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Public Administration and Governance,
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Aviation, Agriculture, Computer Science,
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Editorial Review Process   double-blind peer-review

Types of Manuscript Publication   The Editorial board is responsible for notifying errors/formatting issues.   If no formatting corrections are necessary, articles will immediately be forwarded to experts in the relevant fields to further assess the article's viability and completeness. The accepted liberal arts and social science articles are divided into four categories as described below.

1) Academic Article: Academic articles typically present the core of assembled and analyzed academic content consisting of an introduction and a body that includes major, minor, and subordinate topics usually within a maximum of 20 pages.

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Otherwise, place both the name and the year separated by comma in parentheses. The page number(s) may be cited as a specific part of a source. All the works cited in text with an author-date citation system must be listed alphabetically in the reference section in APA style under a 'References' heading. Examples are given below:

Journal Article

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Online Magazine Article

Thomson, J. (2022, September 8). Massive, strange white structures appear on Utah's Great Salt Lake. Newsweek. https://www.newsweek.com/mysterious-mounds-great-salt-lake-utah-explainedmirabilite-1741151

Print Magazine Article

Nicholl, K. (2020, May). A royal spark. Vanity Fair, 62(5), 56–65, 100.

Online Newspaper Article

Roberts, S. (2020, April 9). Early string ties us to Neanderthals. The New York Times. https://www.nytimes.com/2020/04/09/science/neanderthals-fiber-string-math.html

Print Newspaper Article

Reynolds, G. (2019, April 9). Different strokes for athletic hearts. The New York Times, D4

Edited Book Chapter

Zeleke, W. A., Hughes, T. L., & Drozda, N. (2020). Home–school collaboration to promote mind– body health. In C. Maykel & M. A. Bray (Eds.), Promoting mind–body health in schools: Interventions for mental health professionals (pp. 11–26). American Psychological Association. https://doi.org/10.1037/0000157-002

Conference Session

Davidson, R. J. (2019, August 8–11). Well-being is a skill [Conference session]. APA 2019 Convention, Chicago, IL, United States. https://irp-cdn.multiscreensite.com/a5ea5d51/files/uploaded/APA2019_Program_190708.pdf

Dissertation from a Database

Horvath-Plyman, M. (2018). Social media and the college student journey: An examination of how social media use impacts social capital and affects college choice, access, and transition (Publication No. 10937367). [Doctoral dissertation, New York University]. ProQuest Dissertations and Theses Global.

Editorial Note

It is with immense pride and enthusiasm that we present the third edition of **Liberal Arts and Social Studies International Journal (LAASSIJ) Online ISSN 3057-1006**, Volume 1, No. 3. Building on the success of our inaugural edition. As a gold open-access journal indexed in **the Thai-Journal Citation Index (TCI)**, **LAASSIJ** remains a premier platform for disseminating high-quality, innovative research from educators, scholars, and researchers worldwide. Our mission is to advance knowledge in the liberal arts, humanities, and social sciences, fostering academic excellence and interdisciplinary collaboration.

The scope of **LAASSIJ** is deliberately broad, embracing original and pioneering research that addresses the intricate challenges within liberal arts, humanities, and social sciences. Submissions must demonstrate a clear connection to the interplay between these disciplines and related fields, such as applied sciences, arts, culture, and beyond. Our journal welcomes research across all scales, from groundbreaking discoveries to interdisciplinary studies, covering areas such as home economics, cultural and interpersonal communication (verbal and nonverbal), service industries (including tourism, hotel management, hospitality, food science and technology, aviation business, and convention and exhibition management), physical education, recreation, mathematics, and applied sciences

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Arts, Humanities   and Applied Sciences
> Aviation Business
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> Home Economics
> Human and Community Resource Development
> Interpersonal Communication both Verbal and Nonverbal
> Service Industry such as Tourism, Hotel Management, and Hospitality

Looking ahead, we are confident that the collective efforts of our authors, editorial board, reviewers, **the LAASSIJ team**, and our global network of young editorial board members will continue to elevate liberal arts and social sciences to the forefront of multidisciplinary research for sustainable development.
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Patcharin

Assoc. Prof. Patcharin Kangkha, Ph.D.
Editor-in-Chief

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Enhancing Production Efficiency through Organizational Support and Workforce Competence in the Health and Beauty Supplement Industry, Samut Sakhon Province

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Abstract

This study examines the influence of organizational support and competence on production efficiency in a comprehensive health and beauty supplement manufacturing business in Samut Sakhon Province. The research investigates the role of organizational support, including investments in technology and personnel development, and how these factors contribute to the enhancement of employee competence. The study also explores the direct and indirect effects of these variables on production efficiency. The structural model testing reveals that organizational support has a positive direct effect on production efficiency, with a coefficient of 0.73 ($p < 0.01$). Additionally, competence (COMC) demonstrates a direct effect on production efficiency (PROE), with a coefficient of 0.65 ($p < 0.01$). The results indicate that organizational support indirectly influences production efficiency through competence, with an indirect effect coefficient of 0.36, leading to a total effect of 0.65. The findings highlight the importance of organizational support and employee competence in improving production efficiency in the context of health and beauty supplement manufacturing. The study provides valuable insights for organizations seeking to enhance their production processes and optimize employee performance through strategic investments in technology and training. The research contributes to the body of knowledge on the relationship between organizational support, competence, and operational efficiency, offering practical recommendations for business improvement in this sector.

Keywords: Organizational Support, Competence, Production Efficiency, Health and Beauty Supplement Manufacturing, Structural Model, Samut Sakhon Province.

1. INTRODUCTION

The global market for health and beauty supplements has been experiencing rapid growth, driven by increasing consumer awareness of health, wellness, and personal care (Zhi Chao, Wongkumchai, & Worapongpat, 2023). In this competitive industry, businesses must continuously enhance their production efficiency to maintain a competitive edge and meet consumer demands (Lee & Kwon, 2022). Efficiency in production is not solely dependent on technological advancements; rather, it also heavily relies on organizational support and the competence of the workforce (Worapongpat & Chaoluang, 2024). Therefore, understanding how organizational factors influence employee performance and production outcomes is critical for companies aiming to thrive in this sector (Liu, Niyomsilp, & Worapongpat, 2020).

In the context of health and beauty supplement manufacturing, particularly in Samut Sakhon Province, businesses face various challenges in optimizing production processes, integrating new technologies, and improving employee skills (Worapongpat, 2024c). Many organizations are investing in automation and technology to improve operational efficiency; however, the effect of these investments on employee competence and the subsequent impact on production efficiency remains underexplored (Michalski, 2024). Additionally, the role of organizational support in fostering employee competence and its indirect effect on production outcomes presents a significant area of study (Selim, 2020).

This research addresses the gap in understanding the relationship between organizational support, employee competence, and production efficiency in the health and beauty supplement manufacturing sector (Worapongpat, 2024b). By exploring these factors, the study provides insights into how businesses can strategically invest in workforce development and technological advancements to enhance their operations (Worapongpat, 2024a). The findings of this research are significant for businesses in the health and beauty industry, as they offer actionable recommendations to improve production efficiency, strengthen employee skills, and maintain organizational competitiveness in a rapidly evolving market (Spitzer & Kreca, 2022).

This study is timely and relevant, as it responds to the growing need for businesses to adapt to industry changes while optimizing internal processes. The research contributes to the body of knowledge by providing evidence of how organizational factors influence production efficiency and offers practical implications for improving business performance in the health and beauty supplement sector

Research Objectives

1.To evaluate the direct and indirect effects of organizational support and employee competence on production efficiency in the health and beauty supplement industry.

2.To provide practical recommendations for enhancing production efficiency and contributing to academic knowledge on organizational support, employee competence, and production efficiency.

2. LITERATURE REVIEWS

1. Organizational Support

Organizational support refers to the resources or essentials provided by an organization to assist business operations, such as capital, materials, or infrastructure (Worapongpat, 2023a). This support helps businesses operate efficiently and sustainably (Worapongpat, 2023g).

2. Organizational Promotion

Organizational promotion focuses on motivating employees or stakeholders to work toward shared goals (Worapongpat, 2021b). It may involve training or development programs that enhance skills and knowledge. This promotion affects employee engagement and can boost work efficiency (Tao, Wongkumchai, & Worapongpat, 2024).

3. Organizational Assistance

Organizational assistance refers to providing consulting or resolving issues that arise during production or business operations (Worapongpat, 2021a). This assistance helps businesses overcome obstacles and ensures smooth workflows (Worapongpat, 2023f).

4. Organizational Endorsement

Organizational endorsement refers to the organization's support for the business through assurance or assistance, ensuring operations run without interruptions or obstacles, such as

financial support or measures to maintain long-term stability (Tiscini, Martiniello, & Lombardi, 2022).

5. Organizational Provision of Support

Organizational provision of support refers to the allocation of financial resources or personnel to enable businesses to operate and grow efficiently (Worapongpat, 2020). This resource allocation supports operational capabilities and ensures business competitiveness in the market (Worapongpat, 2023e).

6. Organizational Care

Organizational care refers to creating a positive work environment where employees feel motivated and satisfied. A positive environment helps improve employee commitment and job satisfaction, which directly impacts production efficiency (Wei, Worapongpat, & Prompanyo, 2020).

7. Organizational Assistance as a Resource

Organizational assistance as a resource means that the organization acts as a source of advice or problem-solving support to ensure business operations continue smoothly despite obstacles or production issues (Worapongpat, 2023d).

8. Promotion and Support from Organizations

This refers to the integration of promotion and support, where organizations not only provide resources but also encourage creativity and business development to enhance capabilities and competitiveness (Worapongpat & (Narong Uttamavangso/Sendaranath), 2024).

9. Organizational Resource Support

Organizational resource support means providing the necessary resources for business operations, such as personnel, technology, or investment. This type of support helps businesses run smoothly and strengthens their ability to compete (Worapongpat, 2023c).

10. Ongoing Organizational Assistance

Ongoing assistance means that organizations provide continuous support over time, tracking progress and helping businesses grow while addressing challenges as they arise (Worapongpat, Limlertrid, Zangphukieo, Wongkumchai, & Muangmee, 2023).

Organizational support in various forms, such as promotion, assistance, endorsement, and care, directly impacts production efficiency and business competitiveness (Yicheng, Worapongpat, & Wongkumchai, 2024). This is especially important in the health and beauty supplement industry, which requires skill development and competence to meet the challenges of producing high-quality products (Worapongpat, 2023b).

Research Conceptual Framework

1. Exogenous Variables: Organization Support, which consists of 3 sub dimensions:Investment in Automation and Technology Human Resource Development Creating a Learning and Innovation Supportive Environment

2. Mediator Variables: Employee Competency, which consists of 3 sub dimensions: Knowledge and Skill Competency Adaptability Competency Creativity Competency

3. Endogenous Variables: Production Efficiency, which consists of 2 sub-dimensions: Productivity Improvement Quality Improvement

Independent variable	
Resource Support Organizational Culture and Employee Competency Productivity Improvement and Quality Improvement	**Dependent variable** Organizational Support and Competence in the Health and Beauty Supplement Industry: Impacts on Production Efficiency in Samut Sakhon Province

Investment in automation and technology
Development of people (training)
Creating an environment that promotes learning and innovation
Organizational support (investment in technology and development of people) → Competence
Competence → Productivity improvement and quality improvement
Organizational support → Productivity (through competence)

Figure 1: Research Conceptual Framework

4. RESEARCH METHODOLOGIES

This study employs a quantitative research design, utilizing questionnaires as the primary data collection tool. The research methodology is outlined as follows:

4.1 Population and Sample

1.1 Population

The population includes executives and employees of a full-cycle health and beauty supplement manufacturing business located in Mueang District, Samut Sakhon Province, specifically SCG Grand Co., Ltd., and its affiliated companies.

