Challenges of Quality Assessment System (QLASSIC) In Malaysia's Construction Industry

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DOI: https://doi.org/10.47772/IJRISS.2026.100300100

Received: 11 March 2026; Accepted: 16 March 2026; Published: 27 March 2026

ABSTRACT

The Quality Assessment System in Construction (QLASSIC) is an independent framework based on the Construction Industry Standard (CIS 7:2021), designed to evaluate workmanship quality in the Malaysian construction industry. This research investigates the advantages, challenges, and strategies associated with QLASSIC implementation. Utilizing a quantitative approach, data was collected from a total of 122 respondents in Kuala Langat, Selangor. The findings reveal that the primary advantage of QLASSIC is its capacity to reduce major defects and building failures, thereby enhancing structural longevity. Conversely, the extended duration required to produce assessment reports was identified as the main challenge in implementing the QLASSIC system. To address these issues, the study suggests that the most effective strategy is to enhance stakeholders' technical knowledge and proficiency with the QLASSIC system.

Keywords: QLASSIC, CIS 7:2021, Workmanship Quality, Construction Industry, Defect Reduction.

INTRODUCTION

Quality is an essential aspect that significantly impacts the construction industry in Malaysia. Consequently, the Construction Industry Development Board (CIDB) introduced the Quality Assessment System in Construction (QLASSIC) as a standard measure of quality (Khalid & Tamjehi, 2020). However, contractors' understanding of the system remains superficial, and the technical implementation of QLASSIC remains notably low (Khalid & Tamjehi, 2020). Recent studies reinforce this concern, noting that the voluntary nature of the system leads to a lack of "coercive pressure" for firms to move beyond minimum compliance (Zahrizan et al., 2023). Chung et al. (2025) highlight that despite CIDB's efforts, the adoption rate of QLASSIC remains low across the industry. They found that perception barriers such as the misconception that QLASSIC is only for large-scale projects significantly hinder a company's readiness to adopt the system. This is exacerbated by a shortage of certified internal assessors and technical expertise within smaller firms (Jasni et al., 2023).

A significant factor hindering the progress of quality standards is the lack of awareness among contractors regarding the QLASSIC system (Subramaniam et al., 2019). This deficiency often stems from a general lack of concern toward quality aspects during the construction phase. Ideally, the QLASSIC system is implemented as a strategic mechanism to overcome building defects and ensure the delivery of high-quality products to clients (Subramaniam et al., 2019). Furthermore, modern frameworks suggest that aligning QLASSIC with international standards like ISO 9001 is essential to bridge the gap between management theory and site execution (Azahari et al., 2025). However, when this system is neglected, building defects become prevalent. According to Subramaniam et al. (2019), such defects occur primarily due to poor workmanship, the use of inferior materials, and a lack of rigorous implementation of QLASSIC protocols. These defects result in

substantial negative impacts, specifically affecting the overall cost and the intended timeline of the construction project.

Currently, the Malaysian construction industry is transitioning toward higher quality standards as outlined in the Construction Industry Strategic Plan (CIMP) and the National Housing Policy (2018–2025). To achieve this, QLASSIC was introduced by CIDB as the primary benchmark for workmanship based on the CIS 7 standard. Ideally, its implementation should ensure standardized quality, reduced rework, and higher occupant satisfaction. However, despite these institutional efforts, the adoption and effectiveness of QLASSIC face significant hurdles. Research by Chung et al. (2025) indicates a persistent lack of readiness among Malaysian contractors, driven by high cost-perceptions and a lack of technical awareness. Similarly, Subramaniam et al. (2019) revealed that only a small number of contractors utilize the QLASSIC system, with the adoption rate remaining critically low; some studies indicate that less than 10% of total projects are assessed (Fateh & Sulaiman, 2022). A major factor contributing to this stagnation is the lack of "coercive pressure"; since the system is not strictly mandatory for all private developments, many contractors do not feel the legal or competitive necessity to undergo assessment (Zahrizan et al., 2023). Furthermore, a "Workforce Competency Gap" exists, where the heavy reliance on unskilled foreign labor makes it difficult to maintain the technical standards required by CIS 7 (Jasni et al., 2023).

