

Optimizing Innovation in Knowledge, Education and Design

# EXTENDED ABSTRACT





e ISBN 978-967-2948-56-8





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eISBN 978-967-2948-56-8

Published by:
Universiti Teknologi MARA (UiTM) Cawangan Kedah,
Sungai Petani Campus,
08400 Merbok,
Kedah,
Malaysia.

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Assalamualaikum warahmatullahi wabarakatuh,

First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality . I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said

RECTOR

**UITM KEDAH BRANCH** 



# **WELCOME MESSAGE (i-SPIKE 2023 CHAIR)**

We are looking forward to welcoming you to the 3<sup>rd</sup> International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "Optimizing Innovation in Knowledge, Education, & Design". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

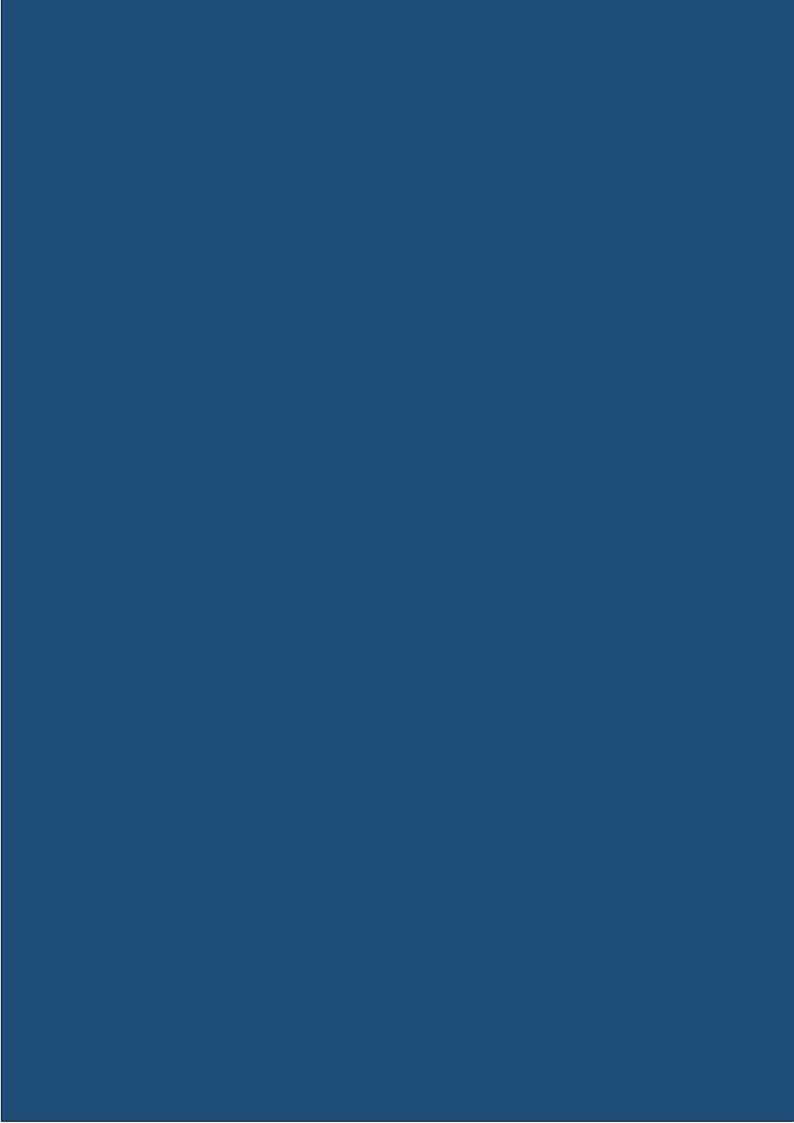
i-SPiKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPiKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail

Chair

3<sup>rd</sup>International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023)







