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Exploring the Dynamics of Japanese Research Culture: A Case Study on Postgraduate Studies



Abstract: - The research culture in Japan shapes the country's academic landscape and scientific output quality. This study examines the unique characteristics and challenges of Japanese research culture among postgraduate studies by exploring research practices, institutional frameworks, mentor-student relationships, collaboration patterns, publication norms, and funding mechanisms. The findings contribute to existing knowledge, inform policymakers and educators, and emphasize the importance of understanding Japanese research culture for fostering collaboration, interdisciplinary research, and international engagement. The case study approach, with interviews from subject matter experts, provides in-depth insights and acknowledges limitations while adhering to ethical guidelines. The research highlights the prioritization of precision and fundamental research, supported by institutional frameworks, collaborative environments, and publication norms that value timely dissemination of research outcomes. These insights offer a comprehensive understanding of Japanese research culture and serve as a foundation for future initiatives aimed at enhancing research practices both in Japan and globally.

Keywords: Japanese Research Culture; Postgraduate; Research Practices; Institutional Frameworks; Mentor-students Relationship; Collaboration Patterns; Publication Norms; Funding Mechanism.

I. INTRODUCTION

Research culture plays a vital role in shaping the academic landscape [1]-[2] of any nation, influencing the quality and productivity of its scientific output. Study of research culture allows us to gain a deeper understanding of the practices, norms, and values that underpin scholarly pursuits within a specific context [3]. In this case study, is the research aims to focus on the current practice of Japanese research culture among postgraduate studies, aiming to shed light on the unique characteristics and challenges faced by aspiring researchers in Japan.

Japan has long been recognized as a global leader in science and technology, contributing significantly to various fields of research [4]. The country's commitment to excellence, innovation, and meticulousness has propelled it to the forefront of scientific advancements [5]. However, understanding the intricacies of Japanese research culture, particularly at the postgraduate level, requires a comprehensive examination of the prevailing practices and their impact on the research ecosystem.

The objective of this paper is to analyse the current state of Japanese research culture and its influence on postgraduate studies. By conducting an in-depth case study, this distinctive feature of research practices, institutional frameworks, mentor-student relationships, collaboration patterns, and publication norms and funding mechanisms that shape the academic environment in Japan is explored. Through this investigation, the study hopes to identify both strengths and areas of improvement in the Japanese research culture to foster enhanced scientific

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productivity and innovation.

The findings of this research will not only contribute to the existing body of knowledge on research culture but also provide valuable insights for policymakers, educators, and researchers in Japan and beyond. Understanding the nuances of Japanese research culture is crucial for establishing effective strategies that promote collaboration, interdisciplinary research, and international engagement, fostering an environment that nurtures the growth and development of postgraduate scholars [6]-[8].

The following sections will present a comprehensive analysis of the current practices of Japanese research culture among postgraduate studies. Through interviews and an examination of relevant literature and institutional policies, this paper mainly explores the key factors shaping research culture. By delving into the intricacies of this important facet of Japan's academic landscape, this paper helps to contribute to the ongoing discourse on research culture and facilitates evidence-based recommendations for enhancing the postgraduate research experience in Japan.

II. LITERATURE REVIEW

2.1 *Research Practices*

Research practices within the Japanese research culture among postgraduate studies are characterized by a deep-rooted emphasis on meticulousness and attention to detail. This commitment to precision and accuracy permeates every aspect of the research process, from experimental design to data collection and analysis [9]. Japanese researchers are known for their rigorous approach, leaving no room for errors or oversights.

Experimental design in Japanese research is meticulously planned and executed, with careful consideration given to controlling variables and ensuring reliable results. Researchers pay close attention to sample size, experimental conditions, and statistical analysis, aiming to minimize biases and maximize the validity and reproducibility of their findings [10]-[11]. This meticulousness not only enhances the reliability of research outcomes but also contributes to the overall quality of scientific knowledge.

Data collection methods employed by Japanese researchers are characterized by thoroughness and a focus on obtaining comprehensive and accurate data. Researchers often invest significant time and effort in data collection, employing standardized procedures and protocols. This enabling a robust analysis and interpretation of the data [6] & [8]. This meticulous approach fosters confidence in the integrity and reliability of the research outcomes.