Without addressing these multi-dimensional challenges, the Malaysian construction industry risks permanent stagnation in workmanship quality, leading to increased maintenance costs and diminished trust from building occupants. Therefore, this research examines the advantages of QLASSIC implementation, assesses the prevailing challenges, and identifies strategies for contractors to overcome these barriers. By addressing these concerns, the standard of quality in construction can be achieved and building failures can be avoided.

LITERATURE REVIEW

The implementation of QLASSIC started when the previous system from the International Organization for Standardization (ISO) 9000 did not apply effectively to the construction industry because it was challenging to execute and impractical for the unique requirements of construction compared to the manufacturing industry. In order to cope with that issue, CIDB introduced QLASSIC through Construction Industry Standard (CIS) 7:2006, which was adapted from the Construction Quality Assessment System (CONQUAS) Singapore to meet the requirement of the Malaysian construction industry (Kam et al., 2016). The system was created by the Technical Committee on Quality Assessment in Construction together with CIDB and the relevant industry stakeholders in 2006 (CIDB, 2017). While initially based on the 2006 version, the standard has since evolved through several revisions, with the latest update being CIS 7:2021, which refines the assessment categories to focus primarily on architectural works, basic M&E fittings, and external works (CIDB, 2021).

The Quality Assessment System in Construction (QLASSIC) is an independent method used to measure and evaluate the quality of workmanship and finishes of building construction works based on the relevant Construction Industry Standard (CIS 7). QLASSIC serves as a system for measuring and assessing the quality of workmanship by setting out standardized criteria for various construction elements. Under this framework, marks are awarded if the workmanship complies with the standard, and these marks are then summed up to calculate the QLASSIC Score (%) for the building construction project. However, it is noted that despite its established framework, recent research highlights that the adoption rate remains low due to perceived additional costs and a lack of skilled workers to maintain the high workmanship standards required for top scores (Chung et al., 2025; Zahrizan et al., 2023).

As it is impractical to assess all elements in a construction project, the QLASSIC assessment uses a sampling process to carry out the assessment. Before carrying out the assessment, the assessor will determine the samples (elements or locations) that need to be assessed. The samples must be distributed as uniformly as possible throughout the project and various construction stages. This sampling method, which is based on the Gross Floor Area (GFA), ensures that the assessment adequately represents the entire building project (CIDB, 2021). The samples are selected from the drawings and plans of the relevant construction project, and all locations in the construction project must be available for assessment at the time of inspection.

Advantages of Implementation of QLASSIC

The adoption of comprehensive quality assessment framework is widely regarded in contemporary scholarship as the most efficacious approach to construction management (Ali, 2014). Consequently, the systematic application of the Quality Assessment System in Construction (QLASSIC) serves as a robust preventive measure to mitigate the incidence of structural defects and systemic building failures. Recent academic studies confirm that the selection of high-quality construction materials is the fundamental determinant of a building's service life, as superior material properties directly enhance resistance to environmental degradation and mechanical stress (Azahari et al., 2025; Zahrizan et al., 2023). Beyond technical compliance, construction firms leverage QLASSIC to generate high-quality outputs that simultaneously enhance end-user satisfaction and fortify stakeholder confidence in workmanship standards. Recent studies emphasize that high QLASSIC scores serve as a critical differentiator for developers seeking to align with global Environmental, Social, and Governance (ESG) standards, as quality directly correlates with building longevity and reduced waste (Azahari et al., 2025).

Furthermore, clients expect and demand the highest quality end-products. When contractors implement the QLASSIC system, they can deliver a high-quality end-product. The implementation of the Quality Assessment System in Construction (QLASSIC) serves as a critical preventative mechanism that effectively mitigates workmanship deficiencies and structural failures, thereby ensuring that projects avoid the long-term financial and reputational risks associated with poor-quality construction (Azahari et al., 2025; Zahrizan et al., 2023, Khalid & Tamjehi, 2020). This is further supported by evidence that systematic assessment reduces the financial burden of "Latent Defects" which often appear years after handover (Zahrizan et al., 2023).

