the importance of cultural competence in optimizing project outcomes.

Researchers outside of the U.S. also explored venues to examine organizational culture in construction. Oney-Yazıcı et al. (2007) examined organizational culture within the Turkish construction industry, using theoretical models from management literature to analyze cultural profiles. Their study aimed to understand how organizational culture impacts performance and innovation in Turkish construction firms, proposing further research to deepen insights into the specific cultural dynamics influencing industry practices. This has significant implications for organizational strategy and leadership development. Meanwhile, Robinson Fayek & Omar (2016) defined project competencies for construction projects in Canada. In their study, they developed evaluation criteria, and proposed measures to enhance project performance and organizational effectiveness. They identified essential competencies needed for successful project execution, emphasizing the integration of cultural competence into project management practices.

With respect to cultural competency on education, Aigbavboa & Aliu (2017) utilized factor analysis to emphasize the necessity of cultural competence among graduates entering the construction industry. Their recommendation to modify construction curricula aligns with the evolving demands of globalized construction markets, ensuring that future professionals are equipped with the necessary skills to navigate diverse cultural contexts effectively. These studies highlight the critical need for organizational culture and cultural competence in shaping the performance and sustainability of construction projects.

#### **THEME 4: ETHICS AND PROFESSIONAL PRACTICES**

Ethics and professional practices are foundational for promoting cultural competency because they ensure all individuals are treated with respect and fairness, regardless of their cultural background. In the construction industry, this includes addressing issues such as corruption and discrimination, which can undermine trust and collaboration. A literature review was conducted by Brottman et al. (2020) focusing on the significance of cultural competency in healthcare and education. The study emphasizes the importance of cultural competency in professional settings, highlighting its role in improving interactions and outcomes in these fields. Although the study does not specify any gaps or recommendations, it highlights the need for research and addresses ethical and cultural challenges in various professional fields, especially in the construction industry where ethical and professional practices are more likely to not be followed. Chan & Owusu (2017), highlighted the need for ethical and culturally sensitive practices as tools to reduce corruption in the construction industry. These findings underscore the importance of integrating ethical principles and cultural awareness into organizational frameworks and educational curricula. Future research and initiatives should continue to explore these intersections to promote ethical conduct and enhance cultural competence in the construction industry.

## CONCLUSIONS AND FUTURE RESEARCH

The construction industry has observed a significant increase in the number of Hispanic workers over the last decade. It has become imperative that construction organizations ensure workers are aware of cultural differences and are trained to be culturally competent. This study highlights the crucial role of cultural competency in the construction industry, particularly in the context of an increasingly multicultural workforce. Through a scoping review of 54 publications, four primary themes emerged: assessment strategies, professional competencies, organizational culture, and ethics. The findings from this study suggest that integrating cultural competency training into construction education and industry practices is vital. Educational institutions must equip future construction professionals with the necessary skills to manage cross-cultural interactions effectively. Similarly, industry leaders should foster an inclusive organizational culture that values diversity and promotes ethical practices.

Future research should focus on several key areas to further enhance cultural competency within the construction industry:

- **Development of Comprehensive Assessment Tools:** There is a need to develop and validate comprehensive assessment tools tailored specifically for the construction industry. These tools should measure various dimensions of cultural competency, including awareness, knowledge, skills, and attitudes.
- **Impact of Cultural Competency Training Programs:** Investigate the long-term impact of cultural competency training programs on workforce performance and project outcomes. This includes evaluating the effectiveness of different training methods and identifying best practices.
- **Organizational Culture and Leadership:** Examine the role of organizational culture and leadership in promoting cultural competency. Future studies should explore how leaders can influence organizational norms and practices to create a more inclusive and culturally competent work environment.
- **Longitudinal Studies on Workforce Sense of Belonging:** Conduct longitudinal studies to track the progress of cultural competency initiatives and their impact on workforce sense of belonging over time. This will provide valuable insights into the effectiveness of these initiatives and guide future policy and practice.

By addressing these areas, future research can contribute to a more culturally competent and inclusive construction industry, ultimately leading to improved project performance and a more sustainable workforce.

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