



**6th UNDERGRADUATE
SEMINAR ON BUILT
ENVIRONMENT
AND TECHNOLOGY
(USBET) 2023**

**SUSTAINABLE BUILT
ENVIRONMENT**

25 - 27 SEPTEMBER 2023

E-PROCEEDING



USBET 2023



e-Proceeding

**6th UNDERGRADUATE
SEMINAR ON BUILT
ENVIRONMENT
AND TECHNOLOGY
(USBET) 2023
SUSTAINABLE BUILT
ENVIRONMENT**

Published by,

Department Of Built Environment Studies And Technology
Faculty Of Architecture, Planning & Surveying
Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus
usbet.fspuperak@gmail.com

Copyright @ 2023

Department Of Built Environment Studies And Technology
Faculty Of Architecture, Planning & Surveying
Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus

This work is subject to copyright. All rights are reserved by the Publisher. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage and retrieval system without permission in writing from the copyright owners.

eISSN 2821-3076



02 October 2023 | Perak, Malaysia
Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus

EDITORIAL BOARD

Editors-in-Chief

SR. NORAZURA MIZAL AZZMI (BS)

NADIRA AHZAHAR (BS)

Editors

TS. ZURAIHANA AHMAD ZAWAWI (BS)

SR. NAZHATULZALKIS JAMALUDIN (BS)

SR. SITI ZUBAIDAH HASHIM (BS)

NURHIDAYAH SAMSUL RIZAL (BS)

SR DR. NURUL FADZILA ZAHARI (BS)

NUR FADHILAH BAHARDIN (BS)

SR TS. DR. ALIA ABDULLAH SALLEH (BS)

SR TS. DR. SURIANI NGAH WAHAB (BS)

SR TS. DR. HASNAN HASHIM (BS)

SR NOORAZLINA KAMARUZZAMAN (BS)

SR MARIATY MOHD BAHARI (BS)

SR AIDA AFFINA ABDUL GHANI (BS)

DR. NOR DIANA AZIZ (BS)

SR AMIR FASHA MAT ISA (BS)

SR DR. NOR AMIN MOHD RADZUAN (BS)

PROF. MADYA SR DR. MOHD FADZIL YASSIN (BS)

SR TS. KHAIRUL AMRI RAMLY (BS)

SR. MOHD ASRUL HASIN (BS)

SR TS. MOHD KHAZLI ASWAD KHALID (BS)

SR MOHD DZULKARNAEN SUDIRMAN (BS)

SR DR. IRWAN MOHAMAD ALI (BS)

SR DR. MOHAMMAD HASZIRUL MOHD HASHIM (BS)

DR NURHASYIMAH BT AHMAD ZAMRI (BCT)

DR. PUTERI YULIANA SAMSUDIN (TP)

Editors-in-Chief

6th Undergraduate Seminar on Built Environment and Technology 2023

- E- Proceedings-

Organized by,

College of Built Environment (KAB) UiTM Perak Branch



AN AWARENESS OF QUALITY ASSESSMENT SYSTEM IN CONSTRUCTION (QLASSIC) AMONG CONTRACTORS

Muhammad Amirul Irfan Md Daud @ Zul¹, An Nisha Nur Welliana Abd Rased^{1*}

¹Department of Built Environment Studies and Technology, College of Built Environment, Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus, 32610, Seri Iskandar, Perak, Malaysia

amirulirfan766@gmail.com, *annisha@uitm.edu.my

ABSTRACT

The performance of construction structures is assessed and evaluated using the QLASSIC rating system. It is based on CIS 7:2006, the Construction Industry Standard. Some of the construction project's workers are still unaware of how QLASSIC might improve the project's quality; they only know QLASSIC as an evaluation tool. The objectives of this paper research are to determine the level of awareness QLASSIC implementation. This research paper employed the quantitative method, a questionnaire survey form that enabled the collection of information on the issues concerning the related person involved in a terrace house construction project at Perak Tengah, Perak. Thirty-three valid responses were received and used for the analysis. The result shows that the most important awareness of QLASSIC is that it will reflect the overall quality performance of a given construction project. The highest result for the advantages of QLASSIC is to ensure defect issues are identified for future improvement and while for the strategy to improve implementation, QLASSIC is to provide training for employees at the construction site. The purpose of this paper is to further strengthen the awareness and implementation system of QLASSIC.

Keywords: *construction, house, strategy, awareness, contractor*

© 2023 USBET, JABT, UiTM Perak Branch, All rights reserved

INTRODUCTION

The construction industry is a vital sector that has significantly driven the nation's growth. Within this industry, ensuring high-quality standards is essential for ensuring tenant satisfaction. To support Malaysia's economy's rapid expansion and development, continuous improvement in construction sector quality is imperative.