The scoring point attained can be used to benchmark project performance within a similar project scope internally and externally. The institutionalization of QLASSIC scores serves as a vital strategic asset that enhances a developer's marketability by providing an objective quality benchmark, which effectively bolsters homebuyer confidence and aligns consumer expectations with the delivered workmanship standards (Chung et al., 2025; Zahrizan et al., 2023). Modern industry trends suggest that QLASSIC scores are increasingly utilized as a digital performance metric in Building Information Modelling (BIM) environments, allowing for real-time quality monitoring (Ismail et al., 2025). Moreover, projects with certified high QLASSIC ratings often benefit from faster sales cycles and premium pricing due to the "quality assurance" label recognized by financial institutions (Chung et al., 2025). Finally, the adoption of QLASSIC fosters a "Right First Time" culture among the workforce, which significantly reduces the time and labor costs associated with rework and rectification (Jasni et al., 2023).

Challenges in Implementation of QLASSIC

The challenges in conducting a QLASSIC assessment revolve around institutional limitations, specifically the constraint of manpower in CIDB and the low capability and competency of assessors. Subramaniam et al. (2019) stated that workmanship deficiencies are not exclusively a problem that occurs with sub-contractors but also among main contractors. Poor workmanship may occur because of inadequate training and limited experience in construction works. Ismail (2025) highlights "insufficient training" as a core challenge, noting that without a standardized competency framework, site supervisors struggle to align with CIS 7:2021 requirements. Rahman et al. (2018) further state that competency development is crucial but often neglected, leading to poor workmanship on-site. Recent findings by Azahari et al. (2025) suggest that this competency gap is exacerbated by a high turnover rate of skilled labor, which prevents the institutionalization of quality standards.

Ali et al. (2014) mentioned that the current time taken to produce required reports is unreasonably long, normally more than six weeks from the last assessment date. While Chung et al. (2025) and Subramaniam et al. (2019) identify a "Time-Related Barrier," more recent analysis by Nasir et al. (2024) confirms that administrative bottlenecks within the scoring process often take up to six weeks from the last date of assessment to reach developers, which discourages adoption in fast-moving projects. This delay is particularly detrimental in the "Fast-Track" construction era, where developers require immediate feedback to proceed with vacant possession (Zulkifli et al., 2023). The duration of producing the report needs to be reduced through digitalized assessment tools to maintain industry relevance (Ismail et al., 2025).

According to Azir et al. (2018), most contractors lack knowledge regarding the QLASSIC system and are not familiar with using the framework in daily operations. This lack of familiarity is often rooted in the "Complexity Barrier," where contractors find the sampling technicalities of CIS 7 difficult to integrate into tight schedules (Seman et al., 2021). Harun and Ahzahar (2018) stated that the assessment of the QLASSIC system is based on a scoring system carried out only once by a qualified person. When the contractors get a lower score on the assessment, this affects and decreases their company's marketability. Norizam and Malek (2013) emphasize that the administrative burden and the "fear" of low scores were already documented barriers to adoption. Zahrizan et al. (2023) and Fateh and Sulaiman (2022) discuss how contractors fear the reputational damage that comes with a poor score. This leads to a "rectify-before-score" cycle that disrupts project timelines and creates artificial delays in project delivery (Hamid et al., 2024).

According to Dato' Seri Dr Judin, as cited in Yvone (2014), the initial awareness of QLASSIC was low primarily because the strategic focus of the system was restricted only to industry players. He added that CIDB intended to change its approach by educating the public on QLASSIC via mass media to create a "market-pull" effect, where consumer demand would drive higher workmanship standards.

CIDB (2019) and Ismail (2025) specifically highlight insufficient assessor competency as a formidable barrier to standardized quality benchmarks. Additionally, the recruitment of external assessors from rival firms often creates a conflict of interest, where they are perceived as potentially biased or discriminatory, leading to a systemic lack of trust in the objectivity of the final score (Mahat et al., 2024). This perceived lack of professional integrity and subjectivity remains a significant deterrent for G7 contractors who manage high-prestige projects, as they prioritize impartial evaluation to protect their high-value corporate reputation (Basri et al., 2025).