1.2 Sample

The sample consists of executives and employees from the aforementioned population. Since the exact population size is unknown, the sample size was determined using Cochran's formula (1977) for an unknown population. Based on a confidence level of 95%, a margin of error of 5%, and an assumed proportion of 0.5, a minimum sample size of 385 was required. To account for potential errors during data collection, a total of 400 samples were collected.

The sampling technique employed was purposive sampling, with data collection conducted over five months, from August 1, 2023, to November 30, 2023.

4.2 Research Instruments

The research instruments comprised the following: Interview Form: To gather qualitative insights.

4.2.1 Questionnaire: Designed to assess the following components:
Resource Support
 Organizational Culture
Employee Competency
Productivity and Quality Improvement

The questionnaire underwent the following quality assurance steps:

Consultation and Revision: The questionnaire was reviewed and revised based on feedback from academic advisors.

Expert Validation: Three experts evaluated the questionnaire to assess content validity using the Index of Item-Objective Congruence (IOC) The IOC values ranged between 0.80 and 1.00.

Pilot Testing: The revised questionnaire was tested on 30 non-sample respondents. Discrimination indices ranged from 0.25 to 0.75, and reliability was calculated using Cronbach's alpha (1951), yielding a reliability coefficient of 0.95.

4.3 Data Collection

Data were collected from two primary sources:

Secondary Data: Document research, including books, academic papers, research studies, and relevant electronic media.

Primary Data: Questionnaires distributed to the sample group.

4.3 Data Analysis and Statistics

The data were analyzed as follows:

Preliminary Analysis:

Multivariate normality was assessed using Mahalanobis Distance to detect multivariate outliers.

Normal distribution was verified by examining skewness and kurtosis.

Measurement Model Analysis:

Construct validity and unidimensionality of the data were assessed.

Linear relationships among variables were examined.

Structural Equation Modeling (SEM):

Path analysis was conducted to evaluate direct and indirect relationships.

Descriptive and Inferential Statistics:

Descriptive statistics included percentages, means, and standard deviations.

Multivariate regression analysis and path analysis were performed using statistical software.

5. RESULTS AND DISCUSSIONS

5.1 Results

Table 1: Data Analysis From the research findings, it was found that:

Category	Variable	Mean	Opinion Level
Demographic Information of Respondents	Gender: Female	74.60%	-
	Age: 26-35 years	54.70%	-
	Age: 36-45 years	42.10%	-
	Education Level: High School (Grade 6)	50.50%	-
	Work Experience: 16+ years	37.20%	-
Resource Support	Investment in Automation and Technology to Enhance Production Efficiency	3.81	High Level
	Human Resource Development to Enhance Skills	3.85	High Level
	Creating a Learning and Innovation Supportive Environment	3.88	High Level
Organizational Culture and Employee Competency	Knowledge and Skill Competency	4.20	High Level
	Adaptability Competency	3.94	High Level
	Creativity Competency	4.14	High Level
Productivity and Quality Improvement	Productivity Increase	4.21	High Level
	Quality Improvement	4.17	High Level

Summary of Analysis from the Table:

- Resource Support: Overall, the average is at a high level. The investment in technology, human resource development, and the creation of a learning-supportive environment are highly valued by the organization.
- Organizational Culture and Employee Competency: Employees rated their competencies highly, particularly in terms of knowledge and skills.
- Productivity and Quality Improvement: Both productivity increase and quality improvement are also rated highly, with the highest mean score for productivity increase and quality improvement.

Table 2: Analysis of Variable Components (Measurement Model)

Variable	Factor Loading
Investment in Automation and Technology	0.834
Human Resource Development (Training Programs)	0.820
Creating a Learning and Innovation Supportive Environment	0.795

Summary of Analysis from the Table:

- Investment in Automation and Technology: The factor loading of 0.834 indicates that this component has the greatest influence in developing and improving the production efficiency of the organization.
- Human Resource Development through Training Programs: With a factor loading of 0.820, this variable is also highly influential in developing employee capabilities.
- Creating a Learning and Innovation Supportive Environment: The factor loading of 0.795 indicates that this factor plays a significant role in supporting learning and fostering innovation within the organization.

Table 3: Structural Model Testing

Hypothesis	Coefficient	t-value	p-value	Test Result
Organizational Support (Investment in Technology and Human Resource Development) → Competence	0.77	6.26	< 0.001	Positive and statistically significant effect
Competence → Productivity Increase and Quality Improvement	0.81	5.11	< 0.001	Positive and statistically significant effect
Organizational Support → Production Efficiency (through Competence)	0.58	4.21	< 0.001	Indirect positive and statistically significant effect

Summary of Test Results:

- Organizational Support (Investment in Technology and Human Resource Development): This has a positive effect on competence with a coefficient of 0.77 and a t-value of 5.35, indicating a statistically significant relationship (p-value < 0.001).
- Competence: This has a positive effect on productivity increase and quality improvement with a coefficient of 0.81 and a t-value of 5.11, indicating a statistically significant relationship (p-value < 0.001).
- Organizational Support: This has an indirect positive effect on production efficiency through competence, with a coefficient of 0.58 and a t-value of 4.21, indicating a statistically significant relationship (p-value < 0.001).

5.2 Discussion

In this study, we explored the influence of organizational support, employee competencies, and production efficiency in the health and beauty supplement industry. Based on the results from the structural model testing, we can draw several key conclusions and insights.

1. Organizational Support's Impact on Employee Competencies The findings demonstrate that organizational support, particularly in the form of investments in automation, technology, and human resource development, plays a significant role in enhancing employee competencies. Specifically, the investment in technology and the development of human resources (training programs) were shown to have a positive impact on employees' knowledge, skills, adaptability, and creativity. These competencies are crucial

for improving production efficiency (Chen, Worapongpat, & Wongkumchai, 2024; Worapongpat, 2025f). This aligns with previous studies suggesting that a supportive environment and investment in employee development can enhance both individual and organizational performance.

2. Employee Competencies as a Mediator The results indicate that employee competencies act as a mediator between organizational support and production efficiency. The competencies of employees in terms of knowledge, skills, adaptability, and creativity have a direct positive effect on the increase in production output and quality improvement These findings are consistent with the idea that a skilled and adaptable workforce is a key driver of production effectiveness and innovation within organizations.(Dongjie, Wongkumchai, & Worapongpat, 2024; Worapongpat, 2025e).The positive influence of employee competencies on production performance highlights the importance of continuous professional development and training programs in achieving organizational goals.

3．Indirect Impact of Organizational Support on Production Efficiency One of the most insightful findings is the indirect effect of organizational support on production efficiency through employee competencies This suggests that while direct investments in technology and human resources are important, their full impact on production efficiency is realized through their enhancement of employee competencies. (Gongjing, Worapongpat, & Wongkumchai, 2024; Worapongpat, 2025d).Thus, the effective utilization of organizational resources requires a workforce that is not only equipped with the necessary tools and training but also empowered to innovate and adapt to changing conditions.

4. Practical Implications These findings offer several practical implications for managers in the health and beauty supplement industry and other similar sectors:Focus on Workforce Development: It is crucial for organizations to continue investing in the training and development of their employees. This includes both technical skills and soft skills such as adaptability and creativity, which are essential for fostering innovation and improving production processes. Enhance Organizational Support: Companies should prioritize creating a supportive work environment that promotes learning and innovation. (Issa & Hanaysha, 2023; Worapongpat, 2025c).This can be achieved by integrating advanced technologies, automating processes, and providing opportunities for professional growth. Strategic Alignment: The alignment between organizational support, employee competencies, and production efficiency should be emphasized in strategic planning. (Jaouhari, Travaglia, Giovannelli, Picco, Oz, Oz, & Bordiga, 2023; Worapongpat, 2025b).Companies should ensure that their resources are utilized effectively, and that employees are empowered to contribute to the continuous improvement of production quality and output.

5. Limitations and Future Research While this study provides valuable insights into the role of organizational support and employee competencies in production efficiency, it is important to acknowledge some limitations. For instance, the study is based on a specific industry (health and beauty supplements), and the results may not be directly transferable to other sectors. Future research could explore similar models in different industries to validate the generalizability of the findings. Additionally, the study could investigate the role of external factors such as market competition and consumer demand in influencing the effectiveness of organizational support and employee competencies. (Jianyu, Wongkumchai, & Worapongpat, 2024; Worapongpat, 2025a). In conclusion, the study highlights the critical role of organizational support and employee competencies in driving production efficiency. Organizations that invest in their workforce and foster a supportive, innovative environment

are likely to experience improvements in both productivity and quality. This provides a roadmap for companies looking to enhance their operational performance in an increasingly competitive market.

5.3 Originality and Body of Knowledge

This study offers several contributions to the existing body of knowledge in the fields of organizational behavior, human resource management, and production efficiency, particularly within the context of the health and beauty supplement industry. By analyzing the relationships between organizational support, employee competencies, and production efficiency, this research provides novel insights into how these factors interact and influence operational performance.

5.3.1   Originality of the Study

This research presents an original approach by linking organizational support with employee competencies as key drivers of production efficiency in the health and beauty supplement sector. While there is a significant body of work on organizational support and its effects on employee outcomes, few studies have explicitly explored the indirect pathways through which organizational resources (e.g., technology and human resource development) influence production outcomes by enhancing employee competencies.

The study expands on existing literature by introducing a structural model that examines the direct and indirect effects of organizational support on production efficiency. It is particularly unique in how it positions employee competencies, such as adaptability and creativity, as mediators that connect organizational support to production performance outcomes. This perspective provides a deeper understanding of how investments in technology and workforce development can lead to measurable improvements in operational performance.

5.3.2 Contribution to Existing Knowledge

Organizational Support and Employee Development: The findings reinforce the importance of organizational investments in both technology and human resources. By highlighting the positive effect of such investments on employee competencies, this study adds to the growing body of literature on the role of continuous training and technological advancements in improving employee performance and, by extension, organizational outcomes.

Employee Competencies as a Mediator: The study's contribution lies in establishing employee competencies as a key mediating factor between organizational support and production efficiency. The identification of knowledge, adaptability, and creativity as essential competencies further enriches the understanding of what constitutes an effective workforce in a highly competitive industry.

Production Efficiency as a Multifaceted Concept: By examining production

efficiency through both output (increased productivity) and quality improvement, this research broadens the traditional scope of production efficiency studies. It provides a more nuanced understanding of how organizations can optimize performance by balancing both quantity and quality, which is crucial in the highly competitive health and beauty sector.

5.3.3. Implications for Future Research

This study opens several avenues for future research:

Cross-Industry Comparisons: Future research could extend the model tested in this study to other industries, such as manufacturing, technology, or service industries, to assess the generalizability of the findings. Comparing how organizational support and employee competencies influence production efficiency in various sectors could provide deeper insights into sector-specific dynamics.