# KICKRESEARCH MODULE: RESEARCH PROPOSAL MADE EASY!

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#### **ABSTRACT**

The KickResearch Module is a structured and efficient research tool designed to facilitate comprehensive research projects for novice researchers. Its unique, standardized template allows researchers to follow a systematic and structured writing process, thereby streamlining research production and enhancing output quality. The module's distinctive feature is its ability to provide a practical solution for individuals lacking the resources or expertise to conduct high-quality research. KickResearch's potential for commercialization is noteworthy as it can be applied to various research topics and industries. Its practicality and uniqueness are grounded in its 5-step research process, which can be executed within a 6-month timeline. The steps include refining the research topic, followed by a comprehensive literature reviewto identify existing research and knowledge gaps. The steps also involve the planning of the data collection process, the identification of stakeholders, and the drafting of the initial report. This structured process provides a clear and systematic path for researchers, enabling them to efficiently produce high-quality research output. The KickResearch Module package includesa user-friendly log sheet that consists of a 5-step research process, a systematic reading template, and an effective writing guide. These templates can be easily modified to suit the researcher's specific research needs and study specifications. The KickResearch Moduleoffers guidance and support throughout the entire research process, making it an essential toolfor anyone seeking to conduct a comprehensive research project. Its practicality and uniqueness make it a valuable asset for researchers across different industries and disciplines.

Keywords: KickResearch; research process; standardized template; high-quality research; time management.





# INTRODUCTION

The KickResearch Module, or KickResearch, is intended to support research students and early career researchers in accomplishing their research projects proficiently. It features an array of resources including guidelines, reading templates, and research logbooks that guarantee an orderly and systematized research process. KickResearch strives to enable users to economize their time, enhance their research quality, and ensure adherence to their project objectives. The module is available on diverse platforms such as MS Teams and Google Drive and is user-friendly and easily accessible to novices.

In recent years, advanced research tools have gained popularity across various fields of study. The use of project management software, data visualization tools, and machine learning algorithms has become increasingly common in research fields (Ahmadi et al., 2023; Chen et al., 2022; Fecher, Friesike, & Hebing, 2015). However, incorporating these tools often presents a challenge for inexperienced researchers who lack the necessary expertise and training. To address this issue, the KickResearch Module offers a comprehensive and user- friendly research framework that guides researchers throughout the entire research process, from refining the research theme to initiating the first research draft. This Module includes a range of tools and resources, such as templates, guidelines, and checklists, that enhance the efficiency and productivity of research. By providing structure, emphasizing collaboration, and promoting communication, the KickResearch Module not only enhances the quality of research but also saves time and resources.

#### **METHODS & MATERIAL**

KickResearch has been developed through a meticulous analysis of the requirements of research students and early career researchers. The process began by identifying common obstacles encountered by individuals initiating and concluding research projects, including challenges related to time management, organization, and information overload. The primary objective was to create a comprehensive module that addresses these obstacles and provides support to researchers throughout their project journey. This module is designed to be suitable for a wide range of users, including early-career researchers starting new projects, graduate students embarking on research endeavors, and undergraduate students eager to delve into research or initiate their own projects. Additionally, KickResearch caters to individuals interested in gaining knowledge about the research process, including academicians and industry partners.

By offering comprehensive guidelines, reading templates, and research logbooks, KickResearch presents a user-friendly and streamlined approach to research, enabling users to save time, enhance research quality, and stay on track with their project objectives. Its main aim is to provide a complete research package that assists early-career and inexperienced researchers in efficiently commencing and completing their projects. This package encompasses various resources such as guidelines, templates, and tools, which canbe utilized for refining research themes/topics, conducting literature reviews, planning data collection, identifying and engaging stakeholders, and drafting research reports. The ultimate goal of KickResearch is to simplify the research process and elevate the quality of research outcomes.





#### **FINDINGS**

The KickResearch module presents a practical and structured framework for researchers to navigate the research process, guiding them through key project stages within a designated 6-month timeline. These stages encompass refining the research topic, conducting literature reviews, planning data collection, identifying and engaging stakeholders, and commencing the research draft. KickResearch provides a logbook and reading template as tools to aid researchers in tracking their progress and recording important notes. The 6-month timeline is designed to accommodate the constraints commonly faced by early-career researchers, such as limited resources, funding, and time. By establishing specific milestones and deadlines, researchers can effectively manage their time, ensuring steady progress and increased productivity. This timeframe allows for thorough research, data analysis, and the preparation of comprehensive reports or publications that carry significance. KickResearch offers a comprehensive array of resources and support, enabling researchers to successfully execute their research projects. Its structured approach streamlines the research process, resulting in the production of high-quality research outputs.

Steps/months	M1	M2	M3	M4	M5	M6
1. Refine the research topic & theme						
2. Read, read, and read!						
3. Plan data collection process						
4. Establish contact with stakeholders						
5. Start the research draft						

Figure 1. KickResearch Module Timeline

The KickResearch module offers a step-by-step approach to the research process, guiding researchers through key stages within a 6-month timeline. These steps aim to streamline the research process, enhance research quality, and ensure timely completion.

- 1. Step 1 focuses on refining the research theme. Researchers are advised to choose a specific and manageable topic within the given timeframe. Initial research is conducted to understand the subject matter, assess feasibility, and identify gaps in knowledge. This stage lays the foundation for a successful research project.
- 2. Step 2 emphasizes conducting an extensive literature review. Researchers search for relevant articles, books, and online sources, including social media platforms, togather insights and identify potential data sources. Critical evaluation of sources is crucial, considering their quality and validity. Taking detailed notes and continuously reading help researchers stay updated and refine their research question and design. There is a crucial need for researchers to contribute to the body of knowledge by conducting literature reviews that offer new insights or perspectives on a particular topic (Lim, Kumar & Ali, 2022).
- 3. Step 3 involves planning data collection. Researchers carefully determine the types of data to be collected (qualitative, quantitative, or both) and align them with current trends. Selection of appropriate methods and developing a data collection plan, including timelines and quality assurance measures, contribute to robust research. At this stage, it is advisable for researchers to plan the analytical tools that will be utilized during the data analysis phase, as the selection of appropriate tools can assist in streamlining the research process (Lesnikowski, Belfer, Rodman, Smith, Biesbroek, Wilkerson... & Berrang-Ford, 2019).

Step 4 focuses on engaging stakeholders. Researchers identify and involve individuals or groups impacted by or having an interest in the research. Analysis of potential





impacts and consultation with experts' aid stakeholder identification. Effective communication channels, regular updates, and soliciting feedback facilitate stakeholder engagement.

5. Step 5 entails starting the research draft. Researchers organize their notes and data, following a structured format. The draft should be clear, concise, and objective, adhering to journal or publication guidelines. Multiple rounds of revisions and editing ensure a high-quality output.

# KickResearch Module package: Log sheets, reading template and writing guide to assist researchers

The KickResearch Module offers comprehensive resources for early-career researchers, including log sheets for tracking progress, a reading template for organizing information, and a writing guide for improving research reports. These tools aid in staying organized, synthesizing information, and enhancing research quality.

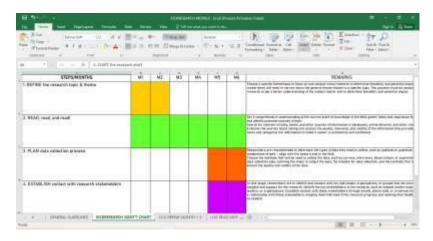


Figure 2. KickResearch Module (Gantt Chart)

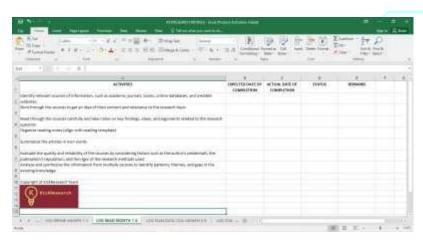


Figure 3. KickResearch Module (Log sheets)





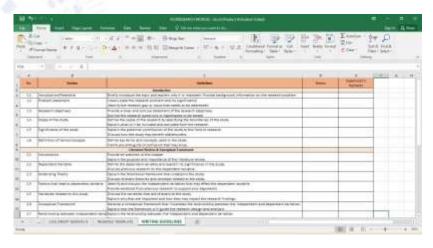


Figure 4. KickResearch Module (Writing guidelines)

# Novelty of KickResearch Module

The KickResearch Module introduces several novel features that set it apart from traditional research frameworks.

Table 1. Novelties of KickResearch Module

Novelty	Elaboration		
Comprehensive	KickResearch offers a complete package for researchers starting a new		
Research Module	project, including guidelines, templates, and tools to facilitate the		
	research process.		
User-Friendly Platform	The module is designed to be user-friendly, making it accessible to a wide		
	range of users, from undergraduate students to industry professionals.		
Customizable Features KickResearch allows users to tailor the research process to their specific ne			
	providing a flexible framework for conducting research.		
Emphasis on	The module encourages collaboration and communication among		
Collaboration	research team members, providing a platform for sharing ideas, tracking		
	progress, and resolving issues.		
Focus on Efficiency	By providing a structured framework for research, KickResearch helps		
-	researchers save time and resources, allowing them to focus on their		
	research questions and hypotheses.		

# Practicality and usefulness KickResearch Module

KickResearch offers a structured and comprehensive approach to the research process, making it particularly valuable for beginners and those unfamiliar with research. It provides guidelines, templates, and tools to help researchers plan and execute their projects efficiently. KickResearch enhances research quality by promoting careful planning, thorough documentation, and avoiding common mistakes. It is versatile, suitable for diverse users ranging from undergraduates to industry partners, fostering collaboration and communication. The provided resources, such as templates and checklists, increase efficiencyand productivity by keeping researchers organized and on track. Overall, KickResearch is a practical and beneficial tool for researchers at all levels, enabling them to produce high- quality research effectively.





Table 2. Practicality and usefulness of KickResearch Module

Practicality of KickResearch	Usefulness of KickResearch
Provides a structured approach to the research process, helping guide researchers through planning and execution.	Increases efficiency and productivity by providing tools such as templates and checklists to help researchers stay organized and on track.
Breaks down the research process into manageable steps, making it helpful for beginners and those unfamiliar with the research process.	Enhances the quality of research by promoting careful planning and thorough documentation, which can help researchers produce higher quality work and avoid common mistakes.
Offers guidelines, templates, and tools that can be customized to fit the specific needs of researchers.	Encourages collaboration and communication among team members, which can lead to better research outcomes.
Can be used by a wide range of individuals interested in the research process, from undergraduate students to industry partners.	Saves time and resources, allowing researchers to focus on their research questions and hypotheses.

## Potential for commercialization

KickResearch holds significant commercial potential due to its comprehensive and user-friendly approach to the research process. It can be marketed to universities, research institutions, and individuals interested in research. For academic institutions, it serves as a valuable training and guidance tool for both novice and experienced researchers. The customizable features of KickResearch make it adaptable to specific project needs and institutional requirements. Additionally, individuals in the private sector can benefit from its structured approach and user-friendly platform. By offering a comprehensive research guide, KickResearch enables individuals without formal research training to navigate the process and achieve high-quality outcomes. The commercial viability of KickResearch lies in its ability to provide a valuable service to individuals and organizations seeking to initiate or enhance their research projects. By offering a structured and customizable framework, KickResearch enhances research efficiency, productivity, and outcome quality

#### DISCUSSION AND CONCLUSION

This paper presents the KickResearch module, a user-friendly research package that provides comprehensive guidance throughout the research process. It highlights the module's features and benefits, emphasizing its potential to enhance research quality, efficiency, and productivity. The module offers a structured approach with guidelines, templates, and tools, particularly beneficial for beginners. Its accessibility makes it suitable for various users, including undergraduate students and industry professionals. Furthermore, the module promotes collaboration and communication among research teams, fostering improved outcomes. With potential for commercialization, it can cater to universities, research institutions, and individuals interested in research. Ultimately, the KickResearch module aims to elevate research quality, streamline processes, and facilitate collaboration, making it an invaluable resource across disciplines and contexts.







Figure 5. KickResearch logo

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e ISBN 978-967-2948-56-8