Strategy to Overcome the Challenges in QLASSIC Implementation

A primary strategy to overcome implementation barriers involves the systematic acquisition of knowledge regarding the QLASSIC framework. Contractors can gain more knowledge from the QLASSIC system by accessing information related to the project handled and leveraging digital platforms such as social media, TV, radio, and the internet (Khalid & Tamjehi, 2020). Recent research by Roslan et al. (2023) suggests that this knowledge acquisition must move beyond basic awareness toward a deep technical understanding of CIS 7:2021 criteria to ensure quality benchmarks are met during the construction phase. Furthermore, raising the skills level among the workers and contractors is a fundamental strategy to overcome the challenges in QLASSIC implementation. At present, the Malaysian construction industry is largely dependent on low-skilled foreign workers. As new technologies emerge, there is a need to push for higher quality manpower while the demand for low-skilled foreign workers should be proportionally reduced. This elevation of craftsmanship is essential; Basri et al. (2025) argue that high-prestige G7 projects require a "quality-first" culture that can only be sustained by a certified, high-skilled workforce capable of meeting international standards.

The technical consistency of the system relies heavily on the competency of its evaluators. According to Poloris (2019), structured assessor re-training is essential for less experienced assessors or those who have not been assessing for some time. A short and sharp re-training suffices to build confidence in assessing the quality of construction projects and refreshing the assessment process. To maintain professional integrity and objectivity, Mahat et al. (2024) advocate for mandatory annual refresher courses to mitigate the risks of subjectivity and perceived bias in scoring, which often deters major contractors from participating. Moreover, the evaluation of training for workers should be directed at all levels of the organization to understand more about the QLASSIC process. According to Ismail (2025), this evaluation must be a continuous pedagogical loop rather than a singular event, ensuring that training outcomes translate directly into a measurable reduction of site defects. Hamid et al. (2024) further suggest that robust training evaluations help break the "rectify-before-score" cycle by embedding quality standards into the daily workflow.

Finally, increasing industry participation requires a robust focus on promotional programmes. Promoting the QLASSIC through organizing more roadshows, seminars, and training, and reducing the fees for its registration, is a proven method to attract more construction players to implement the QLASSIC system (Azir et al., 2018). Current industry trends indicate that these programmes should be modernized; Chung et al. (2025) recommend utilizing digital "success story" campaigns and fiscal incentives to demonstrate the tangible marketability

benefits of high QLASSIC scores to skeptical industry stakeholders. By combining financial incentives with high-visibility outreach, the industry can move toward a more standardized and quality-centric future.

METHODOLOGY

This research adopted a quantitative approach. The list of the targeted population is the contractors Grade G7 in Kuala Langat, Selangor that registered with CIDB. The total number of contractors that have registered with CIDB is 122. The sampling method for this research was the random sampling method. In order to decide the actual sample size of this type of study, the sample size was based on the Krejcie & Morgan (1970) table. A sample of 97 respondents is suggested. Yong and Mustaffa (2013) observed that a response rate of 20% to 30% is standard for construction-related research, yielding reliable and convincing results. This aligns with industry norms where professional apathy and high workloads often limit participation rates (Akintoye, 2000; Yong & Mustaffa, 2013). Out of the 122 distributed questionnaires, 59 were found to be useful and valid for the analysis. The remaining were not responded, incomplete or invalid for some reason; hence, a response rate of 48 percent was achieved. Descriptive analytics, including mean scores and frequencies of respondents' sociodemographic characteristics and their survey responses, were calculated in SPSS version 22.

FINDINGS AND ANALYSIS

Section A: Demographic of the Respondents

A total of 59 respondents participated in the study. The majority were male (64.4%), while female respondents made up 35.6%. In terms of age, the largest group was between 26 to 36 years old above, where 26-30 years (27.1%), 31-35 years (27.1%) and 36 years and above (27.1%). Smaller proportions were recorded for the 18-25 years (18.6%) age groups. In terms of years of experience, the largest segment had less than 5 years of experience (40.7%), followed by 5-10 years (27.1%). Other groups had 11–15 years (16.9%), 16–20 years (8.5%), and more than 20 years (6.8%) of experience.