In line with the Japanese research culture, postgraduate studies in Japan place a strong emphasis on fundamental research [12]-[13]. The pursuit of fundamental knowledge and the establishment of a solid foundation in various disciplines are regarded as essential steps in advancing scientific understanding. Researchers are encouraged to delve deep into the theoretical underpinnings of their fields, conducting rigorous literature reviews and theoretical analyses to build a comprehensive understanding of existing knowledge. This emphasis on fundamental research lays the groundwork for subsequent applied research and innovation, contributing to the advancement of scientific fields.

The culture of precision, accuracy, and a focus on fundamental research in Japanese postgraduate studies creates a research environment that values the meticulous pursuit of knowledge. It fosters a culture of continuous learning, where researchers strive for excellence in their work and actively seek to contribute to the broader scientific community. These distinctive research practices not only elevate the quality of research outputs but also contribute to the reputation of Japanese research on the global stage.

2.2 *Institutional Frameworks*

The institutional frameworks in Japan are integral to the cultivation and development of the research culture among postgraduate studies. Universities and research institutes serve as the foundation for research activities, providing a structured and supportive environment for scholars to pursue their research interests [8]. These institutions are equipped with state-of-the-art laboratories, cutting-edge technology, and research facilities that enable researchers to conduct high-quality investigations.

One notable characteristic of the institutional frameworks in Japan is the hierarchical structure that exists within academic institutions. Principal researchers and professors hold considerable authority and influence, often playing crucial roles in shaping the research culture and setting the direction of research activities. This hierarchical structure can influence decision-making processes, research priorities, and the allocation of resources within the institution.

Principal researchers and professors in Japan often act as mentors and advisors to postgraduate students, providing guidance and support throughout their research journey [14]. These established academics possess a wealth of experience and expertise, which they pass on to their students through mentorship relationships. The hierarchical nature of these relationships fosters a sense of respect, loyalty, and obligation among postgraduate students towards their mentors [15], creating a conducive environment for learning and knowledge transfer.

Furthermore, the institutional frameworks in Japan provide opportunities for interdisciplinary collaboration and networking. Research institutes and centres within universities often bring together researchers from diverse disciplines, fostering a culture of cross-disciplinary collaboration. This interdisciplinary approach promotes the exchange of ideas, methodologies, and perspectives, leading to innovative research outcomes that address complex societal challenges [6] & [8].

Research grants and funding mechanisms offered by the Japanese government, such as the Japan Society for the Promotion of Science (JSPS) and the Japan Science and Technology Agency (JST), also form an integral part of the institutional frameworks. These funding opportunities support postgraduate students and researchers in conducting their studies, facilitating the advancement of knowledge and scientific discoveries. The competitive nature of securing research grants encourages researchers to develop compelling research proposals and demonstrate the potential impact of their work, thereby fostering excellence and innovation within the research culture.

2.3 Mentor-Student Relationships

Mentor-student relationships are deeply ingrained in the fabric of Japanese research culture and play a pivotal role in shaping the experiences and development of postgraduate students. Rooted in the traditional apprenticeship model known as "senpai-kōhai" these relationships go beyond academic supervision and encompass various facets of a student's professional and personal growth [15].

The mentor-student relationship in Japan is characterized by a strong emphasis on respect, loyalty, and hierarchy known as the KOHZA System Specialised Course as illustrated in Figure 1 Organisation Chat of KOHZA System Specialised Course. The mentor, often a principal researcher or professor, assumes the role of a guide and advisor, imparting knowledge, expertise, and wisdom accumulated through years of experience. The hierarchical nature of these relationships fosters a sense of deference and obligation on the part of the student, creating an environment conducive to learning, growth, and knowledge transfer.

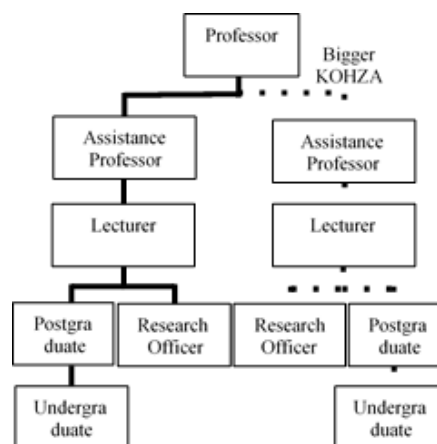


Fig. 1: Organisation Chat of KOHZA System Specialised Course

In addition to academic guidance, mentors in Japanese research culture provide extensive support in the realm of career development. They help students navigate the intricate pathways of academia, offering advice on publishing research, presenting at conferences, and establishing professional networks. Mentors often serve as influential figures who can open doors to collaboration opportunities and facilitate access to resources and funding [14].