Longitudinal Studies: A longitudinal study examining the long-term impact of organizational support on employee competencies and production efficiency would provide valuable insights into how investments in these areas affect organizational performance over time. This approach would allow for a more comprehensive analysis of cause-and-effect relationships.

Impact of External Factors: While this study focused on internal factors, external elements such as market demand, customer satisfaction, and competitive pressure could also be incorporated into future models to better understand their role in shaping organizational performance outcomes.

6. CONCLUSION AND SUGGESTIONS

In conclusion, this study makes a significant contribution to the body of knowledge by introducing a comprehensive model that links organizational support, employee competencies, and production efficiency. The originality of this research lies in its focus on the mediating role of employee competencies and the integration of technological and human resource investments in shaping organizational outcomes. The study's findings offer valuable practical implications for organizations seeking to enhance their operational performance and provide a solid foundation for future research.

6.1 Suggestions

Based on the findings of this study, several practical and strategic suggestions can be made for organizations in the health and beauty supplement industry, as well as for future research in the field.

Enhancing Organizational Support through Investment in Technology Organizations should continue to prioritize investments in automation and advanced technology systems that directly enhance production efficiency. By upgrading technological infrastructure, companies can streamline production processes, reduce costs, and improve the speed and

consistency of output. Given the high coefficient of impact that investment in technology has on employee competencies and production efficiency, firms in this sector should explore further opportunities to integrate cutting-edge technologies, such as AI and machine learning, into their production systems. Recommendation for Action: Develop a roadmap for adopting new technologies, regularly assess the technological needs of the organization, and allocate resources to research and development of automation systems to stay competitive.

Focus on Continuous Employee Development and Skill Enhancement The research suggests that training and development play a pivotal role in improving employee competencies, particularly in technical and managerial skills. Organizations should invest in continuous education and professional development programs aimed at enhancing not only technical knowledge but also leadership, adaptability, and creative problem-solving skills. This would ensure that employees are well-equipped to handle changes in production processes and market demands. Recommendation for Action: Implement ongoing training programs, mentorship, and skill-enhancement workshops that align with industry trends and the evolving needs of the workforce. Consider incorporating digital learning platforms for flexible training opportunities.

Fostering a Culture of Innovation and Learning Creating an organizational culture that promotes innovation, continuous learning, and knowledge sharing can contribute significantly to improving employee competencies. Encouraging employees to share ideas, collaborate, and experiment with new methods can lead to breakthroughs that enhance both individual and organizational performance. Recommendation for Action: Establish forums, workshops, and cross-departmental collaboration platforms to encourage employees to propose innovative solutions. Reward creative thinking and problem-solving that lead to tangible improvements in production processes.

Aligning Employee Competencies with Organizational Goals Organizations should ensure that the competencies being developed among their employees are aligned with the strategic goals and production targets. This alignment is crucial for optimizing production efficiency. The focus should be on building competencies that directly influence the desired outcomes, such as increased productivity and quality improvement.

Recommendation for Action: Conduct regular assessments to identify the competencies that are most crucial to organizational success and ensure that training programs focus on these specific areas. Also, establish clear links between individual performance and organizational goals to foster a sense of purpose and motivation among employees.

Monitoring and Evaluating the Impact of Organizational Support It is important for organizations to continuously monitor the effectiveness of their support systems, such as training programs, technology investments, and employee development initiatives. Regular assessments can help identify areas of improvement and ensure that the resources allocated to these initiatives are being used efficiently.

Recommendation for Action: Set up key performance indicators (KPIs) to measure

the impact of organizational support on production efficiency. Regular feedback loops and performance reviews can help fine-tune these programs for optimal results.

Future Research Directions Future research could further explore the long-term impact of organizational support and employee competencies on production efficiency, particularly in the health and beauty supplement industry. Longitudinal studies could offer a deeper understanding of how these factors evolve over time and provide a clearer picture of their sustained impact on organizational performance.

6.2 Suggestion for Future Studies:

Industry Comparisons: Conduct studies in other industries to assess the generalizability of the findings. Understanding whether similar patterns hold in manufacturing, service sectors, or other industries could offer new perspectives on how organizational support and employee competencies influence production efficiency.
Role of External Factors: Future research could examine the influence of external factors such as market trends, customer expectations, and regulatory changes on the relationship between organizational support, employee competencies, and production efficiency.
Impact of Digital Transformation: Investigating the role of digital transformation in improving organizational performance, particularly in the context of automation and AI, would be highly relevant for organizations looking to stay ahead in an increasingly digital economy.

6.2 Implementation of Strategic Recommendations

Organizations in the health and beauty supplement sector should consider implementing the suggestions mentioned above to build a robust and future-ready workforce capable of driving higher production efficiency. By aligning employee development with technological advancements and fostering an environment of continuous improvement, businesses can achieve sustained competitive advantages in the market.
Recommendation for Action: Develop a strategic plan that integrates technological investments with a focus on developing employee competencies. Ensure that the leadership team is committed to creating an environment that nurtures both innovation and efficiency, aligning organizational goals with employee skill development.

ACKNOWLEDGEMENTS

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Linking Handmade Vocabulary Media to for Enhanced Learning Outcomes

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ABSTRACT

A handmade learning media is always practical and fruitful for promoting the primary students' learning skills who are studying in various remote areas throughout Thailand. As it was made from simple available materials and included the students' characteristics and school stories. Therefore, three objectives of this research study aimed to investigate the effectiveness of handmade learning media for promoting the students' English vocabulary skills, the students' achievement and the students' satisfaction from using handmade learning material for enhancing the grade 6th students' English vocabulary skills at Ban Thung Sabaijai Border Patrol Police School. The samples were ten of grade 6th students: eight boys and two girls. The research instruments were pre-tests and post-tests and a satisfaction questionnaire. The data was collected and analyzed by using percentage value, average, standard deviations and t-test. The results revealed that the handmade learning media for improving the students' English vocabulary skills was high effective, as evidenced by higher scores from the post-test than the pre-test and students are satisfied with using handmade learning materials to develop English vocabulary skills. Furthermore, the students' school stories and characters were included in a way of constructed handmade learning materials leading them learn more and remember more the vocabulary items.

1. INTRODUCTION

The global demand for English proficiency has underscored the importance of effective pedagogical strategies in Teaching English as a Foreign Language (TEFL), particularly at the primary level where foundational language skills are established. In resource-constrained settings, such as remote schools in Thailand, innovative and cost-effective teaching methods are critical to fostering English vocabulary acquisition, academic achievement, and student engagement. Handmade learning media, crafted from locally available materials and tailored to students' cultural and contextual realities, have emerged as a promising approach to address these needs. By incorporating students' personal narratives and school-specific stories, such media enhance the relevance and memorability of vocabulary instruction, thereby promoting both cognitive and affective learning outcomes (All About Me, 2013; Krumam, 2019).

This study investigates the efficacy of handmade learning media in improving English vocabulary skills, academic achievement, and student satisfaction among Grade 6 students at Ban Thung Sabai Chai Border Patrol Police School, a remote educational institution in Thailand. The research aligns with the broader goal of developing practical, scalable solutions for TEFL in underserved contexts, contributing to the global discourse on equitable education.

Despite advancements in TEFL, significant challenges persist in primary-level foreign language education, particularly in aligning curricula with practical language use and addressing resource limitations. The Thai primary education system has undergone curriculum reforms to emphasize functional English skills applicable to daily life, career development, and higher education (Iam Sa-at, 2018). These reforms aim to equip students with communicative competence in a rapidly evolving global society. However, efforts to enhance English instruction, such as employing foreign teachers to facilitate authentic communication, often face logistical and financial constraints, particularly in remote areas (Bunnag, 2018). Moreover, conventional teaching aids, such as standardized textbooks or digital tools, frequently lack cultural relevance and physical accessibility in such settings, limiting their generalizability and effectiveness (Sunsinphai, 2020). The absence of consistent, context-sensitive teaching materials further exacerbates disparities in educational outcomes, underscoring the need for innovative, low-cost interventions that resonate with students' lived experiences and foster sustained engagement.

A critical gap in the current TEFL literature lies in the limited exploration of integrated, context-driven pedagogical frameworks that leverage handmade learning media to simultaneously enhance vocabulary acquisition, academic performance, and student satisfaction. While studies have demonstrated the efficacy of game-based or flashcard-based vocabulary instruction (Phonraksa, 2018; Plianpran & Nakchan, 2015), few have examined the role of student-centered, culturally embedded handmade media in remote primary schools. Existing research often focuses on urban or well-resourced contexts, overlooking the unique challenges of rural education, such as limited access to technology or trained educators (Kimsesiz et al., 2017; Platapiantong & Thienpermpool, 2020). Furthermore, there is a paucity of studies that integrate sociocultural learning theories with practical media design, particularly in addressing the affective dimensions of learning, such as student satisfaction and motivation. This research gap highlights the need for a comprehensive framework that combines cultural relevance, participatory design, and measurable academic outcomes to advance TEFL pedagogy in underserved settings.

This study makes several novel contributions to the field of TEFL, offering both theoretical and practical advancements. First, it develops and tests a culturally contextualized handmade learning media framework, incorporating students' personal and school-based narratives to enhance vocabulary retention and recall. This approach extends Vygotsky's sociocultural theory by demonstrating how mediated learning tools, grounded in students' lived experiences, facilitate language acquisition (Permama, 2020). Second, the study provides empirical evidence of the media's impact on academic achievement and student satisfaction, using a mixed-methods design that combines pre- and post-tests with satisfaction questionnaires. This methodological rigor strengthens the validity of the findings and addresses the need for robust data in TEFL research (Wattanakornpisan et al., 2020). Third, the research offers a scalable,

cost-effective model for educators in resource-constrained settings, aligning with global priorities for equitable education as outlined in UNESCO's Sustainable Development Goals. By focusing on a remote Thai school, the study addresses the practical significance of tailoring interventions to underserved populations, thereby enhancing the generalizability of its findings to similar contexts worldwide.

2. LITERATURE REVIEW

This section synthesizes theoretical foundations, empirical studies, and methodological approaches relevant to the use of handmade learning media for enhancing English vocabulary skills among primary students in resource-constrained settings. It addresses the study's objectives: (1) to evaluate the effectiveness of handmade learning media in improving English vocabulary skills, (2) to assess academic achievement, and (3) to explore student satisfaction among Grade 6 students at Ban Thung Sabai Chai Border Patrol Police School, a remote institution in Thailand. The discussion integrates Vygotsky's sociocultural theory, vocabulary acquisition frameworks, and affective learning principles, while critically analyzing recent developments (2020–present), gaps, and trends in TEFL research. All cited studies are peer-reviewed and published in reputable journals indexed in platforms such as Scopus or Web of Science, ensuring academic rigor.

2.1 Sociocultural Theory and Mediated Learning

Vygotsky's sociocultural theory (1978) posits that learning is a socially mediated process, where cultural tools and interactions facilitate cognitive development. In TEFL, instructional media serve as mediators that bridge learners' existing knowledge and new linguistic concepts (Permana, 2020). Handmade learning media, crafted from locally available materials and embedded with students' personal narratives and school stories, enhance vocabulary acquisition by grounding instruction in culturally relevant contexts. Permana (2020) found that interactive media, such as pictures and games, significantly boost elementary students' motivation and engagement, supporting the hypothesis that context-driven tools foster both cognitive and affective outcomes. This study extends Vygotsky's framework by testing handmade media as a scalable, low-cost mediator in rural settings.