With regard to total number of projects handle by contractors, most respondents held a less than 10 projects handled (47.5%), followed by more than 20 projects (27.1%), while a smaller number handled 10-20 projects (25.4%). Regarding types of projects that experience assessed with QLASSIC system, the vast majority have experience assessed with QLASSIC in housing (42.2%), followed by public building (28.8%), commercial building (16.9%) and industrial (11.9%) comprising the remainder.

Table 1: Demographic of the Respondents

Respondent's	Characteristic				
Gender		Male		Female	Total
		38		21	59
		64.40%		35.6%	100%
Age	18-25 years	26-30 years	31-35 years	36 years and above	Total
	11	16	16	16	59
	18.6%	27.1%	27.1%	27.1%	100%
Years of Experience	< 5 years	5-10 years	11-15 years	16-20 years	> 20 years
	24	16	10	5	4
	40.7%	27.1%	16.9%	8.5%	6.8%

Total Numbers of Projects Handled	< 10 projects	10-20 projects	>20 projects	Total	
	28	15	16	59	
	47.5%	25.4%	27.1%	100%	
Types of project experienced assessed with QLASSIC system.	Public Building	Housing	Industrial	Commercial Building	Total
	17	25	7	10	59
	28.8%	42.2%	11.9%	16.9%	100%

Section B: Advantages of the Implementation of QLASSIC

The result of this section was to achieve the objective of this research study which was to identify the advantages of the implementation of the QLASSIC system. As the result of the study, there are six (6) variables were identified. Based on Table 2, the variable had a mean value of all above 3.0. The result of this study showed majority of respondents emphasized to QLASSIC can reduce the number of major defects and building failure issues where it is in the first (1) ranked. Then followed by the QLASSIC can measure the quality of workmanship and QLASSIC can deliver the quality of the end-product as the advantages of implementation of the QLASSIC system that ranked the number two (2). Therefore, when the contractors apply and implement the QLASSIC system, they can deliver and give good quality end-product to their clients as fulfilling their client's satisfaction.

Table 2: Advantages of the Implementation of QLASSIC

Advantages of the implementation of QLASSIC	**Mean**	**Ranking**
Reducing the number of major defects and building failure issues.	3.86	1
The QLASSIC can measure the quality of workmanship.	3.76	2
Delivering quality of the end-product.	3.76	2
Increasing the good perception of investor.	3.75	4
Improving the performance of construction projects.	3.75	4
Increasing the company's marketability.	3.73	6
Average mean	**3.77**	

Note: Scale: Strongly Disagree (1.00 average mean <1.50), Disagree (1.50 average mean <2.50), Neutral (2.50 average mean <3.50), Agree (3.50 average mean <4.50), Strongly Agree (4.50 average mean <5.00).

Section C: Challenges in Implementation of QLASSIC

The question for this section is used in this research study to determine the challenges in the implementation of the QLASSIC system. As the result of the study, there are six (6) variables were identified. Based on Table 3, the variable had a mean value of all above 3.0. The result of this study showed that majority of the respondents highlighting the longer time taken in producing the QLASSIC report where it is in the first (1) ranked. Then followed by the inadequate training for workers and lack of knowledge on QLASSIC as the challenges in the implementation of the QLASSIC system that ranked number two (2) and three (3). Therefore, these barriers may discourage contractors from opting for and applying the QLASSIC system.

Table 3: Challenges in Implementation of QLASSIC

Challenges in implementation of QLASSIC	**Mean**	**Ranking**
A longer time is taken in producing the QLASSIC report	4.15	1
Inadequate training for workers	3.98	2
Lack of knowledge on QLASSIC	3.93	3
The low capability and competency of assessors	3.81	4
Getting a lower score on the assessment	3.76	5
Lack of awareness of QLASSIC	3.69	6
Average mean	**3.89**	

Note: Scale: Strongly Disagree (1.00 average mean <1.50), Disagree (1.50 average mean <2.50), Neutral (2.50 average mean <3.50), Agree (3.50 average mean <4.50), Strongly Agree (4.50 average mean <5.00).

Section D: Strategy to Overcome the Challenges in QLASSIC Implementation

The question in this section is used in this research study to suggest the strategy to overcome the challenges in QLASSIC implementation among the contractors. Based on Table 4, most of the variables displayed that the respondents agreed with all the variables. Besides, all variables had a mean score of above 3.0. The result of this study showed that majority of the respondents' emphasis that gaining more knowledge on QLASSIC which is ranked the first (1) ranked. This was followed by raising the skills level which ranked number two (2) and re-training for the assessors ranked number three (3). However, the training module for various trades as well as skill accreditation for the career development of the construction personnel has been developed.

Table 4: Strategy to Overcome the Challenges in QLASSIC Implementation

Strategy to overcome the challenges in QLASSIC implementation	**Mean**	**Ranking**
Gaining more knowledge on QLASSIC	4.00	1
Raising the skills level	3.95	2
Re-training for the assessors	3.93	3
Evaluation of training for workers	3.80	4
Promotional programme towards contractors	3.64	5
Average mean	**3.89**	

Note: Scale: Strongly Disagree (1.00 average mean <1.50), Disagree (1.50 average mean <2.50), Neutral (2.50 average mean <3.50), Agree (3.50 average mean <4.50), Strongly Agree (4.50 average mean <5.00).

DISCUSSIONS

The findings of this study reveal that reducing numbers of major defects and building failure issues ranks as the most significant advantage of QLASSIC implementation, achieving the highest mean index of 3.86. This finding strongly resonates with established research where QLASSIC is identified as a primary mechanism to reduce

the number of major defects and building failure issues. Ali (2014) highlights that applying systematic quality assessment is the most effective approach to minimizing structural risks in the construction industry. Furthermore, Azir et al. (2018) emphasize that QLASSIC serves as a vital safeguard to avoid poor quality workmanship in construction projects.

This research concurs that the longer time is taken in producing the QLASSIC report. Ali et al. (2014) pointed out that the time taken to produce the required reports is normally more than six weeks from the last assessment date. Subramaniam et al. (2019) support that the duration for producing the required reports should be reduced because many applicants such as contractors required faster QLASSIC reports for them to have an insight into a broad indication of the level of quality of their completed projects. It would discourage the contractor from opting for the QLASSIC assessment and applying the QLASSIC system.

Research indicates that contractors must prioritize gaining more knowledge on the QLASSIC system to remain competitive. This is supported by Khalid and Tamjehi (2020), who established that contractors can effectively obtain information on QLASSIC through direct involvement in project management and by leveraging accessible media channels such as social media, TV, radio, and the internet. However, the findings suggest that theoretical knowledge alone is insufficient without practical application. While Subramaniam et al. (2019) mentioned that the Malaysian government has been making significant efforts to enhance the knowledge and technical skills of workers by conducting field training, seminars, and short courses, there is a growing need to align these efforts with modern construction demands. Current literature suggests that for knowledge to translate into a reduction of defects, training must evolve from general seminars to "on-site" competency assessments (Ismail, 2025).

CONCLUSION

In summary, the Quality Assessment System in Construction (QLASSIC) functions as a critical independent method for measuring and evaluating the quality of workmanship and finishes in building construction works. While historically based on Construction Industry Standard (CIS 7:2006), the system has evolved into a sophisticated benchmark (CIS 7:2021) designed to standardize the quality of workmanship across the Malaysian building sector.

The findings of this study confirm that the main advantage of the implementation of QLASSIC is its capacity for reducing the number of major defects and building failure issues, thereby enhancing the structural integrity and longevity of the built environment. However, the implementation of QLASSIC in Malaysia's construction industry still faces several systemic challenges, including delays in the administrative process for producing QLASSIC reports, inadequate competency among workers, and a persistent lack of technical knowledge regarding the system's requirements.

To address these challenges, it is essential that contractors prioritize gaining more knowledge on QLASSIC and invest in raising the skills level of their workforce through structured training and digital integration. By transforming QLASSIC from a voluntary checklist into a core organizational culture, the industry can bridge the gap between theoretical quality standards and practical site execution, ultimately fostering a more resilient and reputable construction landscape.

ACKNOWLEDGEMENT

The authors would like to acknowledge the support of Universiti Teknologi MARA (UiTM), Cawangan Seri Iskandar, Perak, Malaysia for providing the facilities and support on this research.

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