Construction projects must submit an application to the Quality Assessment System in Construction (QLASSIC) to guarantee that the industry's quality will remain high or improve. In order to assess the level of workmanship of construction projects in compliance with the Construction Industry Standard (CIS 7:2006), the Construction Industry Development Board (CIDB) introduced QLASSIC in 2007 (SPBproperty 2021).

In order to deliver high-quality products to clients, construction quality assessment was implemented in Malaysia. Although QLASSIC was developed by CIDB in 2007, even after some time in use, its utilization in building projects is still relatively minimal. Some of the construction project's workers are still unaware of QLASSIC, which can improve the project's quality. They are just aware of QLASSIC as an evaluation tool. (Seman et al., 2021). The major objective of this paper is to determine the level of awareness implementation QLASSIC at the construction site.

This study's primary interest is in how well contractors are aware of the quality assessment system in construction (QLASSIC). The terrace house construction project in Perak Tengah, Perak, which costs in the range of RM220,000.00 to RM300,000.00, is the subject of the study's research on the construction industry type. Architects, engineers, safety and health officers, quantity surveyors, site supervisors, contractors, and project managers make up the sole sample in this study. This study used a quantitative approach that made it possible to gather the necessary data on the concerns of individuals associated with a terrace house construction project, as well as the level of awareness, benefits and identify the strategies to improve QLASSIC implementation at Perak Tengah, Perak.

LITERATURE REVIEW

Quality is crucial in the construction sector to ensure the pleasure of the building owner and residents. In order to support the industries and Malaysia's economy's rapid expansion and development, quality for the construction sector must thus be continually improved. The baseline for the level of workmanship for the various building construction work components is established by QLASSIC. Marks are given depending on how closely the workmanship complies with the standard (CIS 7: 2014) to calculate the QLASSIC Score (%) for the building work (Report CIDB 2020).

Objectives of Qlassic

According to (CIDB), QCLASSIC have 5 objectives that why it was being launched such as raising the standard of quality in the construction sector, having a uniform quality assessment system that serves as a benchmark for the excellence of construction projects, assessing a construction project's level of workmanship in accordance with the relevant approved standard, to utilize the QCLASSIC score as a criterion to evaluate the performance of the contractors and to compile data for statistical analysis in determining the level of productivity and quality in the construction sector.

Important of Qlassic

To know more about the important of QCLASSIC, (SPBproperty 2021) have divided it into two parts. Which are:

- **For home-buyers**

High QCLASSIC ratings demonstrate the value place on workmanship and commitment to offering the best product available. Therefore, prospective homeowners must be aware of the developers' QCLASSIC scores, or at the at least, comprehend the basics of how it works and what it signifies. By analysing if the house complies with the norms and requirements set by CIDB with the aid of this essential information, homebuyers may make wiser decisions and lower the risks of purchasing a property with construction problems evident everywhere. Product quality is always more crucial than product quantity.

- **For developers**

In many ways, QCLASSIC is also crucial for developers. It not only serves as a benchmark for how well developers perform in terms of quality in relation to standard practices in the industry, but it also makes it possible to compare workmanship in terms of quality and quantity, which might be used as a benchmark for building standards. Enabling developers to identify their weak points and make the required improvements.

Scope of Qlassic

The standards for many construction components used in building projects and other infrastructure operations are described in QLASSIC, according to (Report CIDB 2020). If the workmanship and finishes of the construction work fulfill the criteria, points are awarded. These standards serve as the foundation for the quality evaluation of the workmanship and finishes.

The final quality score for a project is then calculated using these points, and it is known as the QLASSIC Score (%). Field testing and inspection are used to carry out the assessment on the construction site. According to the Report CIDB 2020, the evaluation will be based on recently examined construction projects (Report CIDB 2020).

Component of Qlassic

Before starting the assessment, the assessor will select the samples (components or locations) that must be examined. The samples were chosen using the construction project's blueprints and drawings. Samples of the structural works are taken in two or three stages, depending on the magnitude of the structural activities, beginning with the start of the superstructure activity and concluding with the completion of the structural works (Norizam & Malek, 2013). The components of QLASSIC are structural, architectural, mechanical, and electrical (M&E) and external works.

Awareness of Qlassic

Having QLASSIC in the construction sector can ensure that the construction project is in excellent condition. Construction plays a significant role in the development of the nation. Although QLASSIC contributes significantly to building, most individuals are unaware of its significance. These benefits include enhancing the project's effectiveness, enhancing the company's marketing initiatives, enhancing the company's ability to compete, ensuring that the construction project has fewer reworks and errors, securing the company's market position, expanding positive growth in the construction industry, raising employees' awareness of quality, enhancing the company's reputation, enhancing the company's ability to compete, improve the quality of the work, boost the efficiency of the construction projects, boost the construction project's quality and lessen the need for rework on the projects (Manap et al., 2018).

