KEMENTERIAN PENDIDIKAN TINGGI
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2ND EDITION

E-BOOK TVET COMMERCE SYNERGY

"EMPOWERING TVET THROUGH COMMERCE"

EDITORIAL TEAM

A MESSAGE FROM THE HEAD OF COMMERCE DEPARTMENT

ROHANA BINTI MAT

Assalamualaikum Warahmatullahi Wabarakatuh and warm greetings.

It is my great pleasure to extend my sincere congratulations and appreciation to the Research, Publication and Innovation Committee of the Commerce Department, Politeknik Port Dickson, for the successful publication of the 2026 edition of this e-book. This achievement reflects the team's unwavering commitment, dedication, and collaborative efforts in producing a valuable academic resource that contributes meaningfully to the enhancement of teaching, learning, and knowledge dissemination within the department.

This e-book represents more than a compilation of academic materials; it serves as an innovative platform that facilitates accessible, flexible, and continuous learning. Through its digital format, students and educators are provided with greater opportunities to engage with current, relevant, and practical knowledge that aligns with the evolving requirements of the commerce discipline and the contemporary educational landscape.

The successful development of this publication demonstrates the strong commitment of the Commerce Department towards fostering a culture of academic excellence, innovation, and continuous improvement. The dedication shown by the Editorial Team reflects the collaborative spirit and professional values that are deeply embedded within the academic community of Politeknik Port Dickson.

As educators, we bear the responsibility to continuously enhance the quality of educational resources and embrace new approaches that support meaningful learning experiences. This publication is a testament to our collective efforts in advancing academic development and strengthening the role of digital resources in education.

May this accomplishment inspire further initiatives and outstanding contributions in the future. I encourage the Editorial Team to continue pursuing excellence and innovation, as your commitment will undoubtedly create a lasting impact on students, educators, and the wider academic community.

Congratulations once again, and thank you for your exceptional dedication and remarkable contribution towards the advancement of knowledge and education.

NADZIRAH MUHAMMAD MEREJOK

A MESSAGE FROM THE CHIEF EDITOR

RESEARCH, PUBLICATION AND INNOVATION COMMITTEE

Assalamualaikum Warahmatullahi Wabarakatuh and warm greetings.

It is my great pleasure to extend my sincere congratulations to the Editorial Team of the Commerce Department, Politeknik Port Dickson, on the successful publication of the 2026 Edition of this e-book. This achievement reflects the team's dedication, commitment, and collaborative efforts in producing a valuable academic resource that supports knowledge sharing and enhances the teaching and learning experience within the department.

This e-book represents an innovative and contemporary approach to learning Commerce by providing relevant, accessible, and practical content that meets the needs of today's academic and professional environment. The digital format offers greater flexibility and convenience, allowing students, educators, and readers to access and engage with the learning materials anytime and anywhere.

The continuous improvement reflected in this edition demonstrates the Editorial Team's commitment towards academic excellence, innovation, and the development of quality educational resources. The content presented is aligned with current trends and practices in the field of Commerce, ensuring its relevance in supporting learners to acquire essential knowledge, skills, and competencies required in a dynamic business landscape.

This accomplishment is a testament to the strong spirit of teamwork, creativity, and professionalism demonstrated by the Commerce Department, Politeknik Port Dickson. The efforts of the Editorial Team not only contribute to the academic growth of the department but also reflect the institution's commitment towards promoting impactful digital learning and continuous improvement.

May this achievement inspire further excellence in research, publication, and innovation. Congratulations once again to the Editorial Team for this remarkable milestone. May your dedication and contributions continue to inspire the pursuit of knowledge and lifelong learning.

Thank you and well done.

TABLE OF CONTENT

BUY NOW, PAY LATER: A GROWING TREND

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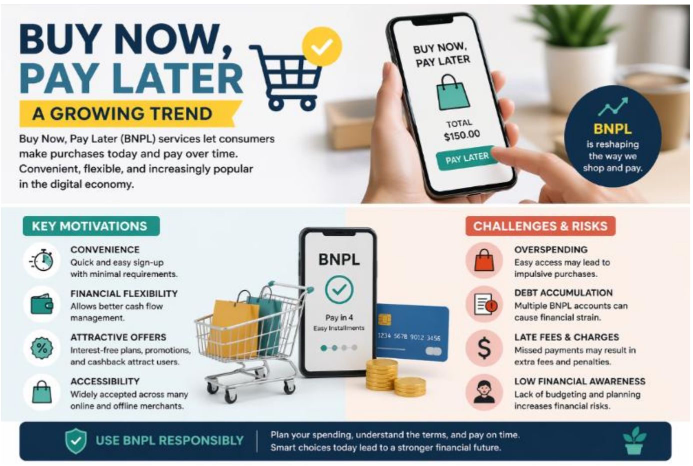

The Buy Now, Pay Later (BNPL) sector in Malaysia has experienced rapid expansion in recent years. According to Fintech News Malaysia (2025), more than 5.1 million Malaysians utilised BNPL services, spending approximately RM 7.1 billion in the second half of 2024 alone. This demonstrates how BNPL has increasingly become embedded in everyday consumer spending behaviour. In line with this growth, Malaysia's BNPL market is projected to reach USD 2.52 billion in 2025, representing a 15.1% increase compared to the previous year.

On a broader scale, the popularity of BNPL services has significantly transformed consumer finance globally. Driven by technological advancements and evolving customer expectations, BNPL allows consumers to make purchases immediately while deferring payment (McKinsey & Company, 2023). This trend has been further accelerated by economic uncertainty and the growing demand for flexible payment solutions (LendUp, 2023), making BNPL an increasingly attractive financial option.

In the Malaysian context, this global trend is clearly reflected. BNPL transactions increased by 35% year-on-year in 2024, highlighting a strong shift toward digital and flexible payment methods. Convenience and instant access remain the primary drivers of adoption, with approximately 45% of Malaysian consumers having used BNPL services (Bank Negara Malaysia, 2024). However, despite its growing popularity, the rapid expansion of BNPL raises concerns regarding its long-term impact on consumer behaviour and financial stability.

Key Aspects of the BNPL Phenomenon in Malaysia

Rapid Adoption & Strong Market Growth

The rapid proliferation of Buy Now, Pay Later (BNPL) services in Malaysia signifies a fundamental shift in the national payments landscape, evolving from a supplementary fintech feature into a primary credit instrument. By late 2025, active BNPL accounts reached approximately 6.5 million, reflecting high penetration across diverse consumer segments. Quantitative data reveals a staggering 243 million transactions valued at RM21.3 billion, highlighting the high velocity of micro-credit circulation (Shereen, 2024).

This trajectory is bolstered by "super-app" integration, which embeds credit seamlessly into daily commerce (McKinsey & Company, 2023). While adoption was initially fueled by discretionary retail, the current market depth is driven by a structural reliance on flexible payments for routine expenditures (LendUp, 2023). Consequently, this explosive growth has necessitated more stringent oversight through the Consumer Credit Act 2025 (Bank Negara Malaysia, 2024).

User Demographics

Wong et al. (2022) note that Malaysian BNPL users, particularly younger demographics, face higher financial hardship and late payments than traditional credit users. This aligns with Tan and Lim’s (2023) observation of rising debt-related issues linked to BNPL adoption. While Gen Z and Millennials favor the platform’s digital convenience, over 70% of users belong to the B40 low-income group.

This demographic concentration suggests that BNPL serves as a "salary smoothing" tool for the underbanked (BNM, 2024). The low entry barriers facilitate "debt stacking," where users accumulate multiple micro-loans beyond their repayment capacity (Hassan et al., 2023). Consequently, the Consumer Credit Act 2025 was implemented to enforce stricter credit assessments and mitigate systemic risks within these vulnerable populations (CCC, 2025).

Dominant Providers

In the Malaysian Buy Now, Pay Later (BNPL) landscape, market dominance is heavily consolidated among three key entities: Shopee’s SPayLater, Atome, and Grab’s PayLater. As of late 2025, SPayLater holds a commanding majority with approximately 56.5% of active users, followed by Atome at 26.5% and Grab at 8.3% (Fintech News Malaysia, 2025).

This oligopolistic structure is driven by the "super-app" strategy, where credit is seamlessly embedded into existing e-commerce and transport ecosystems (Research and Markets, 2026). While e-commerce integration remains the primary catalyst for growth, providers like Grab and Atome are increasingly diversifying into "high-ticket" sectors such as healthcare and travel (FinTech Futures, 2025). Under the Consumer Credit Act 2025, these dominant players must now secure licenses from the Consumer Credit Commission (CCC) to ensure continued market participation (MOF, 2026)

Usage Patterns

The consumption patterns of BNPL users in Malaysia have undergone a structural shift from discretionary spending to subsistence-linked credit. While historically dominated by high-engagement categories such as fashion and electronics, recent data indicates a significant pivot toward "essential utility" spending. According to Bank Negara Malaysia (2024), there is a rising trend of utilizing installment plans for non-durable goods, including groceries, food delivery, and transportation services.

This transition suggests that BNPL is increasingly functioning as a budgetary management tool for the B40 and M40 groups to cope with inflationary pressures (Ismail & Ariff, 2025). However, using credit for recurring daily necessities raises concerns regarding "debt traps," where consumers may struggle with compounded repayments for short-lived consumption (Khazanah Research Institute, 2025).

Impulse Spending

The frictionless nature of BNPL interfaces often cultivates a "buy now, think later" mindset, significantly escalating impulsive consumption among young Malaysians. According to Osman et al. (2024), the perceived affordability of small installments, combined with instant gratification, bypasses traditional cognitive barriers to spending. This is particularly evident among Gen Z, where social media influence and materialism exacerbate unplanned purchasing behaviors (Alias et al., 2025). Research indicates that these impulsive tendencies are often driven by "present bias," where consumers prioritize immediate rewards over future financial obligations (Cheng & Huo, 2025). Consequently, this lack of deliberation fosters "payment regret" and financial overcommitment, highlighting a critical need for enhanced financial literacy and regulatory oversight under the Consumer Credit Act 2025 (Halim et al., 2024).

Conclusion

BNPL has clearly become a crucial financial support option for many Malaysians, especially those dealing with economic constraints and limited access to conventional credit facilities. As this sector continues to expand and develop, it is important to tackle the related risks and challenges through well-considered regulations and stronger consumer education initiatives. In a recent report by KRI titled *"The Financialization of our Lives: Values and Trade-offs,"* several policy recommendations were highlighted to better manage the evolving BNPL ecosystem. These include incorporating BNPL into household debt measurements, enhancing regulatory supervision, and improving consumer awareness and financial literacy (KRI, 2024). At the same time, a deeper analysis of Malaysia's BNPL market is necessary. This can be achieved by leveraging microdata from BNPL providers and financial institutions to gain clearer insights into consumer behaviour, spending patterns, and how debt levels change over time.

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TAX INCENTIVES IN MALAYSIA: ECONOMIC BOOSTER OR TAX REDUCTION STRATEGY?

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Introduction

Tax incentives have become an important component of Malaysia's economic strategy. Introduced to attract investment, encourage business expansion, and strengthen national competitiveness, these incentives play a significant role in supporting economic growth and industrial development. However, as more companies benefit from various tax reliefs and exemptions, concerns have also emerged regarding fairness, transparency, and the long-term implications for government revenue.

Taxation remains one of the government's primary sources of revenue and is essential for funding national development, public services, infrastructure, healthcare, and education (Darsani et al., 2021). In Malaysia, income tax contributed approximately 74.8 per cent of federal revenue in 2024, with corporate income tax representing the largest share of total collections (MoF, 2024). As Malaysia continues strengthening its fiscal sustainability and economic position, greater attention has been directed towards corporate tax behaviour, particularly the role of tax incentives in influencing tax planning practices among large companies.

Tax Incentives

Tax incentives are government-approved mechanisms designed to encourage investment, business expansion, and economic growth by reducing firms' tax liabilities (Zolt, 2015; Mohd Ali et al., 2024). In Malaysia, common tax incentives include Pioneer Status (PS), Investment Tax Allowance (ITA), and Reinvestment Allowance (RA). Additional tax incentives are also offered for activities such as research and development, export promotion, and employee training programmes (Rohani et al., 2023; Salihu et al., 2013). Through these incentives, firms are able to reduce taxable income legally while supporting the government's broader economic development agenda. In general, these incentives are introduced to attract investment, promote industrial development, and strengthen national competitiveness. Despite these benefits, discussions surrounding tax incentives have become increasingly complex due to concerns regarding corporate tax planning and tax avoidance practices.

Tax avoidance refers to the use of legal methods within the tax framework to minimise tax liabilities through strategic tax planning (Saleem, 2024; Zain, 2007). Although tax avoidance differs from illegal tax evasion, aggressive tax planning may still raise concerns about fairness, transparency, and public trust in the taxation system (Khelil & Khlif, 2022; Oktrivina, 2022).

At the international level, the Organisation for Economic Co-operation and Development (OECD) has highlighted growing concerns regarding Base Erosion and Profit Shifting (BEPS), where companies strategically reduce taxable income through various tax planning arrangements (OECD, 2013). According to the OECD (2017), profit-shifting activities reduce global corporate tax revenues by approximately USD100 to USD240 billion annually. This issue is particularly important for developing and emerging economies such as Malaysia, where corporate taxation remains an essential source of public revenue.

Balancing Tax Incentives

In Malaysia, tax incentives may create a dual effect on corporate behaviour. On one hand, tax incentives support economic growth by encouraging firms to reinvest profits, expand operations, create employment opportunities, and improve productivity. Hamid et al. (2018) reported that firms utilising tax incentives contributed positively to business expansion and economic activities. Mohd Ali et al. (2024) further argued that tax incentives function as an important policy tool for strengthening investment and industrial competitiveness.

On the other hand, tax incentives may also provide opportunities for firms to strategically manage their tax positions. Previous studies suggest that tax incentives may influence how companies manage their tax positions and effective tax rates (Rohani et al., 2023; Mohd Ali et al., 2024). While tax incentives are introduced to encourage investment and economic growth, some firms may strategically maximise available tax reliefs and deductions to reduce overall tax liabilities. Nevertheless, tax incentives remain legal and government-approved mechanisms provided that firms comply with the relevant regulatory requirements and reporting obligations.

Many firms comply fully with tax regulations and utilise incentives within the intended legal framework. In Malaysia, tax incentives are subject to application procedures, approval requirements, documentation standards, and monitoring mechanisms administered by agencies such as the Inland

Revenue Board of Malaysia (IRBM) and the Malaysian Investment Development Authority (MIDA). Mohd Ali et al. (2024) noted that these compliance requirements may actually reduce the likelihood of aggressive tax avoidance among tax incentive recipients. This situation highlights an important governance challenge. While tax incentives are essential for attracting investment and supporting economic development, policymakers must also ensure that these incentives are not excessively exploited for aggressive tax reduction purposes. Effective governance and monitoring are therefore important to maintain fairness and public trust in the taxation system. Rohani et al. (2023) cautioned that poorly governed tax incentive systems may contribute to revenue leakages and weaken tax fairness. Similarly, the OECD (2013) emphasised that excessive tax avoidance could undermine public confidence in the integrity and sustainability of tax systems.

Conclusion

Ultimately, tax incentives remain an important component of Malaysia's fiscal and economic policy framework. However, the long-term effectiveness depends not only on attracting investment but also on promoting responsible corporate tax behaviour. Strong governance, transparency, and continuous monitoring are therefore necessary to ensure that tax incentives genuinely support national development objectives while maintaining fairness, accountability, and public trust within Malaysia's taxation system. In short, tax incentives should not merely reduce corporate tax burdens; they should create real economic value for Malaysia.

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THE ROLE OF E-INVOICING ADOPTION IN DRIVING DIGITAL TRANSFORMATION AMONG SMES IN MALAYSIA

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Introduction

Digital transformation is now a fundamental requirement for business survival, fuelled by rapid technological growth and global competition. For Malaysian Small Medium Enterprises (SMEs), moving toward digital operations is no longer optional, it is a necessity for staying competitive and sustainable in the modern market. E-invoicing has emerged as a primary tool in this shift, acting as a digital system for creating, sending, and validating invoices to allow for automated and seamless financial transactions. Unlike older paper-based methods, this technology improves operational efficiency, minimizes human error, and enables real-time data processing.

Recognizing these benefits, the Malaysian government is implementing a phased rollout of e-invoicing starting in 2024 to modernize tax administration and boost compliance. However, many SMEs struggle with this transition due to significant barriers, including a lack of digital skills, limited financial resources, and insufficient technological infrastructure. These obstacles lead to a critical debate, whether e-invoicing will serve as a true catalyst for digital transformation or simply become another administrative burden for compliance.

E-Invoicing and Digital Transformation

Malaysia is introducing e-invoicing in stages to give businesses plenty of time to adapt. The journey began in August 2024 for the largest companies, with smaller businesses joining the wave throughout 2025 based on their revenue. By January 2026, nearly all SMEs will be part of this digital shift, however the smallest micro-businesses (earning RM1 million or less) are currently exempt from the requirement. (Inland Revenue Board of Malaysia, 2025)

E-invoicing is widely recognized as a critical element of digital transformation, particularly within financial and accounting systems. It enables the automation of invoicing processes, reduces the need for manual intervention, and significantly improves data accuracy (Tiwari et al., 2023). Furthermore, e-invoicing allows for better integration with enterprise systems, helping organizations streamline their operations and enhance decision-making.

However, true digital transformation involves more than just adopting individual technologies. According to Al-Hattami and Almaqtari (2023), transformation requires integrating digital tools into the very processes, structures, and strategies of an organization. Similarly, Shahzad et al. (2023) argue that success depends on organizational change, including strong leadership commitment and the development of new capabilities. From this perspective, e-invoicing should be viewed as an enabler, or an entry point rather than a complete solution on its own. Its ultimate effectiveness depends on how well it is integrated into the broader digital strategies of SMEs.

Determinants of E-Invoicing Adoption among SMEs

The adoption of e-invoicing among SMEs is influenced by multiple factors, often explained through the **Technology–Organization–Environment (TOE) framework**.

- **Technological Factors:** Adoption decisions are significantly affected by how useful a system is perceived to be, how well it fits with current systems, and its level of complexity (Tiwari et al., 2023). SMEs are more likely to use e-invoicing if it aligns with their existing setup and is easy to use.

- **Organizational Factors:** Key influences include the size of the firm, the level of support from management, and how ready employees are for the change (Ng et al., 2023). Companies with committed leaders and digitally skilled staff are better prepared to adopt new tech.

- **Environmental Factors:** External pressures like government rules and competition are major drivers, especially in Malaysia. While mandatory requirements force adoption (San et al., 2025), there is a risk that SMEs will only do the bare minimum for compliance instead of using the technology to gain strategic advantages.

Challenges in E-Invoicing Adoption

Despite its benefits, SMEs encounter several hurdles when adopting e-invoicing. Financial limitations are a primary barrier, as many small firms lack the budget for system setup and ongoing maintenance (Arshad et al., 2024). Additionally, A shortage of digital skills and insufficient training also prevent employees from using these systems effectively (Ng et al., 2023).

Technological challenges, including system integration and data security concerns, further complicate adoption (San et al., 2025). SMEs may struggle to integrate e-invoicing with existing accounting systems, leading to operational disruptions.

These challenges highlight a broader issue of digital inequality among SMEs. While larger or more technologically advanced SMEs can adapt more easily, smaller enterprises risk being left behind, raising concerns about inclusivity in digital transformation initiatives.

Benefits and Strategic Implications

E-invoicing provides major advantages, such as better operational efficiency, fewer mistakes, quicker transactions, and increased financial transparency (Tiwari et al., 2023). It also helps businesses follow government regulations and lowers the risk of fraud.

Beyond daily operations, e-invoicing allows SMEs to join digital ecosystems by connecting them more easily with suppliers, customers, and tax officials. Digital accounting systems further boost performance by allowing managers to make decisions based on accurate data (Al-Hattami & Almaqtari, 2023).

However, achieving these benefits depends on an SME's ability to build supporting skills. True digital transformation involves more than just buying technology; it requires matching that technology with business goals and developing the right team capabilities (Shahzad et al., 2023). Without these extra steps, the positive impact of e-invoicing may be very limited.

Conclusion

The shift toward e-invoicing is a major milestone in the journey to modernize Malaysia's SME sector. While government mandates are essential for getting things moving, there is a real danger that a purely regulatory approach will lead to "superficial compliance," where businesses simply tick a box without improving how they work. To truly unlock its value, e-invoicing should be treated as a strategic spark—a catalyst that encourages small businesses to upgrade their digital skills, connect their financial software to the cloud, and align their technology with their overall goals. Real success depends on a balanced mix of organizational readiness and meaningful support, such as financial help and training programs, to ensure no business is left behind. By viewing e-invoicing as an enabler rather than just a rule to follow, SMEs can achieve a more transparent and competitive future. Moving forward, it will be vital to study how different industries are handling this change to ensure the path to digital transformation remains inclusive for everyone.

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LABELLING MANAGEMENT THROUGH 5S PRACTICES IN MOSQUE ADMINISTRATIVE OPERATIONS

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Abstract

This article discusses the implementation of labelling management through 5S practices in mosque administrative operations. The implementation of 5S practices helps improve cleanliness, organization, efficiency, and systematic management within the mosque environment. Through proper tagging and labelling systems, mosque equipment, donated items, and facilities can be managed more effectively. In addition, 5S practices also encourage teamwork, discipline, and responsibility among participants involved in community service activities. Overall, the implementation of labelling management through 5S practices contributes positively towards creating a cleaner, more organized, and more efficient mosque administrative environment.

Introduction

The 5S concept is widely recognized as an effective management practice used to improve workplace organization and efficiency. The concept consists of Seiri (Sort), Seiton (Set in Order), Seiso (Shine), Seiketsu (Standardize), and Shitsuke (Sustain). These practices are commonly implemented in offices, organizations, and institutions to create a cleaner, safer, and more systematic working environment. In mosque administrative operations, proper organization and systematic management are important to ensure that facilities, equipment, and donated items are well managed. A mosque environment that is clean and organized can provide comfort to the community while also improving operational efficiency. Therefore, the implementation of labelling and tagging systems through 5S practices is highly relevant in mosque management.

Labelling Management Through 5S Practices

Labelling management refers to the process of identifying and organizing items systematically using labels or tags. Through proper labelling systems, mosque administrators can easily identify the location and usage of equipment, cleaning tools, documents, and donated items. This practice reduces confusion, saves time, and improves accessibility. Previous studies stated that systematic visual management improves workplace organization and operational efficiency (Wan Ali et al. ,2025) In addition, tagging systems also help improve inventory management within mosque administrative operations. Equipment and facilities can be arranged according to categories and usage, making monitoring and maintenance activities more efficient. For example, cleaning equipment, electrical items, and donated materials can be labelled clearly to ensure they are stored in the correct location. Research by (Gupta & Jain, 2015) found that organizations implementing 5S practices experienced nearly 10% improvement in operational efficiency through systematic organization and tagging systems.

The implementation of 5S practices also contributes to cleanliness and safety within the mosque environment. Through regular cleaning and organizing activities, unnecessary items can be removed while important equipment is arranged properly. This creates a more comfortable and conducive environment for mosque visitors and the local community. According to Rahman et al (2010), workplace cleanliness and proper arrangement contribute significantly to user satisfaction and safety management. Furthermore, 5S practices encourage teamwork, discipline, and responsibility among individuals involved in mosque activities. Community service programmes involving gotong-royong activities can strengthen cooperation while promoting awareness regarding the importance of cleanliness and systematic management. Fiorella and Mayer (2016) highlighted that collaborative and organized activities improve teamwork and community engagement.

Impact on Administrative Operations

The implementation of labelling management through 5S practices gives a positive impact on mosque administrative operations. Through systematic tagging and labelling systems, mosque administrators can manage equipment, facilities, and documents more efficiently. Items can be identified quickly, reducing delays and confusion during daily operations. Studies showed that systematic workplace management can reduce searching time by up to 30% in organizational settings (Kobayashi et al, 2008). In addition, mosque users and visitors also benefit from a cleaner, safer, and more organized environment. Facilities such as prayer areas, shoe racks, cleaning equipment, storage areas, and donated items can be identified more easily through proper labels and tagging systems. This improves accessibility and convenience for mosque visitors. Rahman et al (2010) explained that organized public facilities improve visitor comfort and operational effectiveness. Furthermore, 5S practices help improve workflow management by ensuring that all equipment and materials are arranged systematically. This contributes to better time management and increases operational efficiency within the mosque environment. Administrative tasks can also be carried out more smoothly because important items are easier to access and monitor. (Gupta & Jain, 2015) also reported that systematic management practices improve productivity and workflow consistency. Proper labelling management also supports inventory control and maintenance activities. Tagged items can be monitored more effectively, helping mosque administrators maintain cleanliness, safety, and organization in all operational areas. Previous studies found that proper visual management systems reduce operational errors and improve monitoring activities (Wan Ali et al., 2025)

Mosque Visitors' Insights After the Implementation of Labelling Management

After the implementation of labelling and tagging systems, visitors experienced a more organized and user-friendly environment. Visitors found it easier to identify important facilities such as prayer areas, shoe racks, storage spaces, cleaning equipment, and donation items through the clear labels provided. According to Rahman et al (2010), clear labelling systems improve accessibility and user convenience in community facilities. In addition, visitors stated that the mosque environment appeared cleaner, more systematic, and more comfortable after the implementation of 5S practices. The organized arrangement of facilities reduced confusion and improved accessibility for visitors, especially during crowded activities and programmes. Studies by (Gupta & Jain, 2015) found that 5S implementation improves cleanliness, organization, and workplace satisfaction. Some visitors also appreciated the systematic arrangement because it helped save time when searching for items or facilities within the mosque compound. The implementation of labelling management indirectly improved visitors' overall experience and satisfaction towards the mosque environment. Wan Ali et al. (2025) highlighted that systematic environments improve user experience and operational efficiency.

Benefits of 5S in Mosque Administrative Operations

The implementation of 5S practices provides several long-term benefits to mosque administrative operations. First, it helps maintain consistency in cleanliness and organization within the mosque environment. Second, it promotes a more professional and systematic management culture among mosque administrators and volunteers. Research by Rahman et al (2010) stated that systematic workplace practices improve organizational sustainability and professionalism. Besides that, 5S practices also encourage discipline, teamwork, and responsibility during mosque management activities. A systematic working environment can improve productivity and reduce unnecessary workload caused by poor organization. Previous studies reported that organized workplaces improve productivity by reducing wasted time and operational inefficiencies (Gupta & Jain, 2015). Overall, the implementation of 5S practices contributes towards creating a more efficient, organized, and sustainable administrative environment for mosque management. Continuous implementation of systematic management practices can improve the overall quality of services provided to mosque visitors and the local community.

Conclusion

In conclusion, the implementation of labelling management through 5S practices contributes positively towards improving mosque administrative operations. Proper tagging and labelling systems help create a cleaner, more systematic, and more efficient environment. In addition, 5S practices also encourage discipline, teamwork, and responsibility among individuals involved in mosque management activities. Therefore, mosque administrations should continue promoting 5S practices to ensure better organization and operational efficiency.

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POLYTECHNIC STUDENTS' ACCEPTANCE TOWARDS RINTAS AND SUPERWRITE TECHNIQUES FOR SECRETARIAL NOTE-TAKING SKILLS

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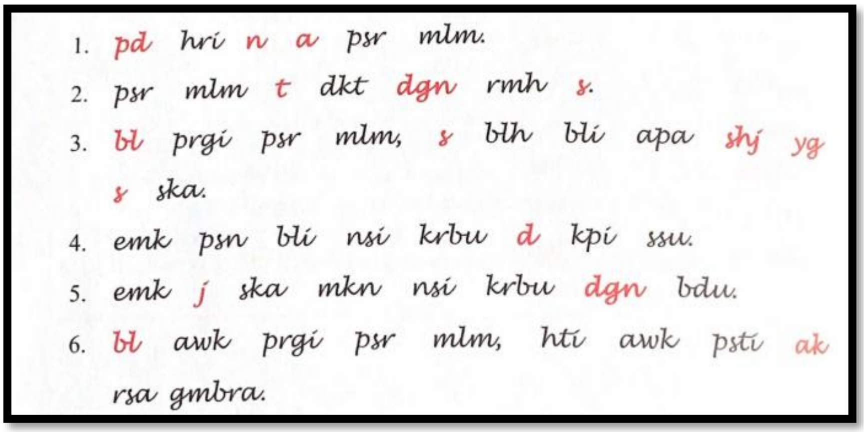
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Abstract

This study examines polytechnic students' acceptance of RINTAS and SuperWrite techniques in enhancing secretarial note-taking skills. A survey was conducted among students who participated in the "Unlocking Advanced Secretarial Note-Taking Skills Programme." The findings revealed that students positively accepted both techniques as they improved note-taking speed, organization, and understanding. Students also found the techniques easy to learn and beneficial in strengthening their secretarial competencies. Overall, RINTAS and SuperWrite contributed positively to students' learning experiences and enhanced their note-taking performance.

Introduction

Note-taking is an essential skill for students in secretarial studies as it enables them to record information accurately, clearly, and systematically. In professional settings, secretaries are expected to take notes efficiently during meetings, discussions, and presentations. However, many students still encounter challenges in recording information effectively using conventional note-taking methods. To enhance students' competencies, RINTAS and SuperWrite techniques were introduced through the Secretarial Note-Taking Skills Programme. The programme aimed to expose students to modern and structured note-taking approaches that could improve speed, organization, and understanding during note-taking activities.

Students’ Acceptance Towards RINTAS and SuperWrite

The findings indicated that students positively accepted the implementation of RINTAS and SuperWrite techniques in secretarial note-taking activities. Based on the survey, 87% of respondents agreed that both techniques were effective in improving their note-taking skills, while 82% stated that the techniques were easy to understand and apply during learning sessions. Students also mentioned that the workshops and practical activities increased their confidence in recording important information during lectures and discussions. This demonstrates that innovative note-taking approaches can enhance students’ motivation and interest in developing secretarial skills. Jansen et al (2017) highlighted that effective note-taking skills play an important role in improving students’ academic performance and learning engagement. Similarly, Kiewra (1989) explained that systematic note-taking methods help students organize and retain information more effectively.

Improvement in Note-Taking Skills

The survey findings revealed that 90% of respondents believed that RINTAS helped them organize notes more systematically and clearly, while 85% agreed that SuperWrite improved their writing speed and efficiency during note-taking activities. Students stated that both techniques enabled them to identify important points faster and reduce confusion when reviewing notes. The findings further showed that students experienced noticeable improvements in their note-taking performance after learning the techniques. Students mentioned that the techniques helped them process information more effectively and improved the clarity of their notes. This finding supports the study by Mueller and Oppenheimer (2014), who found that structured note-taking promotes better understanding and information processing among students. In addition, Kobayashi (2005) stated that effective note-taking strategies contribute positively to students’ comprehension and memory retention. The programme report also highlighted improvements in students’ organization, confidence, and communication skills throughout the activities conducted.

Learning Experience and Skill Development

The programme provided positive and meaningful learning experiences for students. Approximately 88% of respondents agreed that the programme activities were interactive, practical, and beneficial for their academic development. Students enjoyed participating in workshops, quizzes, and hands-on activities conducted throughout the programme. Besides enhancing note-taking skills, the programme also helped students improve their communication, teamwork, and professionalism through active participation in group activities and discussions. This finding is supported by Fiorella and Mayer (2016), who emphasized that active learning strategies encourage deeper understanding and improve students’ engagement during learning activities. Similarly, Munna & Kalam (2021) found that interactive learning approaches increase students' motivation, participation, and overall learning effectiveness in higher education.

Challenges Faced by Students

Despite the positive feedback, several students faced difficulties during the early stage of learning the techniques. Approximately 25% of respondents stated that they required more time and practice to fully understand the abbreviations and writing methods used in RINTAS and SuperWrite. According to the final report prepared by final semester students (DSK5A), "many individuals in secretarial roles still rely on basic note-taking techniques, which may limit their ability to capture complex information clearly and professionally." This explains why some students initially struggled to adapt to the more advanced note-taking approaches introduced during the programme. However, continuous practice sessions and guidance from facilitators helped students adapt to the techniques more effectively. Over time, most students became more comfortable and confident in applying the methods during note-taking activities.

Conclusion

Overall, the findings indicate that students positively accepted RINTAS and SuperWrite techniques in enhancing secretarial note-taking skills. The techniques improved students' writing speed, note organization, and understanding during learning activities. Therefore, the implementation of innovative note-taking techniques should be continuously promoted to strengthen students' competencies and prepare them for professional secretarial environments.

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TREND KEUSAHAWANAN DIGITAL DALAM KALANGAN GENERASI MUDA

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Abstrak

Keusahawanan digital semakin berkembang pesat dan menjadi peluang utama kepada generasi muda melalui penggunaan media sosial dan e-dagang. Ia menawarkan kelebihan seperti kos permulaan rendah, fleksibiliti, dan capaian pasaran global. Namun, bidang ini turut berdepan cabaran seperti persaingan sengit, kekurangan kemahiran digital, dan risiko keselamatan siber. Kejayaan bergantung kepada strategi pemasaran digital yang berkesan, penggunaan data secara optimum, serta sikap inovatif dan proaktif. Secara keseluruhannya, keusahawanan digital berpotensi tinggi dalam menjana pendapatan, namun memerlukan literasi digital dan keupayaan adaptasi yang baik.

Pengenalan

Perkembangan teknologi digital telah mengubah landskap keusahawanan kepada platform yang lebih mudah, pantas dan berkos rendah (Nambisan, 2017). Generasi muda kini lebih cenderung untuk menceburi bidang ini kerana memiliki kemahiran teknologi yang tinggi. Platform seperti Instagram dan TikTok turut memainkan peranan penting dalam pemasaran melalui kandungan kreatif, sekali gus meningkatkan daya saing perniagaan (Dwivedi et al., 2021). Selain itu, pertumbuhan e-dagang didorong oleh kemudahan, kepantasan, dan akses kepada pelbagai produk global (OECD, 2020).

Trend Semasa Keusahawanan Digital

Perkembangan platform digital telah mengubah trend keusahawanan dengan penggunaan e-dagang dan media sosial seperti TikTok, Instagram dan Shopee sebagai medium utama pemasaran yang lebih meluas. Model perniagaan seperti dropshipping dan affiliate marketing semakin popular kerana kos permulaan yang rendah serta mudah dimulakan. Selain itu, kandungan video pendek seperti TikTok dan Instagram Reels berkesan dalam menarik perhatian serta meningkatkan penglibatan pengguna (Dwivedi et al., 2021). Kolaborasi dengan influencer juga turut membantu meningkatkan kesedaran jenama dan mempengaruhi keputusan pembelian pengguna.

Kelebihan Keusahawanan Digital

Keusahawanan digital menawarkan pelbagai kelebihan kepada usahawan. Menurut Nambisan (2017), perniagaan boleh dimulakan dengan sumber yang minimum melalui platform e-dagang dan media sosial. Selain itu, ia memberikan fleksibiliti dari segi masa dan lokasi tanpa memerlukan premis fizikal (OECD, 2020), serta mengurangkan kos operasi seperti pemasaran, sewaan dan tenaga kerja. Interaksi dalam talian juga membolehkan maklum balas pelanggan secara masa nyata bagi tujuan penambahbaikan produk (Dwivedi et al., 2021). Di samping itu, model seperti affiliate marketing dan automasi pemasaran berpotensi menjana pendapatan pasif.

Cabaran yang Dihadapi

Keusahawanan digital berdepan beberapa cabaran utama. Menurut Omar et al. (2024), usahawan PKS sering menghadapi kekurangan kemahiran digital, kekangan kewangan serta kesukaran dalam mengadaptasi teknologi baharu. Selain itu, persaingan global yang semakin sengit menyukarkan usahawan baharu untuk membina jenama yang kukuh (Kreiterling, 2023). Perubahan teknologi yang pantas turut memerlukan usahawan untuk sentiasa mengikuti perkembangan semasa. Di samping itu, isu kepercayaan pelanggan dan keselamatan siber seperti penipuan, kebocoran data dan serangan siber boleh menjejaskan reputasi serta keyakinan pelanggan (Omar et al., 2024).

Strategi Kejayaan

Strategi kejayaan dalam keusahawanan digital bergantung kepada beberapa faktor utama. Menurut Chaffey dan Ellis-Chadwick (2022), pemasaran digital melalui media sosial, enjin carian dan kandungan kreatif adalah penting untuk meningkatkan keterlihatan jenama serta menarik pelanggan. Penggunaan data analitik membantu usahawan memahami tingkah laku pelanggan dan membuat keputusan yang lebih tepat. Selain itu, sikap proaktif, inovatif dan kesediaan untuk terus belajar membolehkan usahawan kekal berdaya saing (Hisrich et al., 2020). Akhir sekali, perkhidmatan pelanggan yang berkualiti dapat meningkatkan kepuasan, kesetiaan dan reputasi perniagaan (Kotler et al., 2021).

Kesimpulan

Keusahawanan digital merupakan pemacu utama ekonomi moden yang memberi peluang kepada generasi muda untuk menjana pendapatan dan membina kerjaya dengan modal yang rendah melalui akses pasaran global (Autio et al., 2018). Penglibatan golongan muda dalam bidang ini boleh diperkukuh melalui pendidikan keusahawanan yang sistematik serta sokongan kerajaan dan institusi berkaitan. Selain itu, ekonomi digital turut mewujudkan peluang pekerjaan baharu dalam e-dagang, pemasaran digital dan ekonomi gig yang lebih fleksibel . Namun, kejayaan dalam bidang ini bergantung kepada tahap literasi digital dan keupayaan adaptasi dalam menghadapi perubahan teknologi (OECD, 2019).

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IS MALAYSIA READY FOR A CARBON TAX?

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Introduction

Climate change and environmental sustainability have become major global concerns in recent years. Around the world, governments are introducing various environmental policies to reduce greenhouse gas emissions and encourage sustainable business practices. Among the policies instruments receiving growing attention is carbon taxation which aims to reduce carbon emission by placing financial cost on activities that contribute to environmental pollution. Carbon taxes are considered an effective environmental policy tool because they place a financial cost on carbon emissions, thereby encouraging industries and consumers to reduce greenhouse gas emissions (Timilsina, 2022).

In Malaysia, discussions regarding carbon taxation have become increasingly relevant in recent years, particularly as sustainability issues gain greater attention at both national and international levels. The Twelfth Malaysia Plan (2021) emphasizes green growth, climate resilience, and sustainable resource management as important national priorities. In line with these objectives, the Malaysian government announced plans to introduce a carbon tax beginning in 2026, initially targeting high-emission industries such as iron, steel, and energy production. This was framed as a step toward achieving carbon neutrality by 2050 and aligning with global decarbonization trends. Investors, multinational companies, and international markets are increasingly paying attention to how businesses manage carbon emissions and environmental impacts as part of sustainable business practices (Grant Thornton, n.d.).

Although carbon taxation offers potential long-term benefits, its implementation in Malaysia is not without challenges. Concerns remain regarding the readiness of local industries, especially small and medium enterprises (SMEs), the impact on living costs, public acceptance, and the country's ability to manage carbon reporting and compliance effectively. Considering these concerns, the discussion focuses on Malaysia's readiness for carbon tax implementation by highlighting the economic, social, and institutional challenges associated with the policy, together with the government's current policy direction.

Carbon Tax and Sustainable Economic Development

Carbon taxation is seen as a strategy to promote sustainable economic development while reducing environmental damage. By placing a price on carbon emissions, governments aim to encourage businesses and consumers to make more environmentally responsible decisions. Studies have shown that carbon pricing policies can contribute significantly to reducing greenhouse gas emissions over time. Kohlscheen et al. (2024) found that carbon pricing mechanisms are generally effective in lowering carbon dioxide emissions, particularly when supported by complementary environmental policies and regulatory enforcement.

Beyond environmental benefits, carbon taxation may also encourage innovation and accelerate the development of renewable energy industries. At the same time, transitioning towards a low-carbon economy will require substantial adjustments across industries. Businesses may need to invest in cleaner technologies, improve operational efficiency, and strengthen sustainability reporting practices. While larger corporations may be better prepared for such changes, smaller businesses could face greater difficulties adapting to the transition.

Challenges for Malaysia's - New Carbon Tax

Financial Pressure on SMEs

One of the main concerns surrounding carbon tax implementation in Malaysia involves its impact on small medium enterprises (SMEs). SMEs contribute significantly to employment and business activity. Many SMEs already operate with limited financial resources and narrow profit margins, making it difficult to absorb additional operational expenses or invest in environmentally sustainable technologies and systems. Although the tax is expected to focus initially on major carbon-emitting industries, rising energy, transportation, and raw material costs are likely to indirectly affect smaller businesses through supply chains. Furthermore, the transition toward greener business practices may require technical expertise and financial capability that many SMEs currently lack. Therefore, government support through financial incentives, tax relief, grants, and phased implementation strategies will be essential to help SMEs adapt to carbon taxation while promoting sustainable business transformation (Nair, 2025).

Rising Living Costs and Social Concerns

Carbon taxation in Malaysia may increase household living costs by raising the prices of electricity, transportation, goods, and services as businesses transfer higher operating costs to consumers. This issue is particularly concerning for lower-income households, which are more vulnerable to inflation and financial pressure. Studies by Nguyen and Ko (2024) suggest that carbon pricing policies may disproportionately burden lower-income households if sufficient support mechanism are not introduced. Similarly, Fried et al. 2024 argued that the carbon taxation may contribute to welfare inequality when the financial burden is shared unevenly across society. A possible approach is for the government to reinvest carbon tax revenue into social support initiatives, public transportation improvements, or renewable energy programs that directly benefit the public. Such measures may help strengthen public trust while ensuring that environmental policies remain socially inclusive.

Public Awareness and Acceptance

Public understanding and acceptance are essential for the successful implementation of carbon taxation policies. Research by Muhammad et al. (2023) found that people are more likely to support carbon taxes when they recognize the seriousness of climate change and believe the policy can encourage industries to reduce environmental harm. The study also showed that individuals who are already concerned about environmental protection tend to be more willing to accept additional environmental costs. In Malaysia, public awareness of carbon taxation and sustainability issues is still developing, and many people may not fully understand the purpose or functioning of carbon pricing policies. Therefore, effective public education, transparent communication, and awareness campaigns by the government, educational institutions, industries, and media are important to improve public trust, reduce misconceptions, and strengthen acceptance of environmental taxation policies.

Institutional and Technological Readiness

Effective carbon tax implementation in Malaysia depends on reliable systems for measuring, monitoring, and reporting carbon emissions accurately. However, many companies are still developing their ESG reporting capabilities and continue to rely on manual systems and fragmented data management, creating challenges related to data consistency, transparency, and auditability. Emission measurement across supply chains is also difficult for industries with limited technological infrastructure and sustainability expertise. According to PwC Malaysia (2026), strong sustainability data systems are essential to support carbon tax compliance and improve accountability. Malaysia has nevertheless shown positive progress through initiatives such as the National Sustainability Reporting Framework (NSRF) and enhanced ESG disclosure requirements by Bursa Malaysia, which will require more listed companies to adopt climate-related disclosures aligned with international standards beginning in 2026. Despite these improvements, continued investment in technology, professional training, and institutional coordination remains necessary to ensure the long-term effectiveness of carbon taxation policies.

Current Policy Outlook

Although carbon taxation was introduced as a key initiative in Malaysia's 2025 Budget, the government has temporarily postponed its implementation due to economic uncertainty and geopolitical instability related to the West Asia conflict (Business Today Editorial, 2026). The decision reflects concerns over rising living costs, inflationary pressures, and the possible financial impact on businesses and households during a challenging economic period.

Despite the postponement, Malaysia remains committed to its sustainability goals by focusing toward building a robust National Carbon Market Policy. This include developing a centralized carbon registry and establishing mechanism for validating carbon credits (Business Today Editorial, 2026). Such efforts may help improve regulatory readiness while giving businesses additional time to strengthen sustainability reporting systems and prepare for future environmental regulations. The temporary delay may therefore provide an important transition period for industries and policymakers to address existing weaknesses before full carbon tax implementation takes place.

Conclusion

Implementing a carbon tax represents both a challenge and an opportunity for Malaysia. While the transition toward a low-carbon economy may create short-term economic adjustments, it also offers long-term benefits such as improved environmental sustainability, stronger global competitiveness, and increased green investment opportunities. Malaysia's readiness for a carbon tax will ultimately depend on effective policymaking, industry collaboration, and continuous efforts to strengthen sustainability awareness and governance. If implemented carefully, carbon taxation could become an important catalyst for Malaysia's sustainable economic future.

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THE ART OF SLOW LIVING IS MORE THAN A GRADE

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In modern world nowadays, people often overlook on the importance on having a balance lifestyle. The art of slow living is a part of balance lifestyle since it is a fascinating subject that touches various aspects of human life as well. Even though students in primary, secondary even in universities level also trapped in a fast world.

According to Aya (2023), slow living is a lifestyle approach that emphasizes simplicity, mindfulness, and a slower pace of life. It is about living in the present, appreciating the small things in life, and relishing each moment. Living slowly inspires us to take a step back from the hectic pace of contemporary life and concentrate on what really counts.

A student's life is frequently idealized as a never-ending struggle, complete with caffeine-fuelled all nights, back-to-back lectures, and the ongoing push to bolster a membership in every club and society. It is can be accepted that "busyness" is synonymous with "success"? the truth, never-ending hurry frequently results in burnout and a loss of enthusiasm for learning. It proved by National Health and Morbidity Survey (NHMS) on 2019, 9.5% children suffer with mental health and 15.1% at the teenagers (Mat & Ahmad, 2024).

In a students' life; yes, the deadlines and grade are paramount but we are not a "degree-seeking robot." Living slowly inspires you to move from survival to real development. Instead of just remembering data to pass a test, you may genuinely absorb knowledge by slowing down and reclaiming your mental space. It supports you in keeping your composure under pressure. By practising slow living, it is about doing things better by being present and deliberate, not about doing less for the sake of being lazy.

Student is student, not a robot. Then, don't need to drop out or move to the countryside to find peace nut create a "slow" mindset right in the middle of student life as suggested by Min (2022) like below:

1. Reconnecting body and mind together. Before start a class, create a space to guide ourselves listen to our bodies and practice coming to their senses. Do notice the way our bodies' feeling, the way to sit, breath and our body posture has a huge influence on calming the minds and improve our focus.

2. Develop a well-being, gratitude and compassion. It means put our mental health first, enjoying little victories every day, and treating our self with kindness when you fail. This way of thinking helps students stay resilient and grounded by shifting the emphasis from academic stress to personal development.

3. Learning across contexts by focusing on quality not a quantity. Try two hours of deep work learning instead of spending eight hours in the library while preoccupied by Instagram, TikTok and other digital portals. Do disable our alerts and give full attention to a single activity. It will support to be more comprehend and complete more quickly. Its same 30 minutes before sleep, create a digital boundary before bed to ensure our brain actually rests.

It was discussed in (Life, 2025) that the power of art slow living is most important in students' life in order to improve productivity and creativity. When one works on fewer tasks simultaneously, they can do better work more efficiently while haste actions caused mistakes and decreases productivity. While working mindfully and deliberately able to improve performance.

Besides that, slow living promotes self-discovery, emotional resilience, and inner calm, whereas a busy lifestyle frequently results in burnout and emotional tiredness. It lessens the pressure to constantly excel and lessens emotions of inadequacy by promoting relaxation and mental health guarantee.

For sure slow living able to create a life satisfaction. Living in accordance with one's personal principles gives one's life meaning and fulfilment. In addition to reducing stress from comparison and rivalry, slow living enables people to revaluate our priorities and concentrate on what makes we happy and fulfilled. This method fosters internal contentment and increases pleasure and life satisfaction.

For the conclusion, school or university is a marathon, not a sprint. Slow living reminds us that our worth is not defined solely by our only grade but its defined as whole of our body and life. Ironically, slowing down can help us achieve more of what we truly want. We may develop more meaningful connections, make more deliberate choices, and live happier lives by concentrating our time and efforts on the things that really matter. Slow living is more than simply a way of life in an acceleration-obsessed world; it's a silent protest and possibly the most progressive way to live.

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FAIRNESS AT THE FOREFRONT: EMOTIONAL IMPACT OF PERFORMANCE APPRAISALS THROUGH ORGANIZATIONAL JUSTICE THEORY

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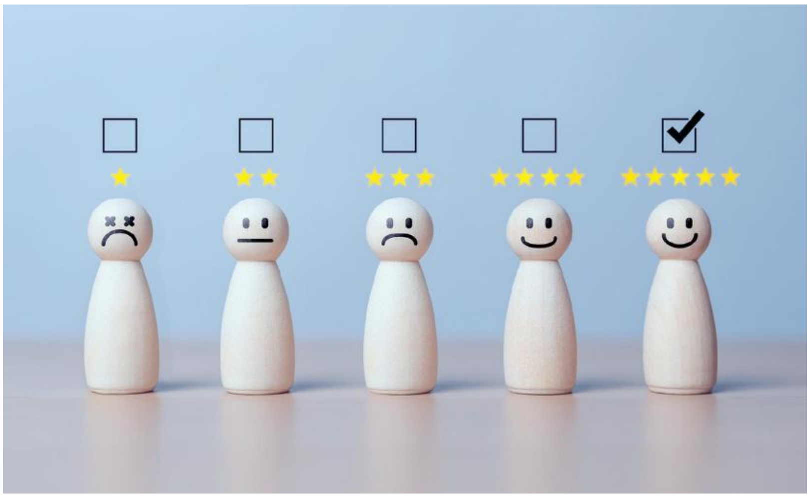
The annual performance appraisal is assessment where superiors and employees discuss job performance, accomplishments, and goals, often influencing compensation and career development (Pramod et al., 2025). While organizations see it as a clinical exercise in data collection and talent mapping, employees experience it as a profound commentary on their personal values and professional identity. This intersection of "corporate logic" and "human emotion" is where organizational stability is either strengthened or fractured.

An employee's review is more than just a number; it's a chance to see how their efforts, late hours, and sacrifices have been recognised. If that managerial mirror gives off an inaccurate image, it can set off a chain reaction of negative emotions, from short-term defensiveness and rage to more permanent disengagement and quiet quitting.

Organizational Justice Theory suggests that the emotional fallout of an appraisal is not determined by the rating itself, but by the perceived fairness of the system (Greenberg, 1993). By understanding how employees process fairness, leadership can transform the appraisal from a source of anxiety into a catalyst for psychological safety and high performance.



The Three Pillars of Organizational Justice

Understanding the emotional health of an organization requires an in depth study of three different dimensions of justice. When this pillars is strong, it acts as an emotional buffer; when it is weak, the appraisal process becomes a liability.

i. Distributive Justice: The Fairness of the "Slice"

Distributive justice is the evaluation of employees by their outcome. The "slice of the pie" they received in comparison to the effort they put in. Distributive justice evaluates employees' perceptions of fairness regarding outcomes like compensation and promotions relative to their contributions (Devana & Mulyana, 2025). This is a comparative process. Employees look at their colleagues and ask, "Did my reward match my contribution compared to others?"

- **Emotional Impact:** When an employee perceives a “distributive imbalance,” they experience the stress of injustice. This manifests as a deep sense of resentment or “being cheated.” Emotionally, employees shift from an “us” mindset to an “I versus them” mindset, leading to a reduction in calculated effort to match the perceived unfairness of rewards.
- **Organizational Strategy:** Superiors must shift from “gut” rewards. Results should be linked to clear Key Performance Indicators (KPIs) that are agreed upon at the beginning of the cycle. Transparency in how bonuses and ratings are calculated is the only way to meet the requirements of distributive justice.

ii. Procedural Justice: The Integrity of the "Recipe"

Procedural justice is often more important than the outcome itself. It refers to the fairness of the rules used to determine the outcome. An employee can emotionally process a “Needs Improvement” assessment if they believe the process used to reach it is unbiased, consistent, and accurate.

- **Emotional Impact:** High procedural justice builds institutional trust. It makes employees feel that they are playing the fair game. Conversely, if the process is perceived as biased, perhaps because superiors had a choice or used outdated data employees feel powerless and cynical. This procedural betrayal is a major driver of top talent turnover (Won et al., 2023).
- **Organizational Strategy:** Make sure the “Voice Effect” is present. This means allowing employees to contribute their own self-assessments and provide objections to

feedback. When an employee feels they have a voice in the process, their emotional acceptance of the final outcome increases significantly (Okey, 2025).

iii. Interactional Justice: The Human Connection

Interactional justice is the emotional glue of the appraisal. It focuses on the interpersonal treatment the employee receives during the feedback session. It asks: "Was I treated with dignity, or was I just a number on a spreadsheet?" It is divided into two sub-categories. First, Informational Justice refers to how well explanations are communicated to employees, particularly whether the information provided is honest, clear, and sufficiently detailed in explaining why certain decisions were made. Second, Interpersonal justice focuses on the quality of treatment employees receive, emphasizing the importance of being treated with dignity, politeness, and respect during interactions.

- **Emotional Impact:** This pillar reaches the "Self Level." If interactional justice is low, for example, if superiors ignore or give vague "sandwich" feedback, employees feel dehumanized. This triggers a "threat response" in the brain, leading to lingering shame or hostility in the workplace.
- **Organizational Strategy:** Appraisals should be dialogues, not monologues. Superiors must be trained in active listening and radical empathy. According to Westover (2025), implementing active listening can lead to improved employee satisfaction and retention, as it signals that their well-being is valued. Delivering difficult news with high interactional justice (honesty and respect) strengthens the superiors-employee bond.

Conclusion

The relationship between performance appraisals and employee emotions is not a mystery; it is a direct reflection of how well an organization upholds the principles of fairness. Appraisals need to be seen as relational contracts rather than one-way report cards. When an organization prioritizes distributive justice, it recognizes the contributions of employees. If the organization ensures Procedural Justice, it respects the needs of employees for a fair system. Next, when the organization implements Interactional Justice, it respects their humanity. Organizations that ignore this pillar will find themselves stuck in a cycle of "appraisal fear," where each review season results in a decline in morale and a spike in resignations. However, by prioritizing fairness, leaders can ensure that the emotional impact of appraisals is one of renewed clarity, motivation, and commitment. Ultimately, the goal of appraisals is not simply to measure performance but also to inspire the people behind the performance to continue striving for excellence in an environment that truly sees them.

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THE FUTURE OF E-COMMERCE: OVERCOMING CHALLENGES AND UNLOCKING OPPORTUNITIES

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Introduction

In recent years, e-commerce has evolved from a niche sector to a major driver of the global economy. With millions of consumers shopping online every day and digital platforms rapidly advancing, businesses must adjust to stay competitive. However, achieving success in e-commerce is challenging. It involves selecting the appropriate platform, refining marketing tactics, and ensuring a smooth customer experience, all of which require strategic planning, ongoing learning, and flexibility.

An e-commerce business is an organization that engages in commercial transactions such as buying and selling products or services are all over the internet. Unlike traditional physical stores, e-commerce businesses mainly operate in the digital realm, leveraging websites, mobile applications, and various online platforms to manage their operations.

E-commerce businesses can operate in various forms, including:

1. Retail e-commerce

Retail e-commerce involves the direct online sale of products and services to consumers. In this model, businesses maintain their own digital platforms or websites where customers can browse, choose, and purchase items, usually with options for immediate or future delivery. Unlike online marketplaces that feature products from various sellers, retail e-commerce focuses on individual companies selling their own products directly to consumers, offering them greater control over branding, pricing, and the overall customer experience. Examples of retail e-commerce include platforms like Amazon, the Apple Store, and Zara (Rosário et al., 2021).

2. **Service-based E-commerce**

   Service-based e-commerce involves the online sale of services rather than tangible goods. In this model, businesses or individuals provide professional services, digital content, or subscription-based offerings directly to consumers through digital platforms. The growth of service-based e-commerce has been substantial, as industries ranging from entertainment and education to healthcare have increasingly adopted the convenience and accessibility of online service provision. Examples of service-based e-commerce include platforms like Netflix, Spotify, and Airbnb.

3. **Marketplaces**

   E-commerce marketplaces are digital platforms that allow multiple independent vendors to showcase and sell their products or services to consumers. Acting as intermediaries, these platforms streamline transactions between buyers and sellers (Moro-Visconti et al., 2023). Unlike conventional online stores managed by a single entity, marketplaces host various sellers, providing a diverse selection of products across different categories. Well-known examples include eBay, Etsy, Walmart, and Amazon.

4. **Subscription-based E-commerce**

   Subscription-based e-commerce is a revenue model where customers subscribe to receive products or services through recurring payments such as monthly, quarterly, or annually to access or receive a product or service. This approach is widely adopted across industries as it ensures a steady revenue stream for businesses while offering convenience and exclusive benefits to customers. Notable examples include Netflix and Spotify, which provide on-demand access to movies, TV shows, and music through a subscription fee.

Succeeding in e-commerce requires more than just a great product as it demands a deep understanding of digital platforms, strategic channel optimization, and the effective use of data and technology (Sulova et al., 2023). Whether you're an emerging entrepreneur aiming to establish a niche or an experienced business striving for expansion, mastering the complexities of e-commerce is essential for success (Wamba et al., 2022).

This guide will explore key strategies and insights to elevate your online business. From selecting the right platform and crafting a strong brand identity to leveraging social media, improving search engine visibility, and delivering exceptional customer service, we will reveal the essential elements of building a thriving e-commerce venture. By implementing effective strategies and staying ahead in the dynamic digital landscape, you can achieve sustainable growth and secure long-term success in a constantly evolving market.

Key Strategies To Success In Digital Business Platforms

Achieving success in digital business platforms requires a blend of technical expertise, customer insight, and strategic vision. Prioritizing user experience, utilizing data analytics, establishing a strong brand, and continuously refining strategies based on customer feedback can set you apart in a competitive market. By combining these elements with persistence, a commitment to long-term customer relationships, and a drive for innovation, you can build a thriving digital business (Purnomo et al., 2023).

Here are some key strategies to the dynamic world of e-commerce:

1. **Choose the Right Platform**
   Choosing the ideal e-commerce platform is a fundamental step in building a thriving online business. Your choice will influence everything from store design and inventory management to payment processing and customer interactions.

2. **Understand Your Target Market**
   Understanding your target market is a fundamental step in building a thriving e-commerce business. By understanding your customers' identities, needs, and online behaviours, you can develop targeted marketing strategies, refine product offerings, and enhance the overall customer experience to attract and retain the ideal audience.

3. **Focus on User Experience (UX)**
   Prioritizing User Experience (UX) is crucial for the success of any digital business. A well-optimized UX enhances customer satisfaction, drives conversions, and strengthens brand loyalty, while a poor experience can result in high bounce rates, lost sales, and negative feedback.

4. **Optimize Product Pages**
   Optimizing product pages is essential for maximizing conversions, enhancing customer satisfaction, and reducing bounce rates in an e-commerce store. A well-structured product page improves user experience and drives sales.

5. **Leverage SEO and Content Marketing**
   Effectively utilizing SEO (Search Engine Optimization) and content marketing can help your e-commerce business attract organic traffic, establish authority, and boost conversions. By optimizing your site for search engines and creating valuable content, you can align with both user intent and algorithm requirements, driving long-term growth.

6. **Utilize Social Media for Promotion**
   Harnessing social media for promotion is a cost-effective and impactful way to enhance brand visibility, engage with your audience, and drive sales for your e-commerce business. Social platforms provide direct access to potential customers, allowing you to showcase products and build relationships in an interactive way.

7. **Implement Effective Email Marketing**
   Implementing an effective email marketing strategy is a powerful way to build customer relationships, boost sales, and enhance brand loyalty. Email marketing provides a direct and personalized approach, increasing engagement and conversions.

Conclusion

Long-term success in e-commerce requires businesses to combine technology, customer experience, and data-driven strategies. Companies face challenges such as intense competition, high customer acquisition costs, cart abandonment, and supply chain issues. To stay competitive, businesses need strong branding, secure payment systems, efficient logistics, and continuous investment in technology and cybersecurity. Retaining customers is equally important through loyalty programs, personalized marketing, social media engagement, and after-sales support. The use of AI tools, automation, and chatbots can improve efficiency and enhance customer experience. By applying these strategies, e-commerce businesses can build customer trust, increase sales, and achieve sustainable growth in the digital marketplace.

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PRELIMINARY STUDY: THE NEEDS OF DBM20233 MATHEMATICS MODULES TO IMPROVE THE PERFORMANCE OF TRANSITIONING STUDENTS FROM COMMUNITY COLLEGE TO POLYTECHNIC

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Introduction

Mathematics is an important foundation in Technical and Vocational Education (TVET) because of its role in shaping high-level thinking skills such as logical reasoning, analysis and problem solving. Low math proficiency among students is a persistent issue in the TVET system. The lack of a mathematical foundation makes it difficult for students to understand advanced concepts and consequently affects their academic performance. The transition from Community College to Polytechnic shows a significant gap in terms of the level of learning difficulty. Students often have difficulty adapting to more challenging academic needs. In addition to cognitive factors, affective aspects such as self-efficacy, attitudes and concerns about mathematics will also affect student achievement. Therefore, an interventional and structured learning approach is needed to help this group of students. Therefore, a DBM20233

Mathematics Module based on the principles of constructivism and self-learning, which emphasizes active knowledge building and the use of a phased approach *(scaffolding)* in learning should be developed.

Constructivism Theory

The theory of constructivism emphasizes that students actively build knowledge through learning experiences. The concept of *the Zone of Proximal Development (ZPD)* shows that effective learning occurs through staged guidance and support. The theory of constructivism is based on the premise that knowledge is not passively transferred from lecturer to student, but rather is actively constructed by the student himself through the interpretation of experience and interaction with their environment (Bustomi et al., 2024). In contrast to the traditional lecturer-centric model, the constructivist paradigm places students as the main *agents of learning*. According to a study by Salsabila and Muqowim (2024), this process of knowledge construction occurs when students associate new information with their existing knowledge to form new knowledge.

ZPD is defined as the gap or distance between a student's actual level of development *(the ability to solve problems alone)* and the level of potential development *(the ability to solve problems under the guidance of an adult or collaborate with more skilled peers)* (Undiksha, 2020). Previous studies show that learning is most effective when the assignments given are within the scope of the student's ZPD. If the assignment is too simple (under ZPD), students will feel bored; while if the assignment is too difficult (beyond the upper limit of ZPD), students will experience frustration and lose motivation (Attarbawiy, 2022). To enable students to cross the ZPD gap, especially in mathematics learning, the concept of *scaffolding* or staged guidance was introduced. *Scaffolding* refers to temporary structural support provided by lecturers or more competent peers during the initial phase of learning (Adisam, 2025). This support can take the form of prompts, encouragement, breaking complex tasks into small chunks, or demonstration examples. Along with the improvement of students' understanding and self-sufficiency, this support will be gradually reduced until students are able to master these skills independently.

Self-Efficacy Theory

The Theory of Self-Efficacy founded by Albert Bandura (1986) asserts that an individual's internal confidence in their ability to perform a task is a key determinant of the way they think, act, and motivate themselves. In the context of education, academic self-efficacy refers to students' perception of their ability to achieve set learning objectives. Rafiola et al. (2020) stated that self-efficacy serves as a strong positive predictor of academic achievement. Students who have high self-efficacy exhibit greater *resilience*, are less likely to give up when faced with abstract concepts, and are more likely to choose deep learning strategies (Arthur et al., 2024).

The effectiveness of a learning intervention should not be based solely on cognitive aspects, but rather must integrate affective factors such as attitudes, interests, and mathematical *anxiety*. The relationship between these affective and cognitive factors is inverse or reciprocal. Studies have found that students who suffer from chronic anxiety often have low self-efficacy, causing them to avoid challenging tasks (Maulida, R., et al, 2019). On the other hand, the increase in self-efficacy was found to be directly proportional to increased interest and positive attitudes towards mathematics subjects (Xiao & Sun, 2021). Therefore, the ideal module-based intervention should not only provide formulaic (cognitive) drills, but also inject elements of emotional support, engaging visuals, and positive feedback (affective) to reduce anxiety and build students' internal confidence.

Conclusion

The development of the DBM20233 Mathematics Module is an intervention that is seen to be able to improve mathematical mastery, self-efficacy, and attitudes among low-ability students. This module is not only expected to help improve their academic comprehension, but also to build self-confidence and foster a more positive perception of mathematics subjects that are often considered challenging. The use of the modules will be directed at the transition group of students from Community Colleges who will continue their diploma level studies at the Port Dickson Polytechnic.

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PROFESSIONAL PERSONALITY DEVELOPMENT AND CAREER READINESS AMONG MARKETING STUDENTS

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Introduction

In the contemporary job market, characterized by rapid evolution and intense competition, academic qualifications alone are insufficient to ensure graduate employability and long-term career success. Employers are looking for college graduates who have not only technical skills but also professional abilities. These include communication skills, emotional intelligence, leadership, adaptability, professionalism, and ethical behaviour (Bernama, 2025).

These qualities are often linked to professional personality development. This has become an important part of getting ready for a career in higher education. Professional personality development refers to the continuous process of improving an individual's professional image, interpersonal skills, attitudes, confidence, communication abilities, and workplace behaviour to meet industry expectations (PsyHome, 2026). In higher education institutions, courses related to professional personality development are often compulsory for students enrolled in programmes such as Secretarial Studies and Hotel Management because these fields require strong customer interaction, professional etiquette, grooming, and service-oriented communication (Madhurri Deepak Patil, May 2026). The objective of such courses is to equip students with the necessary skills and knowledge to function as competent professionals within professional environments.

However, the importance of professional personality development should not be limited only to students in secretarial and hospitality-related programmes. Marketing students, in particular, would greatly benefit from exposure to similar professional development components due to the nature of the marketing profession itself (Dhruv Grewal, 2024). Marketing is a discipline that is centered on human interaction. It is characterized by continuous interaction with customers, clients, business partners, and stakeholders.

Despite its relevance, professional personality development is not always formally emphasized within Marketing programmes. Most marketing curricula focus primarily on technical and theoretical knowledge such as consumer behaviour, digital marketing, branding, advertising, and market research. While these academic components are important, they may not fully prepare students for real workplace environments where interpersonal competence and professional conduct are equally critical.

Therefore, integration of these elements could potentially contribute to the development of essential competencies in marketing students, including enhanced self-confidence, proficient professional communication, leadership qualities, effective stress management, and refined workplace etiquette. These attributes are of paramount importance in today's highly competitive business landscape.

Meaning of Professional Personality Development

Professional personality development can be defined as the process of enhancing an individual's personal and professional qualities to achieve effectiveness in workplace interactions and career performance. It involves the development of soft skills, professional attitudes, self-confidence, communication abilities, emotional intelligence, leadership qualities, and ethical values.

Professional personality development does not only focus on external appearance or communication style, but also emphasizes internal qualities such as positive attitudes, resilience, discipline, integrity, and self-awareness (Manuel London, 2022). In educational contexts, professional personality development helps students bridge the gap between academic learning and industry expectations (Ahmed Awad Elshafie Ibrahim, 2025). It prepares them to become more confident, adaptable, and professionally competent graduates capable of contributing positively in professional settings.

Importance of Professional Personality Development among Marketing Students

Professional personality development plays a crucial role in preparing marketing students for future careers and workplace responsibilities. The marketing profession requires professionals who are capable of influencing customers, communicating ideas effectively, building relationships, and adapting to changing market trends (Stavros Kalogiannidis, 2022).

a) Enhances Communication and Interpersonal Skills

Marketing professionals routinely engage in a variety of professional activities, including presentations, negotiations, networking, customer service, and promotional activities. The cultivation of professional personality is conducive to the enhancement of verbal and nonverbal communication skills, thereby empowering students to articulate their ideas with confidence and poise in a professional setting.

b) Builds Confidence and Professional Image

In the field of marketing, confidence and professional appearance are of paramount importance, as professionals frequently serve as representatives of brands and organizations. It has been demonstrated that factors such as grooming, deportment, and self-presentation have a substantial impact on customer trust and professional credibility.

c) Strengthens Leadership and Teamwork Skills

Marketing activities are frequently characterized by collaboration and teamwork. The implementation of leadership programs, networking activities, and personality development training has been demonstrated to facilitate the development of students' competencies as effective team members and prospective organizational leaders.

d) Improves Career Readiness and Employability

In the contemporary employment context, there is an observable trend among employers to prioritize graduates who demonstrate not only technical competencies but also soft skills and professional attitudes. Marketing students who possess strong professional personalities are more likely to demonstrate successful performance in interviews, internships, and workplace interactions.

Relevance of Professional Personality Development in Marketing Education

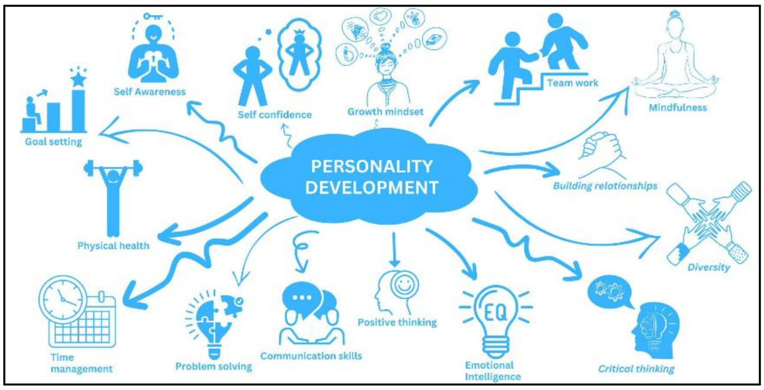
Traditionally, professional personality development courses are more commonly associated with programmes such as Secretarial Studies and Hotel Management because these disciplines emphasize customer service, hospitality, professional etiquette, and organizational representation. Students in these fields are trained extensively in grooming, communication etiquette, interpersonal relations, stress management, and professional conduct.

Nevertheless, these competencies are equally relevant to marketing students. Marketing professionals also function as organizational representatives who interact directly with customers, clients, and business stakeholders. Marketing careers require the same skills as jobs in hospitality and secretarial work. These include good communication skills, emotional intelligence, professional conduct, self-assurance, and the ability to build positive relationships.

In addition, modern marketing environments require professionals who are not only technically skilled but also have social skills, can adapt easily, and can handle setbacks. As digital marketing and global business interactions grow, employers are looking for graduates who can communicate well in different professional settings (Kovacs, 2021).

Therefore, introducing professional personality development elements into Marketing programmes would provide significant benefits to students. These elements could be integrated through:

- workshops and seminars,
- co-curricular activities,
- leadership programmes,
- industry networking sessions,
- internship preparation modules,
- public speaking activities,
- business etiquette training,
- stress management programmes, and
- embedded classroom assessments.



This diagram shows that professional personality development such as communication skills, self-confidence, professional ethics and leadership play an important role in increasing the career readiness level of marketing students.

Suggested Areas of Professional Personality Development for Marketing Students

Several important components of professional personality development could be incorporated into Marketing education:

- Introduction to Personality and Self-Awareness
- Health and Fitness for Professional Productivity
- Formation of Positive Attitude and Self-Concept
- Grooming and Professional Deportment
- Business and Social Etiquette
- Stress Management and Emotional Resilience

Conclusion

In conclusion, professional personality development serves as a fundamental pillar in preparing marketing students to navigate the complexities of today's competitive professional environment (Vocal, 2023). While such courses are traditionally compulsory for students in Secretarial Studies and Hotel Management due to the service-oriented nature of those professions, their relevance extends equally to Marketing education.

Marketing professionals need to be good with people, communicate well, be emotionally intelligent, professional, and adaptable to succeed in industries that are always changing and focus on customers. So, adding professional personality development to marketing programs would help students get ready for jobs, be more confident, and understand what it means to be a professional.

Higher education institutions should recognize the growing importance of holistic graduate development by incorporating professional personality components into academic and co-curricular activities (Khalid Isa, 2025). Through this approach, marketing students can become not only academically knowledgeable but also professionally competent, resilient, and industry-ready graduates capable of contributing positively to organizations and society.

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BIJAK TENAGA, BIJAK BERBELANJA: TINJAUAN PENGGUNAAN PERALATAN JIMAT ELEKTRIK DI RUMAH KEDIAMAN

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1. Pendahuluan

Penggunaan peralatan elektrik cekap tenaga di rumah kediaman memainkan peranan penting dalam mencapai Matlamat Pembangunan Lestari (SDG), khususnya SDG 7 yang bertujuan memastikan akses kepada tenaga yang boleh dipercayai, mampan dan moden untuk semua. Dengan memilih peralatan elektrik yang mempunyai label kecekapan tenaga empat atau lima bintang, pengguna dapat mengurangkan penggunaan tenaga elektrik secara signifikan, seterusnya menurunkan bil elektrik bulanan mereka (ST, Ke Arah Sektor Tenaga Bertaraf Dunia, 2018). Selain itu, penggunaan peralatan elektrik cekap tenaga juga menyumbang kepada pengurangan pelepasan gas rumah hijau, yang berkait rapat dengan SDG 13 mengenai tindakan terhadap perubahan iklim (KPK, 2023). Dengan mengurangkan penggunaan tenaga elektrik, kita dapat mengurangkan keperluan untuk penjanaan tenaga daripada sumber yang tidak boleh diperbaharui, seterusnya mengurangkan pelepasan karbon dioksida ke atmosfera. Langkah-langkah seperti mematikan peralatan elektrik apabila tidak digunakan, menggunakan lampu LED yang lebih cekap tenaga, dan memastikan penyelenggaraan berkala bagi peralatan elektrik dapat membantu meningkatkan kecekapan tenaga di rumah. Amalan ini bukan sahaja menjimatkan kos, tetapi juga menyokong usaha global dalam mencapai matlamat pembangunan lestari (MALAYSIA, 2024).

2. Definisi Peralatan Jimat Tenaga

2.1 Kecekapan Tenaga

Kecekapan tenaga merujuk kepada peningkatan faedah bersih yang diperoleh daripada setiap unit tenaga yang digunakan, di mana pengoptimuman sumber tenaga tersebut dapat menghasilkan hasil yang lebih tinggi dengan penggunaan tenaga yang lebih rendah (ST, 2024).

2.2 Label Cekap Tenaga

Label cekap tenaga bererti ukuran penggunaan tenaga bagi sesuatu produk, bangunan, atau sistem dalam unit tertentu, yang biasanya dibandingkan dengan parameter lain seperti saiz, kapasiti, atau prestasi. Di Malaysia, Suruhanjaya Tenaga telah melaksanakan program pelabelan kecekapan tenaga untuk beberapa peralatan elektrik domestik (Bernama, 2023). Jumlah tenaga (kW) dalam masa setahun mengikut jumlah bintang adalah seperti berikut:

Jadual 1: Jumlah tenaga (kW) dalam masa setahun, jumlah bintang dan pelabelan

Jumlah bintang	Jumlah tenaga	Pelabelan
1 Bintang	760.41 kWh	-
2 Bintang	608.72 kWh	
3 Bintang	487.19 kWh	
4 Bintang	389.54 kWh	
5 Bintang	311.83 kWh	

2.3 Manfaat penggunaan peralatan jimat tenaga elektrik

2.3.1 Penjimatan tenaga dan kewangan

Menurut laporan yang dikeluarkan oleh (Authority, 2020), rumah yang menggunakan peralatan cekap tenaga dapat mengurangkan penggunaan elektrik sehingga 30%, dengan penggunaan teknologi seperti lampu LED dan sistem pemanasan serta penyejukan yang lebih efisien.

2.3.2 Pengurangan kos elektrik

Kajian oleh (Kadir, 2024) menunjukkan bahawa teknologi cekap tenaga membantu mengurangkan penggunaan tenaga elektrik di rumah kediaman, serta memberikan impak positif terhadap pengurangan pelepasan karbon.

2.4 Panduan memilih peralatan cekap tenaga

Pemilihan peralatan cekap tenaga adalah salah satu langkah penting dalam usaha untuk mengurangkan penggunaan tenaga elektrik, sekaligus dapat menurunkan kos tenaga dan memberi impak positif terhadap alam sekitar (Tuan Pah Rokiah Syed Hussain, 2013).

2.4.1 Label tenaga

Label tenaga adalah elemen penting dalam memilih peralatan cekap tenaga (CETREE, 2008). Di Malaysia, label tenaga yang digunakan adalah label Energy Efficiency Label (EEL) yang dikeluarkan oleh Suruhanjaya Tenaga. Peralatan yang mempunyai penarafan 1 hingga 5 bintang menunjukkan tahap kecekapan tenaga produk tersebut, dengan lima bintang menunjukkan penggunaan tenaga yang paling cekap.

2.4.2 Teknologi yang digunapakai

Perkembangan teknologi memberi impak besar dalam keberkesanan penggunaan tenaga peralatan rumah. Sebagai contoh, penggunaan LED (Light Emitting Diode) sebagai pengganti mentol pijar atau lampu fluorescent telah terbukti jauh lebih cekap dari segi penggunaan tenaga.

3. Hasil dan Perbincangan

Aspek utama dapat dikenal pasti berkaitan dengan penggunaan peralatan jimat tenaga antaranya adalah kesedaran pengguna terhadap kecekapan tenaga, kelebihan penggunaan peralatan jimat tenaga, serta cabaran dalam pelaksanaannya. Penggunaan peralatan jimat tenaga dapat membantu mengurangkan penggunaan elektrik, yang seterusnya dapat menjimatkan kos bil elektrik pengguna. Selain itu, ia juga memberi impak positif kepada alam sekitar dengan mengurangkan pelepasan karbon. Walau bagaimanapun, terdapat beberapa cabaran dalam menggalakkan pengguna untuk beralih kepada peralatan cekap tenaga, termasuk faktor kos dan kesedaran yang masih rendah.

3.1 Kesedaran Pengguna

Kesedaran pengguna mengenai kepentingan peralatan jimat tenaga memainkan peranan penting dalam menggalakkan penggunaannya secara meluas. Ramai pengguna menyedari faedah jangka panjang peralatan cekap tenaga, seperti penjimatan bil elektrik dan pengurangan kesan negatif terhadap alam sekitar. Namun, masih terdapat pengguna yang kurang memahami manfaat ini dan lebih cenderung memilih peralatan dengan harga yang lebih murah tanpa mempertimbangkan aspek kecekapan tenaga.

3.2 Kelebihan penggunaan peralatan jimat tenaga

Antara kelebihan utama penggunaan peralatan jimat tenaga ialah:

3.2.1 **Penjimatan Kos:** Peralatan cekap tenaga menggunakan kurang tenaga elektrik, mengurangkan perbelanjaan bulanan pengguna.

3.2.2 **Kelestarian Alam Sekitar:** Dengan mengurangkan penggunaan tenaga, pelepasan karbon juga dapat dikurangkan, menyumbang kepada usaha pemuliharaan alam sekitar.

3.2.3 **Kecekapan Operasi:** Peralatan moden yang menggunakan teknologi cekap tenaga selalunya lebih tahan lama dan berfungsi dengan lebih baik berbanding peralatan biasa.

4. Kesimpulan

Kesimpulannya, penggunaan perkakas cekap tenaga elektrik di rumah kediaman memberikan pelbagai manfaat, terutamanya dalam mengurangkan kos tenaga, menurunkan jejak karbon, dan meningkatkan kesedaran terhadap alam sekitar. Teknologi ini bukan sahaja memberikan manfaat kewangan kepada pengguna, tetapi juga membantu negara dalam mencapai matlamat

SDG 13 dan SDG 8. Berdasarkan dapatan kajian, beberapa cadangan untuk meningkatkan penggunaan perkakas cekap tenaga di rumah kediaman adalah seperti berikut:

4.1 **Pemberian Subsidi dan Insentif**: Kerajaan perlu menyediakan insentif atau subsidi yang mencukupi untuk mengurangkan kos awal pembelian perkakas cekap tenaga, terutama bagi golongan berpendapatan rendah dan sederhana.

4.2 **Pendidikan dan Kesedaran**: Program pendidikan yang lebih meluas mengenai kepentingan penjimatan tenaga dan pengurangan jejak karbon perlu dilaksanakan, terutamanya melalui kempen media dan seminar komuniti.

4.3 **Peningkatan Akses kepada Teknologi**: Usaha untuk meningkatkan akses kepada perkakas cekap tenaga yang lebih berpatutan perlu dipergiatkan, terutamanya di kawasan luar bandar, bagi memastikan teknologi ini dapat dinikmati oleh semua

Dengan langkah-langkah tersebut, penggunaan perkakas cekap tenaga elektrik di rumah kediaman dapat memberi manfaat dalam jangka panjang, bukan sahaja kepada pengguna tetapi juga kepada alam sekitar. Ini seterusnya akan menyumbang kepada pencapaian matlamat pembangunan mampan dan mengurangkan kesan perubahan iklim di peringkat global.

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