Personal support is also a crucial component of mentor-student relationships in Japan. Mentors are invested in the holistic development and well-being of their students, taking a genuine interest in their personal lives and providing emotional support when needed. This support system helps create a sense of belonging and camaraderie within the research community, fostering an environment where students feel valued and encouraged [14].

The mentor-student relationship in Japanese research culture cultivates a strong work ethic and commitment among postgraduate students. The sense of obligation and loyalty towards their mentors drives students to excel and strive for excellence in their research endeavours. The hierarchical structure ensures a clear chain of responsibility and accountability, instilling discipline and professionalism in students' work ethics.

Moreover, the mentor-student relationship in Japan often extends beyond the duration of postgraduate studies. Many mentors continue to provide guidance and support to their students even after they have completed their degrees, fostering lifelong relationships that span professional careers [14]. These enduring connections facilitate ongoing collaboration, mentorship, and knowledge exchange.

2.4 *Collaboration Patterns*

Collaboration is deeply ingrained in the fabric of Japanese research culture, reflecting the collective and cooperative nature of scientific advancement. The emphasis on teamwork and collaborative efforts is not only valued but also actively encouraged in postgraduate studies.

Collaborative research projects in Japan often extend beyond the boundaries of a single institution [16]. Researchers from different universities, research institutes, and even industry partners come together to tackle complex research questions and address interdisciplinary challenges [2] & [8]. This interdisciplinary approach allows for the integration of diverse perspectives, methodologies, and expertise, leading to innovative solutions and advancements in knowledge.

The concept of research groups or labs is prevalent in Japanese research culture. These groups consist of a principal investigator, who is usually a principal researcher or professor, and a team of researchers, including postgraduate students. Within these research groups, members work closely together, leveraging their complementary skills and knowledge to achieve common research goals. The principal investigator provides guidance, mentorship, and oversight, fostering a collaborative environment that nurtures creativity, critical thinking, and intellectual exchange [14].

Collaboration in Japanese research culture extends beyond the confines of specific research projects. Researchers actively engage in knowledge sharing, organizing seminars, conferences, and workshops to promote interaction and collaboration among peers. These platforms facilitate the exchange of ideas, research findings, and methodologies, allowing researchers to learn from one another and spark new research directions [8]. The culture of collaboration in Japan encourages open communication and mutual learning, transcending institutional boundaries and fostering a sense of camaraderie within the research community.

Collaborative efforts in Japanese research culture also extend to the pooling of expertise and resources. Researchers recognize the value of collective endeavours, sharing equipment, infrastructure, and specialized facilities to optimize research outcomes. By leveraging shared resources, researchers can conduct experiments and analyses that would be otherwise unfeasible individually [8]. This collaborative framework promotes efficiency, accelerates research progress, and enhances the overall quality and impact of the research conducted by postgraduate students.

Furthermore, collaborative research projects often involve collaboration with industry partners, government agencies, and non-profit organizations. This collaboration bridges the gap between academia and the real-world application of research findings, fostering innovation and addressing practical challenges. The involvement of

external stakeholders brings a diverse range of perspectives and expertise, enriching the research process and promoting knowledge transfer between academia and other sectors [1].

2.5 *Publication Norms and Challenges*

Publication norms in Japan hold great importance within the research culture among postgraduate studies, with an emphasis on sharing research findings in internationally recognized journals. The dissemination of research outcomes is seen as a crucial step in advancing scientific knowledge, fostering collaboration, and gaining recognition from the global scientific community.

Researchers in Japan are encouraged to publish their work in reputable outlets that are indexed in international databases, such as Scopus or Web of Science. Publishing in such journals ensures the visibility and accessibility of research findings to a wider audience, enabling other researchers to build upon the existing knowledge and fostering the exchange of ideas and methodologies.

However, the prevalence of the "publish or perish" culture, where the quantity and impact of publications are often used as metrics to evaluate academic performance, can create certain challenges within the publication norms in Japan. The pressure to produce a high volume of publications within a limited timeframe can lead to potential trade-offs between quantity and quality [8]. Researchers may face challenges in maintaining rigorous research standards, conducting comprehensive experiments, and ensuring the robustness of their findings within strict publication timelines.

Moreover, the focus on high-impact publications can create a competitive environment, where researchers strive to publish in journals with high-impact factors or citation metrics. While aiming for impactful publications is commendable, it can sometimes divert attention away from publishing research that may be valuable but may not necessarily yield immediate high citation rates. This can limit the dissemination of research that contributes to niche or emerging fields and may undervalue the importance of incremental contributions to scientific knowledge.

Another challenge that researchers may face within publication norms in Japan is the potential delay in publication timelines. The rigorous peer-review process, although essential for ensuring the quality and validity of research, can lead to prolonged review cycles and delayed publication of research findings [14]. This delay can sometimes hinder the timely dissemination of research and impede the researcher's ability to contribute to ongoing scientific discourse.

To address these challenges, efforts are being made to foster a balance between quantity and quality in publication norms. Researchers are encouraged to prioritize the integrity of their research, adopt rigorous methodologies, and focus on producing impactful and robust findings rather than solely pursuing a high volume of publications [17]. Academic institutions and funding agencies are increasingly recognizing the importance of comprehensive research evaluation, considering factors beyond the number of publications, such as the societal impact, collaborations, and contributions to interdisciplinary research.

Furthermore, initiatives promoting open-access publishing and preprint platforms are gaining traction in Japan. Open-access publishing allows for wider accessibility to research findings, facilitating knowledge dissemination and collaboration [18]. Preprint platforms enable researchers to share their preliminary research findings before formal peer review, expediting the dissemination of research and fostering early engagement and feedback from the scientific community.

III. METHODOLOGY

This paper uses a case study approach to investigate Japanese research culture in postgraduate studies. It focuses on six key areas: research practices, institutional frameworks, mentor-student relationships, collaboration patterns, publication norms, and funding mechanisms. The inclusion of the funding mechanism as an additional area is beneficial for bolstering the research's publication output aspect. This study acquires a comprehensive understanding by conducting interviews with subject matter experts.

The case study design allows for a comprehensive exploration of Japanese research culture, considering its complexities. Multiple cases from different academic disciplines and institutions are selected to obtain a holistic

view. Qualitative methods are used to capture detailed insights and subjective experiences of participants.

Purposive sampling is used to select 25 subject matter experts with significant knowledge and experience in Japanese research culture both in Japan and Malaysia. The sample includes researchers, professors, administrators, and key stakeholders in postgraduate studies and research. Diverse backgrounds and extensive expertise are prioritized for a comprehensive understanding.

Semi-structured interviews are conducted with the experts to collect primary data. Open-ended questions encourage participants to share their experiences and perspectives on research practices, institutional frameworks, mentor-student relationships, collaboration patterns, funding mechanisms, and publication norms in Japan.

Thematic analysis is employed to analyze the interview data. Transcripts are reviewed, coded, and organized into themes to identify recurring patterns and insights related to the six aspects of research culture. This iterative process ensures rigor and validity in data analysis.

Ethical guidelines are followed, including informed consent, confidentiality, and anonymity. Limitations of the study are acknowledged, such as the context-specific nature of findings and potential researcher bias. Rigorous data collection and analysis processes aim to enhance validity and reliability.

IV. RESULT AND DISCUSSION

2.6 4.1 Research Practices

The culture prevailing in Japanese postgraduate studies places a strong emphasis on meticulousness and attention to detail, which significantly shapes research practices. One of the key findings of the study is that precision and accuracy are deeply ingrained in the Japanese research culture. Researchers in Japan prioritize rigor and meticulousness throughout the research process, from experimental design to data collection and analysis. This commitment to precision ensures high-quality research outputs and instills confidence in the reliability and validity of the findings.

Furthermore, the research culture in Japan is heavily influenced by a strong focus on fundamental research. Japanese postgraduate studies prioritize the establishment of a solid foundation of knowledge in various disciplines. Researchers delve deep into the theoretical underpinnings of their fields, conducting comprehensive literature reviews and theoretical analyses. This emphasis on fundamental research contributes to building a robust understanding of existing knowledge and serves as a basis for future applied research and innovation.

2.7 4.2 Institutional Frameworks

The study reveals that Japanese universities and research institutions provide a structured and supportive environment for postgraduate studies. These institutions boast well-equipped facilities, including laboratories, libraries, and research databases, which are essential for conducting high-quality research. The financial strength of Japanese universities enables them to invest in state-of-the-art equipment and infrastructure, ensuring that researchers have access to the necessary resources to carry out their studies effectively.