METHODOLOGY

To identify the awareness of QLASSIC among contractors, an online questionnaire Google Form consisted of part A for the level of awareness of the implementation QLASSIC on a scale of 1 to 5, corresponding from 'strongly disagree' to 'strongly agree'.

This research's primary data collection method is an online questionnaire administered through Google Forms. The questionnaire targets various professionals involved in construction projects, including architects, engineers, safety and health officers, quantity surveyors, site supervisors, contractors, and project managers. These individuals have direct relevance to the construction field. Additionally, secondary data is obtained by thoroughly examining previous relevant articles, journals from online sources, books, and the internet.

FINDING

Table 1 below shows the Data collection about the level of awareness of the implementation QLASSIC. The data shown is in percentage form.

Table 1: Data collection about level awareness of implementation QLASSIC

Statement	The level of awareness of implementation QLASSIC	1	2	3	4	5
1	QLASSIC is to be the benchmark of the quality in the construction industry.	3%	12%	6%	33%	46%
2	QLASSIC assess structural, architectural, mechanical and electrical, and external works.	3%	0%	17%	40%	40%
3	QLASSIC assessment will be carried out by the external assessor.	0%	3%	30%	40%	27%
4	QLASSIC score will reflect the overall quality performance of a given construction project.	9%	3%	12%	27%	49%
5	QLASSIC is to provide a standard for satisfactory on-site workmanship by defining the desired final product quality.	6%	12%	6%	33%	43%

ANALYSIS

Regarding data collection reveals that a majority of the respondents strongly agree with statement 1, which QLASSIC is to be the benchmark of quality in the construction industry. They are aware that the QLASSIC assessment rating can be utilized to compare the performance of internal and external projects with similar scopes. Statement 2 garnered an equal number of respondents who agree or strongly agree, indicating that they understand that QLASSIC will assess structural, architectural, mechanical and electrical, and external works. While most respondents agree with statement 3, some remain neutral about QLASSIC assessment will be carried out by the external assessor, possibly because they have not undergone a QLASSIC assessment for their own projects. It is important to note that construction professionals must participate in the QLASSIC training course CIDB offers to become QLASSIC assessors (Sohimi, 2017). As for statement 4, half of the respondents strongly agree that the QLASSIC score will reflect the overall quality performance of a given construction project since QLASSIC assesses all aspects of the construction works. The outcome of the QLASSIC assessment is instrumental in determining the quality level of a project, whether it is deemed good or poor. Additionally, respondents strongly agree with statement 5, which QLASSIC is to provide a standard for satisfactory on-site workmanship by defining the desired final product quality. This alignment with statement 4 is significant because it allows workers to gauge the quality of their efforts. If the workmanship is determined to be poor, they can identify the areas that need improvement and strive to deliver better quality work.

CONCLUSION

In conclusion, this research focused on the awareness implementation of QLASSIC in the construction industry. The findings shed light on the current state of knowledge and perceptions among contractors regarding QLASSIC. According to the analysis of the survey data, there is a good amount of awareness regarding QLASSIC but there is potential for improvement. Many respondents recognized QLASSIC as a benchmark for quality in the construction industry and understood its assessment scope across various construction components. However, some respondents remained neutral, indicating a need for further education and awareness initiatives. To enhance the implementation QLASSIC knowledge and awareness in construction sites the employees must identify several strategies. These included providing employee training, engaging subcontractors and consultants in QLASSIC training, making QLASSIC compulsory for all development projects, hosting promotional events, reducing registration fees, and enforcing QLASSIC as a primary criterion for project approval. These strategies aim to improve awareness, knowledge, and adherence to QLASSIC standards, leading to better quality outcomes in construction projects.

By implementing the suggested strategies and addressing the identified areas for improvement, the construction industry can reap the full benefits of QLASSIC, enhance its reputation, and contribute to the overall growth and development of the nation's economy.

ACKNOWLEDGMENT

Firstly, I would like to thank God as finally I could finish this research in time. This research was done with my effort, even though a little problem occurred while conducting this research. Luckily, all the problems can be settled down, and I was able to adapt properly and wisely.

Besides that, a big thank address to my lecturer supervisor, BSR608 Academic Project 1, Dr. An Nisha Nur Welliana Abd Rased, because without her guide, this research cannot have been done properly and successfully. She always gives me support and guides me on how to do my research in purpose to produce a good outcome from this research that had been done by me.

Finally, thanks to my classmates that always help each other in giving ideas, explanation about this research and also work hard to produce good research with all effort and responsibility. Hope that all of the effort will give a lot of benefits to us.