2.2 Vocabulary Acquisition Frameworks

Vocabulary is a cornerstone of language proficiency, enabling effective communication and comprehension (Nation, 2013). Vocabulary acquisition involves explicit instruction (e.g., direct teaching of word meanings) and implicit exposure (e.g., contextual use in activities). Nation (2013) emphasizes three principles for effective vocabulary instruction: repetition, meaningful use, and opportunities for retrieval. Handmade learning media align with these principles by presenting vocabulary through visually engaging formats (e.g., story-based flashcards) and encouraging active participation (Wattanakornpisan et al., 2020). For primary students, building a robust vocabulary foundation is critical, as limited vocabulary knowledge impedes communication and academic progress (Huang, 1993).

2. 3 Affective Dimensions and Culturally Sustaining Pedagogy

The affective domain—encompassing motivation, satisfaction, and engagement—significantly influences language learning outcomes (Krashen, 1982). Culturally sustaining pedagogy (CSP), which emphasizes the integration of students' cultural identities into instruction, enhances affective engagement by making learning relevant and affirming (Paris, 2012). Handmade learning media, incorporating students' school stories and personal experiences, align with CSP by fostering a sense of ownership and cultural pride. Kimsesiz et al. (2017) demonstrated that project-based learning (PBL), a participatory approach akin to handmade media design, increased vocabulary retention and engagement among young EFL learners, highlighting the role of student-centered methods in addressing affective needs.

2.4 Meaning and Importance of English Vocabulary

Vocabulary is the foundation of language, enabling learners to convey meanings, emotions, and ideas (Nation, 2013). In TEFL, insufficient vocabulary knowledge hinders communication, reading comprehension, and academic achievement (Huang, 1993). For primary students, early vocabulary development is critical for long-term language proficiency. Twinkl (2019) categorizes English vocabulary into eight parts of speech (noun, pronoun, verb, adjective, adverb, preposition, conjunction, interjection), each requiring tailored instructional strategies. Handmade learning media, such as flashcards or narrative-based aids, provide visual and tactile cues that make these categories accessible, enhancing retention and recall (Krumam, 2019).

2.5 Teaching Techniques for English Vocabulary

Effective vocabulary instruction employs diverse, interactive techniques to address varied learning styles. Flashcards, for example, leverage visual memory to facilitate rapid word recognition (Starfishlabz, 2018). Krumam (2019) notes that flashcards are particularly effective for young learners, as they stimulate right-brain processing and enhance memorization. Phonraksa (2018) reported that game-based vocabulary instruction increased Grade 4 students' knowledge by 84.27%, with significant gains sustained after 14 days ($p < .05$). Similarly, Wattanakornpisan et al. (2020) found that flashcard games improved vocabulary acquisition and teamwork among university students, suggesting their versatility across educational levels.

Recent developments (2020–present) have explored technology-enhanced methods, such as mobile applications and digital games (Wichiannit, 2023). However, in rural Thailand, where access to technology is limited, handmade media offer a cost-effective alternative (Sunsinphai, 2020). By incorporating local narratives, these media enhance cultural relevance, making vocabulary instruction both engaging and memorable (Permana, 2020).

2.6 Handmade Learning Media: Concept and Benefits

Handmade learning media are instructional tools created from locally available materials (e.g., paper, fabric, recycled objects) to support experiential learning (All

About Me, 2013). Unlike standardized or digital aids, they are affordable, adaptable, and easily implemented in resource-constrained classrooms. Krugolf (2017) highlights their benefits, including increased student interest, clearer concept recognition, and time efficiency. By embedding students' personal and school-based narratives, handmade media enhance vocabulary retention by making learning contextually meaningful (Permana, 2020). The participatory design process, involving students and teachers, fosters collaboration and motivation, aligning with Vygotsky's concept of co-constructed learning (Kimsesiz et al., 2017).

Seven Teaching Steps Through Handmade Learning Media

Handmade learning media can be implemented through a structured pedagogical approach, adapted from Krugolf (2017) and Permana (2020):

1) Making Learning Fun: Use vibrant, interactive media to create engaging lessons that foster enjoyment.

2) Simplifying Complex Concepts: Present vocabulary through visuals and hands-on activities to clarify abstract terms.

3) Enhancing Memory: Employ repetition and multisensory engagement to improve retention.

4) Catering to Diverse Learning Styles: Design media for visual, auditory, and kinesthetic learners to ensure inclusivity.

5) Fostering Creativity: Involve students in media creation to spark curiosity and innovation.

6) Engaging Mind and Body: Incorporate physical interaction (e.g., manipulating flashcards) to promote active learning.

7) Building Partnerships: Use media as collaborative tools to strengthen teacher-student and peer interactions.

These steps support the study's objectives by facilitating effective vocabulary instruction, academic achievement, and student satisfaction.
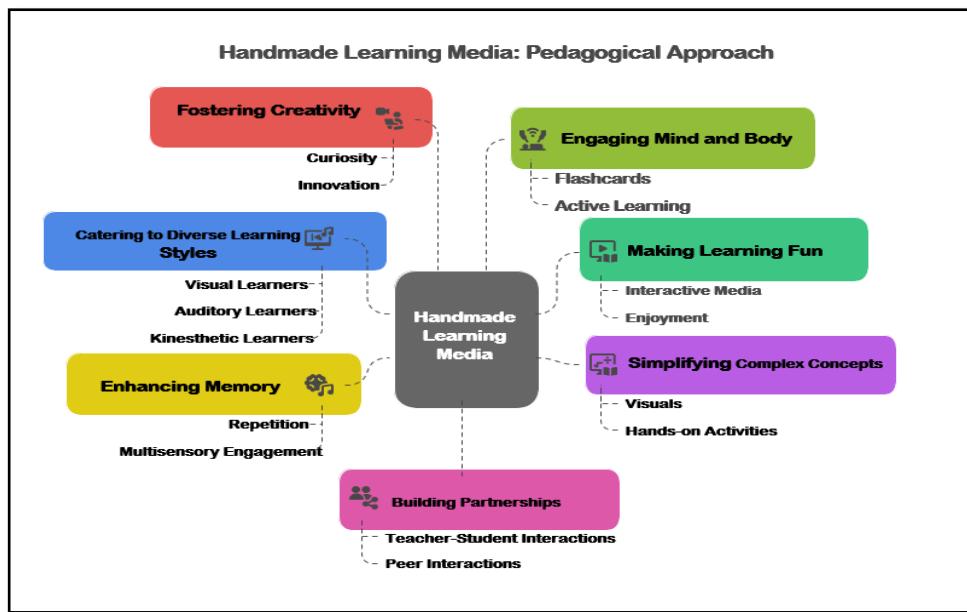
Figure 1 *Seven Teaching Steps Through Handmade Learning Media*

2.7 Related Research

Empirical studies have validated interactive and context-driven vocabulary instruction, though research on handmade media in rural settings is limited. Platapiantong and Thienpermpool (2020) found that mnemonic techniques combined with picture books significantly improved Grade 6 students' vocabulary retention (p < .05), highlighting the efficacy of visual aids. Jaitong (2023) reported that flashcard-based exercises enhanced Grade 2 students' phonics skills, with statistically significant improvements (p < .01). Phonraksa (2018) demonstrated that game-based instruction increased Grade 4 students' vocabulary knowledge by 84.27% (p < .05), with sustained gains after 14 days.

Rodkhum et al., (2016) found that games improved Grade 5 students' vocabulary learning and persistence (p < .01), emphasizing the durability of interactive methods. Kimsesiz et al. (2017) investigated PBL for preschool EFL learners, reporting higher vocabulary gains and engagement compared to traditional methods. While PBL shares participatory elements with handmade media, its focus on preschoolers limits its applicability to Grade 6 students. Permana (2020) underscored the role of interactive media (e.g., pictures, games) in boosting elementary students' motivation, providing a theoretical foundation for this study.

Recent studies (2020–present) have explored innovative TEFL strategies. Wichiannit (2023) integrated communicative language teaching (CLT) with mobile applications, reporting significant vocabulary gains among secondary students (p < .05). However, such technology-driven approaches are less feasible яких in remote areas, reinforcing the value of handmade media. Carlo et al. (2024) conducted a systematic review of vocabulary instruction for English learners, emphasizing the need for culturally responsive strategies, which aligns with this study's focus on student-centered, narrative-based media.

2.7 Gaps, Limitations, and Unresolved Challenges

Several gaps persist in TEFL research. First, there is limited exploration of handmade learning media in rural primary schools, with most studies focusing on urban or technology-rich contexts (Sunsinphai, 2020). This urban bias limits the generalizability of findings to settings like Ban Thung Sabai Chai Border Patrol Police School. Second, few studies integrate sociocultural theories with practical media design, particularly in addressing affective outcomes like satisfaction (Kimsesiz et al., 2017). Third, the adaptation of interactive methods (e.g., games, flashcards) to low-cost, culturally embedded media remains underexplored (Permana, 2020).

Methodological limitations include small sample sizes and lack of longitudinal data, which raise questions about the sustainability of learning gains (Phonraksa, 2018; Rodkhum et al., 2016). Many studies also rely on quantitative measures, neglecting qualitative insights into affective outcomes (Platapiantong & Thienpermpool, 2020). This study addresses these gaps by employing a mixed-methods design, combining pre- and post-tests with satisfaction questionnaires, and focusing on a rural context.

Recent TEFL trends emphasize student-centered, culturally responsive instruction, with a focus on sustainable, low-cost interventions (Carlo et al., 2024). The integration of cultural relevance into teaching aids, as seen in mnemonic techniques and picture books (Platapiantong & Thienpermpool, 2020), reflects a shift toward personalized learning. The growing emphasis on affective outcomes, such as motivation and satisfaction, aligns with global educational priorities, including UNESCO's Sustainable Development Goals (Permana, 2020).

This study contributes to these trends by developing a culturally contextualized handmade learning media framework, grounded in sociocultural theory and CSP. It provides empirical evidence of the media's impact on vocabulary skills, achievement, and satisfaction in a rural Thai school, offering a scalable model for TEFL in underserved contexts worldwide. The literature highlights the efficacy of interactive, culturally relevant methods in TEFL, with handmade learning media emerging as a promising solution for resource-constrained settings. By integrating sociocultural theory, vocabulary acquisition frameworks, and CSP, this study addresses critical gaps in rural education. The subsequent sections will present the methodology and findings, providing empirical support for the theoretical and practical contributions of handmade learning media.

3. RESEARCH METHODOLOGY

This section outlines the methodological framework employed to investigate the effectiveness of handmade learning media in enhancing English vocabulary skills, academic achievement, and student satisfaction among Grade 6 students at Ban Thung Sabai Chai Border Patrol Police School. The study adopts a mixed-methods approach, combining quantitative pre- and post-tests with a qualitative satisfaction questionnaire, to address the research objectives: (1) to evaluate the effectiveness of handmade learning media in improving English vocabulary skills, (2) to assess students' academic achievement, and (3) to explore students' satisfaction with the intervention. The methodology encompasses participant selection, research instruments, data collection

procedures, and data analysis techniques, ensuring rigor and alignment with the study's context in a resource-constrained rural setting.

3.1 Participants

The study involved a purposive sample of seven Grade 6 students from Ban Thung Sabai Chai Border Patrol Police School, a remote educational institution in Thailand. The sample comprised five boys and two girls, reflecting the school's demographic composition. The small sample size is typical of rural schools with limited enrollment, ensuring feasibility while maintaining focus on the target population. Participants were selected based on their enrollment in Grade 6 and willingness to participate, with informed consent obtained from guardians and assent from the students, adhering to ethical research standards.

3.2 Research Instruments

Three research instruments were developed to collect data aligned with the study's objectives:

3.2.1 Handmade Learning Media:

The primary intervention consisted of handmade learning materials designed to teach English vocabulary. These media, crafted from locally available materials (e.g., paper, cardboard, recycled objects), incorporated students' personal narratives and school-specific stories to enhance cultural relevance and engagement. Examples included flashcards, story-based vocabulary boards, and interactive visual aids tailored to Grade 6 curriculum standards.

3.2.2 Pre-Test and Post-Test:

A 30-item vocabulary test was administered before and after the intervention to measure academic achievement. The test assessed recognition, recall, and contextual use of English vocabulary words covered in the handmade learning media. Items were validated for content appropriateness by TEFL experts and piloted to ensure clarity and reliability. The pre-test established baseline vocabulary knowledge, while the post-test evaluated learning gains post-intervention.

3.2.2 Satisfaction Questionnaire:

A structured questionnaire assessed students' satisfaction with the handmade learning media across three dimensions: content, design, and benefits. The questionnaire used a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) to measure perceptions of clarity, interest, appropriateness, and utility. Items were adapted from established TEFL satisfaction surveys and reviewed for cultural and age appropriateness.

3.3 Data Collection Procedures

Data collection occurred over a four-week period, following a structured process:

3.3.1 Pre-Test Administration:

At the study's outset, the pre-test was administered to all seven participants in a controlled classroom setting to assess baseline English vocabulary knowledge. The test duration was 45 minutes, with instructions provided in Thai to ensure comprehension.

3.3.2 Intervention Implementation:

The handmade learning media were integrated into regular English classes for three weeks, with two 60-minute sessions per week. Lessons followed a student-centered approach, incorporating activities such as vocabulary games, storytelling, and collaborative media creation. The researcher and classroom teacher facilitated sessions to ensure consistency and engagement.

3.3.3 Post-Test Administration:

At the end of the intervention, the post-test was administered under conditions identical to the pre-test to measure vocabulary learning gains. The test was conducted one week after the final intervention session to minimize immediate recall effects.

3.3.4 Satisfaction Questionnaire:

Following the post-test, participants completed the satisfaction questionnaire in a 30-minute session. The questionnaire was administered in Thai, with assistance provided for students with limited literacy skills to ensure accurate responses.

3.4 Data Analysis

Data were analyzed using both descriptive and inferential statistical methods to address the research objectives:

3.4.1 Pre-Test and Post-Test Analysis:

Descriptive Statistics: Mean scores (($\bar{x}$)) and standard deviations (S.D.) were calculated for pre-test and post-test results to summarize students' vocabulary performance.

Inferential Statistics: A paired-sample t-test was conducted to compare pre-test and post-test scores, determining the statistical significance of learning gains. The significance level was set at .05, as is standard in educational research, to test the hypothesis that post-test scores were significantly higher than pre-test scores.

3.4.2 Satisfaction Questionnaire Analysis:

Descriptive Statistics: Mean scores (($\bar{x}$)) and standard deviations (S.D.) were computed for each questionnaire item and subscale (content, design, benefits) to assess satisfaction levels. Responses were interpreted using a predefined scale: 1.00–2.00 (low), 2.01–3.00 (moderate), 3.01–4.00 (high), and 4.01–5.00 (very high).

Aggregation: Overall satisfaction was calculated by averaging scores across all subscales, providing a comprehensive measure of students' perceptions.

Data were processed using statistical software (e.g., SPSS or Excel), with results presented in tabular format for clarity. The analysis ensured alignment with the study's objectives, providing robust evidence of the intervention's effectiveness and students' satisfaction.

3.5 Ethical Considerations & Limitations

Ethical protocols were strictly followed to protect participants' rights and well-being. Informed consent was obtained from parents/guardians, and students provided assent after receiving age-appropriate explanations of the study's purpose and procedures. Anonymity was maintained by assigning participant codes, and data were securely stored to ensure confidentiality. The study posed minimal risk, as it involved standard educational activities, and participants could withdraw at any time without consequences.

The methodology has several limitations. The small sample size (n=7) may limit the generalizability of findings, though it is representative of the rural school's context. The short intervention duration (three weeks) may not capture long-term retention effects. Additionally, the satisfaction questionnaire relied on self-reported data, which may be subject to response bias. These limitations are addressed in the discussion section, with recommendations for future research.

4. FINDINGS AND DISSCUSSIONS

This section presents the results of the study investigating the effectiveness of handmade learning media in enhancing English vocabulary skills, academic achievement, and student satisfaction among seven Grade 6 students at Ban Thung Sabai Chai Border Patrol Police School. The findings are organized according to the research objectives and discussed in relation to existing literature, addressing the intervention's impact and implications in a resource-constrained rural context.

4.1 Academic Achievement

Table 1: Pre-test and Post-test Results for Academic Achievement

Test	N	Full score	Mean ($\bar{x}$)	S.D.	T-test	Sig
Pre-test	7	30	7.57	15.86	7.73	0.05
Post-test	7	30	21.14	6.26		

The pre-test mean score was 7.57 (S.D. = 15.86), indicating limited baseline vocabulary knowledge. After the three-week intervention using handmade learning media, the post-test mean score increased significantly to 21.14 (S.D. = 6.26). A paired-sample t-test revealed a statistically significant improvement (t = 7.73, p = 0.05), confirming that the intervention effectively enhanced students' English vocabulary

skills. The mean difference of 13.57 points underscores the substantial learning gains achieved through the use of culturally relevant, hands-on materials.

The significant improvement in post-test scores aligns with prior research on the efficacy of interactive and contextually relevant teaching aids in vocabulary acquisition. For instance, Phonraksa (2018) found that game-based learning significantly improved English vocabulary retention among Thai elementary students, suggesting that engaging, student-centered methods enhance learning outcomes. Similarly, Kimsesiz et al. (2017) demonstrated that project-based learning, akin to the hands-on creation of media in this study, fosters vocabulary acquisition in young learners by promoting active engagement. The handmade media's incorporation of students' personal narratives and local contexts likely increased motivation and relevance, supporting Paris's (2012) culturally sustaining pedagogy, which emphasizes embedding learners' cultural experiences in education. The reduced standard deviation in post-test scores (from 15.86 to 6.26) indicates more consistent performance across participants, suggesting that the intervention was broadly effective despite varying baseline abilities.

4.2 Student Satisfaction

Student satisfaction was assessed across three dimensions—content, design, and benefits—using a 5-point Likert scale questionnaire. The results are summarized below.

Table 2: Satisfaction with Content

Item	Description	Mean ($\bar{x}$)	S.D.	Interpretation
1.1	Clear and easy to understand	4.00	1.51	High
1.2	Modern and interesting	4.14	1.57	High
1.3	Appropriate amount of content	4.29	1.25	High
1.4	Sentences arranged in easy-to-understand steps	4.43	0.79	High
	Total	**4.21**	**1.29**	**High**

The overall mean for content satisfaction was 4.21 (S.D. = 1.29), indicating high satisfaction. The highest-rated item was the logical arrangement of content ($\bar{x}$ = 4.43, S.D. = 0.79), while clarity received the lowest score ($\bar{x}$ = 4.00, S.D. = 1.53), possibly due to varying literacy levels among participants.

Table 3: Satisfaction with Design

Item	Description	Mean ($\bar{x}$)	S.D.	Interpretation
2.1	Interesting and colorful illustrations	4.29	1.11	High
2.2	Suitable for students' level	4.43	1.13	High
2.3	Encourages and cultivates interest	4.86	0.38	Very High
2.4	Appropriate and readable font size	4.43	0.79	High
	Total	**4.50**	**0.85**	**Very High**

The design aspect received the highest overall satisfaction ($\bar{x}$ = 4.50, S.D. = 0.85), with the ability to stimulate interest rated highest ($\bar{x}$ = 4.86, S.D. = 0.38). The

colorful illustrations were slightly less favorably rated ($\bar{x}$ = 4.29, S.D. = 1.11), potentially due to the simplicity of materials used in a resource-constrained setting.

Table 4: Satisfaction with Benefits

Item	Description	Mean ($\bar{x}$)	S.D.	Interpretation
3.1	Improved English vocabulary skills	5.00	0.00	Very High
3.2	Ability to use vocabulary in the future	4.57	1.13	Very High
	Total	**4.79**	**0.57**	**Very High**

The benefits dimension yielded the highest satisfaction score ($\bar{x}$ = 4.79, S.D. = 0.57), with unanimous agreement that the intervention improved vocabulary skills ($\bar{x}$ = 5.00, S.D. = 0.00). The perceived future applicability of learned vocabulary was also highly rated ($\bar{x}$ = 4.57, S.D. = 1.13).

Table 5: Overall Satisfaction by Dimension

Item	Dimension	Mean ($\bar{x}$)	S.D.	Interpretation
1	Contents	4.21	1.29	High
2	Design	4.50	0.85	Very High
3	Benefits	4.79	0.57	Very High
	Total	**4.50**	**0.90**	**Very High**

Overall satisfaction was very high ($\bar{x}$ = 4.50, S.D. = 0.90), with benefits ($\bar{x}$ = 4.79) and design ($\bar{x}$ = 4.50) rated highest, followed by content ($\bar{x}$ = 4.21).

The high satisfaction levels reflect the appeal of handmade learning media in engaging young learners, consistent with Permana (2020), who noted that interactive and visually appealing materials enhance student motivation in vocabulary learning. The design's ability to stimulate interest ($\bar{x}$ = 4.86) aligns with Krashen's (1982) affective filter hypothesis, which posits that low-anxiety, engaging environments facilitate language acquisition. The unanimous satisfaction with improved vocabulary skills ($\bar{x}$ = 5.00) corroborates the academic achievement findings and echoes Platapiantong and Thienpermpool's (2020) study, which found that mnemonic and visual aids significantly boosted vocabulary retention. The slightly lower content satisfaction ($\bar{x}$ = 4.21) may reflect challenges in tailoring content to diverse learner needs in a small, heterogeneous group, as noted by Carlo et al. (2024). The use of locally sourced materials and student narratives likely enhanced cultural relevance, supporting Nation's (2013) emphasis on contextualized vocabulary instruction.

4.3 Limitations and Implications

The study's small sample size (n=7) limits generalizability, though it is representative of the rural context. The three-week intervention may not capture long-term retention, and self-reported satisfaction data may be subject to bias. Despite these constraints, the findings highlight the potential of low-cost, handmade media to address educational challenges in resource-scarce settings. The intervention's success suggests that similar approaches could be adapted for other subjects or grade levels, as recommended by Rodkhum et al., (2016), who advocated for game-based learning to enhance engagement.

The significant academic gains and high satisfaction underscore the value of culturally relevant, student-centered interventions in rural education. Educators in similar contexts can leverage locally available materials to create engaging learning tools, reducing reliance on expensive resources. The findings also support the integration of creative, hands-on activities in TEFL curricula to foster both skill development and positive attitudes toward learning.

The handmade learning media significantly improved Grade 6 students' English vocabulary skills, as evidenced by a 13.57-point increase in post-test scores (p = 0.05). Students expressed very high satisfaction ($\bar{x}$ = 4.50), particularly with the intervention's benefits and design. These results affirm the effectiveness of low-cost, culturally tailored materials in enhancing academic achievement and engagement in resource-constrained settings, offering a scalable model for rural education. Future research should explore long-term retention and applicability across diverse educational contexts.

5. CONCLUSION AND RECOMMENDATIONS

The researchers summarized the research results of the use of handmade learning media to develop english vocabulary skills of grade 6th students at Ban Thung Sabaijai Border Patrol Police School.

Using handmade learning media to develop English vocabulary skills with the objective of Studying the efficiency, achievement and satisfaction of 7 students in grade 6th of the Ban Thung Sabaichai Border Patrol Police School using the sample sampling method. The results can be summarized as follows.

5.1 Achievement of students using handmade learning media to improve English vocabulary skills.

When comparing test results, the samples are subjected to the same tests before and after school. Through practice, the results show the preschool mean (x=7.57) and standard deviation (S.D.=15.86). (x=21.14) and standard deviation (S.D.=6.26), with an average deviation of (x=13.57) and a standard deviation of (S.D.=11.63) Research has shown that the sample has gained a better understanding of using manual media to improve English vocabulary skills after learning. The handmade vocabulary list was observed to have an average difference of 13.57 in the after-school test with an average score of 21.14. The standard deviation is 11.63. In summary, using manual media to improve English vocabulary skills is effective. The statistical significance is as follows: 0.5.

5.2 Using handmade learning media to improve satisfaction with English vocabulary skills

Content, design, benefits Research has found that there are various aspects of the average level and standard deviation in using handmade learning media to develop english vocabulary skills for primary school students at the end of the year for teaching. The average total number of people at Ban Thung Sabaichai Border Patrol Police School is 4.5, and the S.D. is 0.90. The sample satisfaction is the highest.

A Study on Improving English Vocabulary Skills of Grade 6th Students Using Handmade Materials Ban Thung Sabaichai Border Patrol Police School.

Analysis from the pre-post test was reviewed that the sample group achieved better grades after learning English through Manual media vocabulary. This indicates that using handmade teaching materials to improve English vocabulary skills is very successful. This can be seen from the difference in scores between pre-school and post-school tests. In addition, use of handmade teaching materials to develop English vocabulary skills. Students can learn on their own to enhance their vocabulary knowledge and they can be used for effective communication, in line with Teerawara Platapienthong (2019). Learn how to improve vocabulary and durability by using memory techniques and elementary school vocabulary books 6.

From research it was found that Vocabulary learning achievement using mnemonic techniques combined with picture books. Vocabulary of students in Grade 6th at Nakhon Pathom Kindergarten School after studying was higher than before studying by testing the difference between before studying and after studying. Inspection found that the average achievement after study was high, than before studying consistent with research hypothesis number 1, it was determined that students' vocabulary knowledge after study using mnemonic techniques along with a picture book with higher vocabulary than before studying. Results of satisfaction assessment research satisfied with the results of using handmade teaching materials to develop English vocabulary skills at the highest level. This is in line with the research of Pennapa Tadklang (2019) who studied the development of results of learning English vocabulary using activity-based teaching methods for Grade 2th students at Wat Khian Khet School. The results of the study of opinions of students in Grade 2 can be concluded that the sample group has opinions of students towards learning English vocabulary using the teaching method is at a high level. It shows that students have student opinions on learning. English vocabulary using activity-based teaching methods.

In summary, the research results on the use of handmade learning media to develop English vocabulary skills of primary school students grade 6th at Ban Thung Sabaijai Border Patrol Police School. Using teaching materials to develop English vocabulary skills can promote learning. The students are also very satisfied with the handmade learning media.

5.3 Suggestions

Suggestions from the results of a study on the use of handmade teaching materials to develop English vocabulary skills of students in the sixth grade of the Border Patrol Police School, Ban Thung Sabai Jai. The use of handmade learning media to develop English vocabulary skills can demonstrate better learning outcomes and comprehension. Through handmade learning media, students can easily learn anytime, anywhere. Students can freely choose to read according to their interests. Therefore, this type of teaching can also be applied to other subjects.

Suggestions for the next study

1. Research should be conducted with learners at other levels. In addition, course content should be adjusted to suit learners.

2. Research resources outside of the website, such as books, articles, or papers.

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Thinking Less in the Age of Machines: AI Overuse and Cognitive Decline

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Abstract

As artificial intelligence (AI) grows exponentially and becomes embedded in our day-to-day life, important questions emerge: is it helping us think better, or is it making us think less? This position paper explores how overreliance on AI might affect important cognitive skills like memory and critical thinking. Drawing from current empirical research, this paper asserts that while AI offers substantial benefits, it encourages users to rely on it. Further, this paper explains key concepts - cognitive offloading (the use of external means to store information) and working memory (the memory involves not only for storage but for manipulation and transformation of information). Research shows that there is a strong relationship between offloading of information to devices and declined effort to remember and reason. It also points out that while offloading can be a smart way to work efficiently, the risk lies in using AI mindlessly. In conclusion, the paper calls for a balanced approach, advocating for self- reflection and awareness, and institutional responsibility. It recommends selective and strategic offloading, retrieval-based learning, and clear AI-use policies to mitigate potential cognitive decline.

Keywords: AI overreliance, cognitive offloading, working memory

1. INTRODUCTION

It was around 2023 when AI technologies became popular. It gained even more traction as generative AI was introduced. It was all over social media, and became the talk of the town among educators and students. Among the most popular AI technologies are: chatbots e.g. Chatgpt and Copilot, virtual assistants e.g. Siri and Google assistant, and adaptive learning systems e.g. Duolingo and Kahoots. "AI is increasingly embedded in daily life" (Artificial Intelligence Index Report, 2025, p. 4). It is safe to say that people across industries and institutions may it be public or private have partly or wholly employed AI to kickstart or complete a task. Academic institutions are no exception. As a promising and novelty innovation, it is gaining roots in the classroom.

Some of the ways students use AI include: brainstorming, summarizing information, getting a quick answer to a question, improving essays, creating presentations, and helping with assignments (Freeman, 2025; Microsoft AI in

Education, 2025). Among learners, this is a welcomed innovation and is received positively (Sirirojjananan, 2023; Yilmaz et al., 2023; Bok and Cho, 2023; Ho, 2024).

Among educators, however, there is a growing concern. During the 9th Asia International Multidisciplinary Conference 2025 panel discussion, Professor Abudullah Mohd Nawi expressed concerns regarding what might be happening to his students if he himself, a reflective thinker, somehow to some degree noticed a "decreased cognitive ability" as a result of using AI for years. This resonates with the comments from Gerlich's study (2025) participants who expressed the following: "*The more I use AI, the less I feel the need to problem-solve on my own. It's like I'm losing my ability to think critically*," and "*I find myself using AI tools for almost everything— whether it's finding a restaurant or making a quick decision at work. It saves time, but I do wonder if I'm losing my ability to think things through as thoroughly as I used to*".

This is a position paper drawing on current research to explore how overreliance on AI may affect human cognition. It aims to synthesize current research on how AI overuse may diminish human cognitive abilities. It is based on the premise that although AI offers myriad benefits, its overuse promotes excessive cognitive offloading that may have negative effects on working memory and critical thinking.

This paper begins with definitions of cognitive offloading, and working memory, followed by discussions on the effects of cognitive offloading on working memory and critical thinking skills, as well as opposing views on impacts of cognitive offloading. It concludes by looking into the differences between offloading before and during the AI era, and what all these entail to individuals and educational institutions of the AI world.

2. DEFINITION

2.1 Cognitive Offloading and Working Memory

Cognitive offloading refers to the use of external means like paper-and-pen, calculator, GPS, smartphone, and now the internet to store information. So, instead of holding information in mind, an individual uses these external means to store information that can be accessed any time. Hence, an individual may allot more concentration on other more mentally demanding aspects of the task.

For example, instead of holding in mind a list of items to be bought at the grocery one may rather jot them down using pen-and-paper. This way the individual may then focus more on mentally demanding tasks such as safely navigating to the location, or assessing products to buy. Nowadays, many people, especially younger generations, highly rely on AI and search engines for tasks ranging from scheduling and setting reminders to finding general information or choosing a hotel. Using the same example, AI dependent people may use an app and dictate the list of groceries to be bought; the AI will "write them down". Then, on the way to the groceries, some may use a GPS app or a built-in navigator system, or maybe the car itself is electronic and heavily AI-assisted. Further, in the grocery while choosing between two items, AI-dependent individuals may use Google search to ask for the differences between the two using voice modes. Comparing the former and latter examples, one can notice how AI-

dependent individuals may have lesser opportunities of mentally engaging on the task at hand as most tasks are assisted.

Working memory is more than just a short term memory. It is a newer concept that focuses not only on memory structure but also on memory processes and functions. This dynamic nature presented by the Baddeley-Hitch Model (as mentioned in Chai, et al., 2018) involves more than just storing, it manipulates and transforms information, thus working memory (Dosher, 2006).

For example, the ability to hold in mind grocery items while jotting them down or while you are looking for a pen and paper; or holding in mind a list of grocery items while jotting them down (or looking for a paper and pen) and engaging in a conversation at the same time. Or reading and remembering the first sentence in a paragraph while reading and understanding the rest of the sentences. Or holding in mind a question while listening to the rest of an audio. Or holding numbers in mind while performing mathematical problems. Although the working memory capacity of each individual varies, some may be able to hold more than others, it can be enhanced through proactive control and rehearsal mechanisms (Apter, 2013; Spencer, 2011).

3. DISCUSSION

3.1 Effects of Cognitive Offloading to Working Memory

It is important to note that cognitive offloading has increased over the years but more
anything, the ability to quickly finish tasks that otherwise would have taken days to complete, and the ability to retrieve information anytime and anywhere encourage strong tendencies for users to rely on it more and more. People use AI from the minutest task of checking grammar, spelling, or punctuation to generating ideas, writing, or creating codes and applications. Now people go online not only for recreational purposes, but also for mental engagement and creative expression (Kooli, 2025).

This increased cognitive offloading is significant in the equation as it has a crucial role in the decline of working memory.

In an experiment made by Grinschgl and her colleagues (2021), they found that firstly, reduced offloading resulted in lower immediate task performance but promoted more accurate memory; and secondly, offloading behavior is detrimental to memory for both immediate and subsequent memory performances.

Taking this into account, we can deduce that working memory declines as cognitive offloading increases, and reversely, working memory improves as cognitive offloading decreases. Empirical support to this claim can be found in findings on recalling information by (Eskritt & Ma, 2014; Kelly & Risko, 2019; Pyke & LeFevre, 2011; Sparrow et al., 2011; Tarde, 2023).

Further, working memory goes hand in hand with active mental processes such as focus, verbal repetition of information internally, visualization, access to long term memory, and active retrieval of information.

Additionally, working memory is strongly associated with reading comprehension (Daneman & Carpenter, 1980), logic and reasoning (Kyllonen & Christal, 1990) (Kyllonen & Stephens, 1990), and IQ scores (Engle, et al, 1999). Findings from Harvey (2025) suggest that there is a direct proportional relationship between working memory and reading proficiency. This means that working memory is not static but rather has a variable nature. It can be enhanced through mental engagement or stagnated by the lack of it. It plays a crucial role in learning and mastering new skills.

The strong association between cognitive offloading and working memory is undeniable. The issue with excessive, non-strategic cognitive offloading is that it leads to "adaptive forgetting" of unloaded information (Gerlich, 2025). An unloaded information that sits on the external environment, no or less active effort to encode them in memory, eventually becomes forgotten. At present, with AI and internet engines ready to provide information anytime, anywhere, learners become mentally passive (Abdelghani, 2023). Knowing that they have access to information at any time, the effort to actively retrieve information in memory seems unneeded. A passive mind leads to stagnant memory. Having said this, an unexercised working memory will result in reduced ability to remember and diminished critical thinking skills.

3.2 Cognitive Offloading and Diminished Critical thinking

Critical thinking refers to the ability of an individual to assess and analyze situations to form judgment (Sanders and Moulenbelt, 2011).

When generative AIs came out, people were awed at how quick, how erudite, and seemingly accurate they were. As time passed, despite precautions on their negative effects, the reality is many are using them regardless. Not surprising though, the quick answers from AI tools may provide an instant boost on the immediate task and perhaps to some extent give users false notion of being knowledgeable. However, in the long run and with excessive use and reliance, this lessens the need to think, analyze, and judge deeply as answers are readily available. In effect, critical thinking ability is weakened.

In a study made by Gerlich (2025), 666 participants of varying age groups, educational background and professional fields completed a structured survey questionnaire that included items from Halpern Critical Thinking Assessment (HCTA) tool and Terenzini's self-reported measures of critical thinking. Results showed the following: (1) increased use of AI tools is associated with lower critical thinking skills, (2) higher AI usage leads to greater cognitive offloading, and (3) as cognitive offloading increases, critical thinking decreases. Moreover, Wecks and colleagues (2024), found that non-users of Generative AI outperformed GenAI users, scoring on average 6.71 (out of 100) points higher.

This is in congruence with "Google effects", which "refers to the idea that individuals rely on the internet as a source of knowledge rather than remembering it for themselves" (Gong & Yang, 2024, p. 1). Quick responses from the internet may be deemed convincing leading internet users to offload responsibility of "remembering" information on it. And as the reliance on these technologies widen and deepen, they may begin to think that they have become adept at thinking and remembering information themselves. Further, as individuals become proficient and skilled at using these technologies, they may tend to over-estimate their own competencies (Abdelghani, et al, 2023). This perception of the internet and AI technologies as bottomless source knowledge that can be retrieved any time needed, coupled with the belief of gaining high abilities as a result of using them can lead to uncontrolled offloading, passive learning and diminished critical thinking skills.

3.3 Opposing View: Cognitive Offloading, an Efficiency Mechanism

While much research supports the negative relationship between cognitive offloading and working memory, computational model by Gilbert (2024) argues that cognitive offloading is best understood as a value-based decision-making process, rather than simply a failure or weakening of memory. It further posits that people are not losing memory ability, but making rational trade-offs: if they trust external storage, they invest less effort in memorizing the same information. It is an efficiency mechanism, not a deficit.

This paper recognizes the value of using technologies strategically to one's advantage. One may decide which to offload and which to retain in internal memory. However, we contend that for some individuals, cognitive offloading can have adverse effects on working memory: individuals who perceive these external storages as reliant and trust-worthy resulting in disabling dependency.

Grinschgl's and her colleagues' third experiment from the same study (2021), revealed that cognitive offloading has no detrimental effect on working memory which supports Gilbert's claim of offloading as an efficient mechanism. However, it is worth noting that this result was seen among participants who had an explicit goal to "acquire new memory representations". So they may have counteracted the negative effects of offloading on memory. This supports our stand that offloading to devices especially in educational settings should be supervised as not all may have the goal/motivation to learn. Also, as it is easy to fall into using technology carelessly and unawarely. As stressed by Salomon (1990), individual characteristics are significant factors when considering the effects of technology on cognition. Both Grinschgl's and Salomon's findings implicate the relevance of active engagement e.g. reflection and goal-setting, and mindful use of technology.

4. CONCLUSION

4.1 Differences in Cognitive Offloading before and during AI Era

Cognitive offloading has been used by people long before the advent of digital and AI technology. People strategically offload information to efficiently perform a task. For instance, people use maps to navigate new places, library users use card

catalogs to find books, index cards and folders to organize information for teaching or business, or use a physical calendar and planner to manage and coordinate time. Now comes the digital and AI era, individuals rely on Google maps and other GPS navigating systems for directions. All people need to do is type in the name of the place or the place coordinates which, by the way, are all readily available online. Or students can now type in the name of the book they are looking for, and the computer will locate it for them; complete with codes, aisle number, building floor number, etc. Or individuals set the date and time of events on their phone calendar application. Notification and alarm settings are available in whichever way is convenient for the individual.

We observed two main distinctions in how cognitive offloading occurs before and during the digital and AI era: one, active mental involvement; and two, the degree of reliance. Firstly, the examples above suggest that cognitive offloading before the digital and AI era required comparatively greater active mental involvement than it does today. Maps provide directional information, however, an individual needs to "read" the map, figure it out, and connect it to the topography in real time whilst driving. Whereas, with Google maps and GPS navigating systems, the mental involvement is far lesser - follow the arrow and listen for further instructions or information. Finding books before the digital and AI era, includes browsing through hundreds of catalogs arranged alphabetically, reading the catalog, and figuring out where it is in the library, and reading through the arrays of books to get to that one particular location. Secondly, the reliance on today's external environment is far greater than before, sometimes accepting it without question. In a study made by Freeman (2025), 18% of the participants revealed that they include AI-generated content directly to their work. In the classroom, as observed and experienced by educators, many students use AI-generated text verbatimly. These demonstrate high-level reliance and misuse of digital and AI technologies.

This is not to say that digital and AI technologies are unwelcome; they in fact have been helpful and convenient in so many ways. They are not going away; and they will certainly shape our future. This being said, there is clear evidence of its overuse, and its inimical relationship with working memory and critical thinking. Bai, et al, 2023; Akgun & Toker 2024 believe that misuse of AI can lead to cognitive decline in the long term; and detrimental to working memory and critical thinking skills development (Tarde, 2023).

In this AI world, learners and educational institutions play a more crucial role than ever before.

4.2 The Burden Lies on the Individual and Educational Institution

Considering what we know about working memory, critical thinking and how these are affected by excessive cognitive offloading, individuals and educational institutions have now on their shoulders a huge responsibility of mitigating possible negative effects of digital and AI technology overuse.

Although the current technologies are pulling us away from what now seems to be "traditional methods", for instance using pen and paper, and activities requiring routine

memorization, it is essential to retain some of the basics, or employ the basics and strategically supplement them with technologies.

Individual

- Exercise your mind. Memory is very much like muscles that need to be worked out to develop. In an experiment made by Agarwal and her colleagues (2017), they found that students with both lower and higher working memory capacity learned more when they practiced retrieval compared to restudying. Further, when assessed two days after, students with lower working memory capacity benefited more when they practiced retrieval compared to restudying. So, instead of simply re-reading and highlighting notes, intentionally recall them.

- Offload selectively and strategically with the intention of not only maximizing immediate performance but also improving one's memory for subsequent tasks. Individuals must consciously make decisions of what to remember internally and store externally. There must be an intentional choice to think rather than rely on external stored information (Salomon, 1990, mentioned in Grinschgl, et al., 2021).

- Adapt a questioning mindset. Nowadays, AI has answers to everything; question the information, verify and re-verify it.

- For parents to be vigilant on their children's use of digital and AI technology for school work and for general use. There is a rising number of digital addiction among children, especially those having their own mobile phone and/or computer (Oktay and Ozturk, 2024). An experiment by Armitage and colleagues (2020) showed that even young children have the propensity to use external tools as aid. And although strategic offloading increases with age, children need supervision on when to offload and when not to, and how to use digital tools to promote mental proficiency and critical thinking.

Educational institutions

- For teachers to regulate internet and device usage in the classroom. Learners need guidance in navigating through learning with AI as a tool; it is easy to fall into using it as a replacement rather than a partner.

- Despite technological advancement, classics like recall activities, paper-and-pen quizzes and note-taking, or think-pair-share are still valuable.

- For institutions to lay out strong, clear policies on AI usage across all levels of education. Many students have been using Chatgpt, Grammarly, and Microsoft CoPilot (most commonly used tools) to search for information, check grammar, summarize and paraphrase documents and yet expressed inadequacy in terms of confidence and knowledge of AI (Digital Education Council, 2024). The danger with this situation is that it can result in mindless, misuse, and overuse of technology.

- AI literacy is a must not only for students but more so with educators who are the navigator in all these.

AI technology must be treated as a tool, a means, an aid to augment our cognitive limitations. It must not in any way replace the human mind, however, this might not be far from happening if we let it. Thus, AI literacy is key; understanding one's mental capacity is crucial; and a strong, clear AI framework policy is a must to set boundaries between human cognition and AI use. In the age of machines, we must be thinking more critically, more vigilantly.

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A Study of the Effectiveness of Thorndike's Connectionism Theory on English Language Learning for Daily Life

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ABSTRACT

*This study addresses the need for effective pedagogical tools in vocational education, specifically for teaching practical English language skills. It investigates the application of Thorndike's connectionism theory in developing instructional materials. The research aimed to: (1) develop and evaluate the efficiency of an instructional document for the course "English for Daily Life" (Code 20000-1201) against the 80/80 standard criterion; (2) compare students' learning achievement before and after using the materials; and (3) assess student satisfaction with the developed materials. A one-group pretest-posttest experimental design was employed. The sample consisted of 35 first-year vocational certificate students in electrical power at Pattani Technical College. The intervention involved an 8-unit instructional document and lesson plans designed based on Thorndike's principles (laws of readiness, exercise, and effect). Data were collected using a learning achievement test (IOC = 0.67-1.00, reliability = 0.913) and a satisfaction questionnaire (IOC = 0.67-1.00, reliability = 0.951). Data were analyzed using mean, standard deviation, percentage, and dependent-samples *t* tests. The efficiency of the instructional materials was 81.11/80.14, exceeding the 80/80 criterion. The posttest scores (M = 64.89, SD = 4.62) were significantly higher than the pretest scores (M = 25.37, SD = 5.00) at the .01 level, *t*(34) = 48.051. Overall student satisfaction was at the highest level (M = 4.51, SD = 0.45). The instructional materials developed under Thorndike's connectionism theory are effective, significantly improve learning achievement, and are met with high student satisfaction. This approach is recommended for teaching practical English in vocational settings.*

Keywords: Thorndike's connectionism theory, vocational education, English for Daily Life, instructional materials, learning achievement

1. INTRODUCTION

In vocational education, particularly in technical fields, a key challenge is making general subjects like English feel relevant and practical to students. Many students struggle to connect language learning with their future careers, which can lead to low motivation and poor academic performance. Traditional lecture-based methods often fall short of equipping students with the real-world communication skills required by the national vocational curriculum. In an effort to address this, educators are looking to foundational learning theories to create more effective teaching strategies. The development of hands-on, or "handmade," learning media has emerged as a promising approach to promote the acquisition of practical skills, including English vocabulary, while simultaneously enhancing student achievement and satisfaction. Edward Lee Thorndike's Connectionism Theory, developed in the early 1900s, offers a promising framework. This theory, based on the principles of stimulus-response,

reinforcement, and habit formation, suggests that learning occurs by strengthening connections between a situation and a response. By applying his Laws of Learning-specifically the Law of Exercise and the Law of Effect-it may be possible to design a pedagogical approach that reinforces practical, everyday English usage. However, the relevance and effectiveness of these classic principles in a modern, cross-cultural setting, such as Thai vocational education, remains an area that requires further investigation (Joanisse, & McClelland, 2015; Zimmerman, & Schunk, (2014).