The availability of such facilities plays a vital role in fostering a vibrant research culture. Researchers are provided with the tools and resources needed to conduct their experiments, collect data, and analyze results. This infrastructure not only enhances the quality of research outputs but also contributes to the overall advancement of knowledge in various disciplines.

Additionally, the financial strength of Japanese universities supports the establishment of research grants and funding mechanisms. These funding opportunities provide financial support to postgraduate students and researchers, enabling them to pursue their research projects and contribute to the scientific community. The availability of research grants further encourages and motivates researchers to engage in innovative and impactful studies.

2.8 4.3 Mentor-Student Relationships

The research indicates that in Japan, mentor-student relationships are characterized by a superior-mentee dynamic.

The traditional apprenticeship model, known as "senpai-kohai," emphasizes a hierarchical structure where mentors hold significant authority and influence over their students. This relationship extends beyond academic supervision, encompassing career development, personal support, and networking opportunities. The hierarchical nature of these relationships fosters a sense of obligation and loyalty, contributing to a strong work ethic and commitment among postgraduate students.

This stands in contrast to the mentor-student relationships observed in Malaysia, which tend to be more peer-oriented. In Malaysia, there is a greater emphasis on collaborative and equal relationships between mentors and students, with less pronounced hierarchical dynamics. The relationship is characterized by mutual respect and the sharing of knowledge and experiences, fostering a supportive and collaborative research culture.

This distinction in mentor-student relationships between Japan and Malaysia highlights the cultural differences and societal norms that shape the research culture in each country. The superior-mentee relationship in Japan reflects the value placed on hierarchy, respect for authority, and the transmission of knowledge from experienced mentors to their students. On the other hand, the peer relationship observed in Malaysia emphasizes equality, collaboration, and the sharing of ideas among mentors and students.

Understanding these differences in mentor-student relationships is crucial for fostering effective research collaborations and developing supportive research environments. By recognizing and appreciating the unique characteristics of mentor-student relationships in Japan and Malaysia, researchers can adapt their approaches to mentoring, support, and career development accordingly, ultimately enhancing the overall research culture and success of postgraduate students in both contexts.

2.9 4.4 Collaboration Patterns

The research indicates that collaboration is highly valued and actively encouraged in the Japanese research culture among postgraduate studies. Collaborative research projects often involve researchers from different institutions, promoting interdisciplinary approaches and knowledge exchange. The concept of "research groups" or "labs" is prevalent, where a group of researchers work closely together under the guidance of a principal investigator. This collaborative framework allows for the pooling of expertise and resources, enhancing the overall research output.

Importantly, the research findings highlight the willingness of Japanese researchers to collaborate with their international counterparts. Japanese research culture recognizes the importance of global collaboration in advancing scientific knowledge and addressing complex research challenges. By engaging in collaborations with researchers from overseas, Japanese researchers benefit from diverse perspectives, access to new resources and technologies, and opportunities for cross-cultural learning.

The appreciation for collaboration, both within Japan and with researchers from overseas, contributes to a vibrant and dynamic research culture. The willingness to embrace interdisciplinary approaches and engage in global collaborations strengthens the research outcomes and facilitates the exchange of ideas and best practices.

Furthermore, the emphasis on collaboration in the Japanese research culture aligns with the increasingly interconnected nature of scientific research in today's globalized world. By actively seeking and valuing collaborations, Japanese researchers can leverage the strengths and expertise of a broader scientific community, leading to innovative discoveries, advancements, and a positive impact on various fields of study.

2.10 4.5 Publication Norms

The research indicates that publication norms in Japan emphasize the significance of disseminating research findings in internationally recognized journals. Researchers are encouraged to publish their work in reputable outlets, contributing to the global scientific community. However, a specific observation is that local Japanese journals receive greater emphasis and promotion compared to English-language journals.

This finding suggests that there is a preference for publishing research in journals that are more regionally focused and cater to the local academic community. It is likely influenced by factors such as language barriers, cultural context, and the desire to engage with and contribute to the domestic research landscape. By prioritizing local journals, researchers in Japan may aim to address specific research questions that are relevant to the local context,

disseminate findings within the national academic community, and contribute to the development of local scholarship.

However, it is important to note that while local Japanese journals may receive more promotion, the research findings do not indicate a complete disregard for English-language journals. Researchers in Japan are still encouraged to publish in internationally recognized outlets to ensure their work reaches a wider global audience and contributes to the broader scientific knowledge base.

The promotion of local Japanese journals alongside English-language journals reflects a balanced approach to publication norms within the Japanese research culture. It recognizes the importance of engaging with both local and international scholarly communities, fostering knowledge exchange within the domestic context while also contributing to the global scientific discourse.

2.11 4.6 Funding Mechanisms

The research indicates that funding mechanisms significantly influence the research culture among postgraduate studies in Japan. The Japanese government, through agencies such as the Japan Society for the Promotion of Science (JSPS) and the Japan Science and Technology Agency (JST), provides research grants and scholarships to support postgraduate research. However, the highly competitive nature of securing funding necessitates a focus on writing high-quality research proposals and demonstrating the potential impact of the proposed research. This finding is consistent with global trends in research funding, where researchers face similar challenges in securing financial support for their projects.

Moreover, the research findings suggest that the pressures and expectations associated with funding mechanisms are not unique to Japan but are prevalent worldwide. In an environment where resources are limited and competition for funding is intense, researchers around the world face similar challenges in securing financial support for their research endeavors. The need to write compelling proposals, demonstrate the significance and feasibility of the research, and highlight the potential outcomes and impact is a common concern for researchers across different countries and institutions.

The findings underscore the importance of funding mechanisms in shaping the research culture and practices in postgraduate studies, not only in Japan but also on a global scale. The competitive nature of funding drives researchers to strive for excellence, enhance the quality of their research proposals, and demonstrate the potential societal and scientific impact of their work. The pursuit of funding opportunities encourages researchers to innovate, collaborate, and produce high-quality research outputs.

V. CONCLUSION

In conclusion, the Japanese research culture among postgraduate studies is characterized by a focus on precision, accuracy, and fundamental research, ensuring the high quality and reliability of research outputs, thereby enhancing the global reputation of Japanese research. The institutional frameworks provide a supportive environment for research, encompassing mentor-student relationships, interdisciplinary collaboration, well-equipped facilities, funding mechanisms, and publication norms.

Mentor-student relationships foster a strong work ethic and commitment among postgraduate students. This unique mentor-student relationships in Japan, is characterized by a superior-mentee dynamic and compares to the more peer-oriented relationships observed in Malaysia.

Interdisciplinary Collaboration is highly valued within the Japanese research culture, both within Japan and with international researchers, promoting interdisciplinary approaches and knowledge exchange. The research also sheds light on the supportive institutional frameworks in Japan, including well-equipped facilities and research funding mechanisms that foster a conducive research environment.

Funding mechanisms, including government grants and industry collaborations, play a crucial role in supporting research endeavours. While publication norms prioritize internationally recognized journals, efforts are being made to balance quantity and quality and ensure timely dissemination of research outcomes. Additionally, the

study reveals publication norms that prioritize local Japanese journals while recognizing the importance of English-language outlets for the global dissemination of research.

Overall, these findings provide a comprehensive understanding of the Japanese research culture among postgraduate studies, showcasing its strengths in precision, fundamental research, collaborative spirit, and support from institutional frameworks. The research contributes to the broader knowledge base on research practices and can serve as a foundation for future studies and initiatives aimed at further enhancing the research culture and its impact in Japan and beyond.

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3 AUTHORS PROFILE



Ts. Dr. Khairul Zahreen Mohd Arof currently holds a multifaceted role, serving at Praxis, Industry and Community Engagement (PICE) within the Centre of Excellence for Research, Value Innovation, and Entrepreneurship (CERVIE). Simultaneously, he assumes the position of a lecturer at the School of Architecture and Built Environment (SABE) within the Faculty of Engineering (FETBE) at Technology and Built Environment, UCSI University. In addition to his academic responsibilities, Khairul Zahreen Mohd Arof is entrusted with the pivotal role of Country Director at Beyoğlu Çikolata in Malaysia, overseeing Production, Wholesale, Retail, and Trade (WRT). Furthermore, he has achieved the distinction of being promoted to Project Director (Civil & Structure) at the Engineering Unit of Koperasi Komuniti Berhad. His active involvement in research and consultancy is exemplified by his appointment as the Project Manager at the Green Cities and Construction Research Group. Khairul Zahreen extends his contributions beyond academia through active engagement in social responsibility initiatives, particularly for school leavers and the general public. Notably, he holds the esteemed position of Humanitarian Activities and Student Activities Coordinator at IEEE Malaysia Kuala Lumpur Subsection, Institute of Electrical and Electronics Engineers. His diverse expertise spans the areas of Material and Structure, Project Management, Organisational Performance, Leadership Behaviour, and Urban Farming, reflecting a comprehensive and impactful engagement in both academic and professional realms.



Dr. Amy Poh Ai Ling After receiving her first Ph.D. in Advanced Mathematical Sciences from Meiji University in 2012, she conducted research at the University of Tokyo, the California Institute of Technology, the Hong Kong Baptist University, the Taiwan Tamkang University, and the University of Science Malaysia as a postdoctoral researcher of the Japan Society for the Promotion of Science (JSPS). She then became a senior lecturer at the University of Technology Malaysia. In 2019, she received her second Ph.D. in Natural Science and Technology from Okayama University. She was honored with three Student Role Model Awards upon completing her B.B.A., M.Sc., and Ph.Ds. She has won three Science Awards from America, Japan, and Malaysia, as well as seven scholarships. She coordinates multidisciplinary research with experts from seven countries and has co-published one book, one chapter, and 15 manuscripts in prestigious journals. Her research area is social science, including next-generation power grids, information systems security engineering, data processing, statistical modeling and analysis, quality and productivity improvement, economics, and business administration. She is currently a JSPS Special Research Fellow at The University of Tokyo, where she is developing a model for assessing factors that influence public security acceptance in promoting smart grids.



Assistant Prof. IDR Baizura Hanim Bidin currently serving as a senior lecturer at UCSI University, Kuala Lumpur, brings forth a wealth of experience exceeding two decades in the academic realm. Commencing the transition from industry to education in 2002, IDR Baizura has diligently contributed to various private institutions, actively engaging in accreditation processes for Built Environment programs. The academic journey includes the attainment of a Master of Science in Building Technology from the esteemed University Science Malaysia (USM), complemented by a Bachelor of Arts (Hons.) in Interior Architecture from MARA University of Technology (UiTM) and a Diploma in Interior Design from MARA Institute of Technology (ITM). Specializing in research concerning interior detailing and joineries, IDR Baizura demonstrates a profound interest in exploring

the nuanced intersections of human experience, spatial dynamics, and cultural contexts. Holding the prestigious designation of a Registered Interior Designer, **IDr Baizura** is affiliated with professional bodies such as the Board of Architects (LAM) and the Malaysian Institute of Interior Designers (MIID). Notably, [his/her] scholarly endeavors center around the examination and advocacy of Sustainable Development Goals within the domain of Interior Architecture Education.



Intan Liana Samsudin stands as a distinguished author and researcher, channeling her expertise towards intergenerational care, mosque architecture, heritage, and architectural education. Armed with a Master's degree in Architecture, her influential publications delve into these realms, offering novel perspectives and enriching the discourse. Her commitment to excellence is underscored by accolades such as the "Best Research Paper" and "Best Presenter" awards at prestigious research conferences, attesting to both her depth of knowledge and exceptional communication skills. Beyond the confines of academia, Intan actively engages with professional bodies, fostering a collaborative environment for the exchange of knowledge. Her contributions extend beyond the written word, playing a pivotal role in advancing architectural understanding, championing heritage preservation, and promoting intergenerational welfare. In a field where each brick laid and each design choice carries historical significance, Intan's work serves as a beacon, illuminating the path toward a more enlightened and interconnected future in the realm of architecture and beyond.



Noorziza Abdul Aziz, a dedicated lecturer at Politeknik Sultan Idris Shah for over two decades, showcases unwavering commitment and excellence in digital electronics and semiconductor devices within the Department of Electrical Engineering. Her substantial research contributions, concentrated in these domains, mark her as a seasoned academician, advancing knowledge expansion. Beyond the classroom, Noorziza's diverse publications reflect her profound insights, attesting to both intellectual acumen and a steadfast commitment to the progression of digital electronics and semiconductor devices understanding. In the dynamic realm of electrical engineering, she stands as an epitome of innovation and academic leadership, shaping the intellectual landscape of Politeknik Sultan Idris Shah. Serving as an inspiration and mentor, her influence extends beyond her current role, leaving an indelible mark on the broader academic community.