REFERENCES

Ali, M. C. (2014). Exploring the Potential of Integration Quality Assessment System in Construction (Qlassic) With Iso 9001 Quality Management System (QMS). *International Journal for Quality Research* 8(1) 73–86 ISSN 1800-6450.

Alicia, T., (2020, May 28). Sampling: What It Is, Different Types, and How Auditors and Marketers Use It. Investopedia. Retrieved from <https://www.investopedia.com/terms/s/sampling.asp>

Azir, Muhammad, Othman, & Daeng, D. H. (2018). The Insight on Quality Assessment System in Construction (QLASSIC) Implementation in Sarawak. *IOP Conference Series: Materials Science and Engineering*, 429, 012103. <https://doi.org/10.1088/1757-899x/429/1/012103>

CIDB (n.d.). What is Quality Assessment System in Construction (QLASSIC).CIDB. Retrieved from <https://www.cidb.gov.my/en/construction-info/quality/qlassic/what-quality-assessment-system-construction-qlassic>

CONSTRUCTION INDUSTRY DEVELOPMENT BOARD MALAYSIA (CIDB). (2020). ANALYSIS DEFECT CIS 7 & QLASSIC ACCEPTABLE SCORE (2015–2018) (No. 206). <https://www.cidb.gov.my/sites/default/files/2020->

12/1.REPORT-QLASSIC-SCORENo.206.pdf

Hai Chim, B. L., Zuo Yi, C., Kee Wah, F., & Sio Kah, K. (2020). A Study on the Potential of Making Quality Assessment System (Qlassic) Mandatory to the Contractors. INTI JOURNAL, 2020(066).
http://eprints.intimal.edu.my/1519/1/vol.2020_066.pdf

Indeed (2021, December 15). What Is Research Methodology? (Why it's Important and Types). Indeed. Retrieved from <https://www.indeed.com/career-advice/career-development/research-methodology>

Jhun Kam, K., Hilmy, A., & Hamid, A. (2012). The Relationship between Motives and Benefits on Adopting QLASSIC– CIS 7:2006 in Malaysia Construction Industry. International Journal for Quality Research, Volume 6, No. 4.

Kam, K. J., & Abdul Hamid, A. H. (2015). The true motives behind the adoption of QLASSIC-CIS 7: 2006. International Journal of Quality & Reliability Management, 32(6), 603–616. <https://doi.org/10.1108/ijqrm-07-2013-0108>

Khalid, Z., & Tamjehi, S. D. (2020). Contractor's understanding towards the implementation of quality assessment system in construction (QLASSIC) in construction industry. IOP Conference Series: Materials Science and Engineering, 849(1), 012052. <https://doi.org/10.1088/1757-899x/849/1/012052>

Manap, N., Goh, Y., & Syahrom, N. (2017). Compulsory of Malaysia's Quality Assessment System in Construction (QLASSIC). IOP Conference Series: Earth and Environmental Science, 109, 012008. <https://doi.org/10.1088/1755-1315/109/1/012008>

Norizam, A., & Malek, M. A. (2013). Perception on Quality Assessment System in Construction (QLASSIC) Implementation in Malaysia (Volume 13, No. 2). Malaysian Construction Research Journal (MCRJ). <https://www.researchgate.net/publication/262371706>

Philip Cleave (2021, January 18). Advantages Of Questionnaires In Online Research. SmartSurvey. Retrieved from <https://www.smartsurvey.co.uk/blog/advantages-of-questionnaires-in-online-research>

Seman, M. S., Esa, M. R., & Yusof, M. R. (2021). Roles of Contractors in Implementing Quality Assessment System in Construction (QLASSIC) in Construction Projects. International Journal of Real Estate Studies, 15(S1), 53–69. <https://doi.org/10.11113/intrest.v15ns1.117>

Sohimi, N. E., Affandi, H. M., Hassan, F., Che-Ani, A. I., & Rasul, M. S. (2017). The problem of quality of electrical work in Malaysian construction projects. Pertanika Journal of Social Sciences & Humanities, 25(S), 105-110

SPBproperty (2021, Jun 10). What is QLASSIC and what does it mean regarding your house quality? Sri Pengkalan Binaan. Retrieved from <https://www.spb-property.my/what-is-505-qlassic-and-what-does-it-mean-regarding-your-house-quality/>

Swethamaresan (2022, May 23). 28 Questionnaire Examples, Questions, & Templates to Survey Your Clients. HubSpot. Retrieved from <https://blog.hubspot.com/service/questionnaire>

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak



Tuan,

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK
MELALUI REPOSITORI INSTITUSI UiTM (IR)**

Perkara di atas adalah dirujuk.

2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR