UNIVERSITI TEKNOLOGI MARA PERAK BRANCH

SMART CEILING TECHNOLOGY

SHAIFUL NAZREEN BIN KHAIRUL ANUAR

Innovation project report submitted in partial fulfilment of the requirements for the degree of **Bachelor of Science (Hons.) Construction Technology**

Faculty of Architecture, Planning & Surveying

JULY 2022

AUTHOR'S DECLARATION

I declare that the work in this innovation project report was carried out in accordance

with the regulations of Universiti Teknologi MARA. It is original and is the results of

my own work, unless otherwise indicated or acknowledged as referenced work. This

topic has not been submitted to any other academic institution or non-academic

institution for any degree or qualification.

In the event that my innovation project report, be found to violate the conditions

mentioned above, I voluntarily waive the right of conferment of my degree and agree

be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

Name of Student : Shaiful Nazreen bin Khairul Anuar

Student I.D. No. : 2020899314

Programme : Bachelor of Science (Hons.) Construction Technology

Faculty: Department of Built Environment Studies and

Technology, FSPU

Innovation Title : Smart Ceiling for Student's Hostel

Student's Signature :

Date : July 2022

i

ACKNOWLEDGEMENT

Alhamdulillah, praise to Allah, the Most Merciful and the Most Graceful. It is my pleasure to acknowledge the roles of several individuals who were instrumental for the completion of my degree research.

I would like to express my sincere gratitude to several individuals and organizations for supporting me throughout my research study. First, I wish to express my sincere gratitude to my supervisor, Miss Jannatun Naemah Ismam, for her enthusiasm, patience, insightful comments, helpful information, practical advice and unceasing ideas that have helped me tremendously at all times in my research and writing of this thesis. Her immense knowledge, profound experience and professional expertise has enabled me to complete this research successfully. Without her support and guidance, this project would not have been possible. I could not have imagined having a better supervisor in my study.

On the other hand, I would like to acknowledge the valuable input of Ts. Sr. Dr. Asmat binti Ismail, who contributed to many discussions and lectures that helped to shape this project from the beginning of brainstorming ideas to the structural writing of this report.

Deepest appreciation to my parents, family, and others for their cooperation, encouragement, constructive suggestion, and full of support in the completion of the report from the beginning till the end. Thank you also goes to all of my friends and everyone, that has been contributed by supporting my work.

Lastly, I would also like to be thankful to everyone who had been involved and contributed directly or indirectly to my research project as they have been shown their effort and initiative until we were able to complete this report successfully.

TABLE OF CONTENT

AUTE	HOR'S DECLARATION	i
ACKN	NOWLEDGEMENT	ii
TABL	LE OF CONTENT	iii
LIST OF FIGURESvi		
LIST	OF TABLES	viii
ABST	TRACT	ix
СНАН	PTER 1	1
INTR	ODUCTION AND BACKGROUND	1
1.1	Background of Study	1
1.2	Problem Statement	5
1.3	Research Questions	6
1.4	Aims and Research Objectives	6
1.5	Scopes of Study	7
1.6	Limitation of Study	7
1.7	Significance of Studies	8
1.8	Report Outline	9
СНА	PTER 2	10
LITE	RATURE REVIEW	10
2.1	Introduction	10
2.2	Review of Previous Research Related to Ceiling	11

ABSTRACT

Nowadays, Malaysia is an emerging and growing country that is still experiencing tremendous economic development. The construction industry is one of the most active sectors influencing the country's economic progress. Green Building in Malaysia is gaining popularity in the building industry due to its numerous benefits. However, Malaysia is seriously lagging in promoting green building in the construction industry. This report's research is to support the green building agenda in Malaysia by innovating a new technology that eliminates negative impacts and can create positive impacts. The ceiling element was chosen as a study topic because most ceiling elements utilized in buildings are not designed to minimize the overall impact of the built environment on human health and the natural environment. People overlook the capabilities of ceiling features that can preserve or improve the environment's quality of life. This report will assess and propose a solution to produce a product capable of meeting the sustainability viewpoint and the objective of a green campus. This study also has some objectives which are to review the current issue related to the ceiling element, to propose an innovative product to improve the current ceiling element, and to evaluate the marketability of the innovation product. In this research report, several studies had been conducted such as the goals of Sustainable Goal Development, green campus concept, and type of current ceiling used for student's accommodation in UiTM Seri Iskandar. This research report is to innovate a new product technology by improving the abilities of the current ceiling element.