The challenges in English language learning within Thai vocational education can be framed within three foundational pillars. First, from a Curriculum and Policy Framework perspective, the Office of the Vocational Education Commission's curriculum (Office of the Vocational Education Commission, 2019) mandates the development of practical English skills, yet there is a lack of specific guidance on the most effective pedagogical approaches and instructional materials to achieve these objectives in technical fields. Second, in Pedagogical Theory and Material Design, traditional approaches often fail to operationalize foundational learning theories in a way that builds tangible connections for vocational students. Despite the enduring relevance of Thorndik's (1911) and Skinner's (1953) principles, their application in designing targeted instructional materials remains underexplored. The study of the use of instructional documents for vocational curriculum, as seen in the work of Sri-thanaprasert (2013), highlights the need for a more structured, theory-driven approach to materials development. Third, a review of Empirical Efficacy Studies reveals a lack of data on whether materials designed with these specific theoretical underpinnings can meet and exceed established performance criteria, such as the 80/80 standard, and whether they can measurably improve learning outcomes and student satisfaction.

Despite a wealth of research on English language teaching, a notable gap exists concerning the application of foundational theories like Thorndike's connectionism within the specific context of Thai vocational education. While many studies focus on modern communicative methodologies, they often overlook how reinforcing fundamental behavioral principles can enhance the acquisition of practical language skills for non-specialist learners. Furthermore, much of the foundational research on connectionism is several decades old (Thorndike, 1911; Skinner, 1953), and these studies often lack the contemporary validation that modern research methodologies could provide. This creates a temporal gap, making it difficult to assess the theory's current relevance. A significant limitation is that existing meta-analyses and systematic reviews have not consistently isolated Thorndike's specific principles from broader behaviorist approaches, which makes it challenging to pinpoint the unique contributions of his theory (Rodriguez et al., 2013). This study addresses the missing link by focusing on the applied application of Thorndike's principles in a modern, cross-cultural setting. Lastly, there is a general lack of cross-cultural validation for these principles, particularly in non-Western educational environments like Thailand, where English is learned as a foreign language (Thompson, 2012).

This study aims to address these research gaps by examining the effectiveness of an instructional document for "English for Daily Life" that is specifically designed using Thorndike's Connectionism Theory. The primary research question guiding this inquiry is: How effective is an instructional document for 'English for Daily Life,' designed according to Thorndike's connectionism theory, in terms of efficiency, improving student learning achievement, and fostering student satisfaction among vocational students in Thailand? To answer this, the study will pursue three main objectives: to develop and evaluate the efficiency

of the instructional document against an 80/80 standard, to compare students' learning achievement before and after using the materials, and to assess student satisfaction with the developed materials. By providing a clear example of how theoretical principles can be translated into practical, effective pedagogical tools, this study fills a crucial gap between classic learning theory and contemporary educational practice. From above, the details of the materials and methods used in this experimental study, including the sample, instruments, and intervention design as the scope of the study was shown in Table 1 below.

Table 1 The scope of the study

No.	Research Objectives (ROs)	Research Questions (RQs)	Research Instruments (RIs)	Research Statistics (RSs)
1	To develop and evaluate the efficiency of an instructional document for the course "English for Daily Life" (Code 20000-1201).	Do the developed instructional materials meet the 80/80 standard efficiency criterion?	8-unit instructional document and lesson plans (validated by experts, IOC = 0.67-1.00).	Efficiency formulas (E1/ E2) and percentage calculation.
2	To compare students' learning achievement before and after using the instructional materials.	Is there a significant difference in students' learning achievement scores before and after the intervention?	Learning achievement test (Pre-test & Post-test; Reliability = 0.913).	Dependent-samples *t*-test, Mean (*M*), Standard Deviation (*SD*).
3	To assess student satisfaction with the developed instructional materials.	What is the level of student satisfaction with the instructional materials and the teaching approach?	Satisfaction questionnaire (5-point Likert scale; Reliability = 0.951).	Mean (*M*), Standard Deviation (*SD*), descriptive analysis of levels.

2. LITERATURE REVIEWS

The development and evaluation of the instructional materials for this study are not situated in a vacuum but are deeply informed by a synthesis of three distinct yet interconnected bodies of literature. A systematic conceptual clustering reveals the foundational pillars supporting this research: the mandated Curriculum and Policy Framework, the theoretical underpinnings of Pedagogical Theory and Material Design, and the practical, methodological precedents set by Empirical Efficacy Studies. The evolution of thought moves from the broad "why" of learning theory, which is codified into the specific "what" of policy, ultimately informing the "how" of empirical testing in local contexts. This iterative process ensures that practice is both theoretically sound and empirically validated, creating a robust feedback loop for continuous improvement in vocational education. The thematic map of literature review demonstrated in Table 2 below.

Table 2 The Thematic Map of Literature Review

Cluster	Theme	Key Sources	Role in Present Study
1	Curriculum and Policy Framework	Office of the Vocational Education Commission (2019); UNESCO (2012); Biesta (2015)	Provided the mandated objectives and competency standards, contextualized within global and philosophical discussions on vocational education.
2	Pedagogical Theory and Material Design	Thorndike (1911); Skinner (1953); Hattie and Timperley (2007); Merrill (2002)	Provided the theoretical foundation for material design, particularly the laws of learning and the critical role of feedback.
3	Empirical Efficacy Studies	Sri-thanaprasert (2013); Methawiwattanikul (2015); Engchun	Provided a validated methodological model (e.g., DBR) for development and

		(2010); Nieveen and Folmer (2013)	testing, ensuring local relevance and rigor.

2.1 Curriculum and Policy Framework

This cluster is defined by the official documents that prescribe the standards, objectives, and competencies for vocational education in Thailand. The primary source is the *Vocational Certificate Curriculum B.E. 2562* (Office of the Vocational Education Commission, 2019), which mandates a shift from knowledge-based to competency-based learning. This curriculum explicitly outlines the course "English for Daily Life" (Code 20000-1201), emphasizing practical, real-world communication skills in listening, speaking, reading, and writing for both daily and occupational contexts over rote memorization of grammatical rules. This aligns with global trends in Technical and Vocational Education and Training (TVET), where the focus is on developing employability skills and fostering adaptability in a rapidly changing job market (UNESCO, 2012).

The Thai curriculum's emphasis on student-centeredness and practical application reflects a broader philosophical shift in education towards what Biesta (2015) terms "learnification" -a focus on the process and outcomes of learning itself rather than solely on the transmission of knowledge. This policy framework effectively sets the destination but provides limited pedagogical guidance on the journey. It prescribes the "what"-the competencies students must achieve—but remains largely silent on the "how" -the specific instructional strategies most effective for diverse learners in technical fields, who may exhibit varying levels of motivation and proficiency in general subjects like English (Hallinger & Lee, 2014). This gap between policy intent and classroom practice is a common challenge in educational reform, creating a crucial space for research to bridge theory and application.

A significant limitation of this policy-centric literature is its static nature. While it provides a essential snapshot of intended outcomes, it cannot account for the dynamic complexities of classroom implementation, teacher interpretation, and student engagement. Furthermore, the rapid advancement of digital technology and the evolving needs of industries necessitate a curriculum that is inherently adaptable, a challenge for large-scale, centralized policy documents (Wagner, 2014).

Future developments will likely see curricula evolving beyond broad competencies towards the integration of more specific 21st-century skills such as digital literacy, critical thinking, and cross-cultural communication explicitly within vocational subjects (Voogt & Roblin, 2012). This will require even closer collaboration between policymakers, industry partners, and educators to ensure that the "what" of the curriculum remains relevant, thereby demanding continuous innovation and adaptation in the "how" of teaching materials and methods.

2.2 Pedagogical Theory and Material Design

This cluster delves into the theoretical "why" behind the design of the instructional materials. The study is predominantly anchored in the behaviorist tradition, specifically Thorndike's (1911) connectionism theory and its operationalization through Skinner's (1953) operant conditioning. Thorndike's laws of learning: readiness, exercise, and effect—provide a timeless and robust framework for skill acquisition. In the context of this study, these laws translated directly into material design: (1)

stimulating *readiness* through engaging warm-up activities and clear learning goals; (2) providing ample *exercise* through structured, repetitive practice via numerous worksheets and activities; and (3) ensuring a positive *effect* through immediate and constructive feedback on performance.

The critical role of feedback, a key component of the "law of effect," is strongly supported by contemporary meta-analytic research. Hattie and Timperley (2007), in their seminal work, identify feedback as one of the most powerful influences on student achievement. Their model of effective feedback-addressing the questions "Where am I going?" (feed-up), "How am I going?" (feed-back), and "Where to next?" (feed-forward)-resonates deeply with Thorndike's principle. The high student satisfaction with "opportunity to know scores" and "fairness in teacher grading" in this study underscores the motivational and reinforcing power of effective feedback, bridging early 20th-century theory with 21st-century educational research.

However, a limitation of relying solely on behavioral theories is the potential perception of them being outdated or reductionist, especially when compared to constructivist or sociocultural approaches that emphasize knowledge building and social interaction (Vygotsky, 1978). The challenge in modern application is to avoid creating mechanical, drill-oriented instruction. The key is to leverage the structured framework provided by behaviorism while ensuring the activities are meaningful, engaging, and situated in authentic contexts. This is where principles from instructional design models like Merrill's (2002). First Principles of Instruction (learning is promoted when students engage in solving real-world problems) can be integrated to create a more holistic learning experience.

The future of this cluster lies in the symbiosis between foundational learning principles and digital technology. Adaptive learning software and AI-driven platforms can personalize the "exercise" and "effect" components with unprecedented efficiency, providing tailored practice and instantaneous, individualized feedback at scale (VanLehn, 2011). This digital evolution does not invalidate Thorndike's laws but rather provides powerful new tools to enact them more effectively, personalizing the learning pathway while maintaining the structured practice necessary for skill automatization.

2.3 Empirical Efficacy Studies

This cluster comprises the "how"-the body of previous quasi-experimental research conducted within the Thai vocational education system that provides a methodological blueprint for this study. Researchers like Sri-thanaprasert (2013), Methawiwattanikul (2015), and Engchun (2010) have consistently demonstrated the efficacy of locally developed instructional materials across various subjects, from database systems to machine theory. Their work establishes a strong precedent, showing that such materials, when developed systematically, consistently achieve efficiency scores exceeding the 80/80 criterion and lead to statistically significant improvements in learning achievement compared to traditional lecture-based methods.

The methodology employed in these studies—involving expert validation (Index of Item-Objective Congruence, or IOC), reliability analysis, and efficiency testing—is a hallmark of design-based research (DBR) (Nieveen & Folmer, 2013). DBR is characterized by iterative cycles of design, implementation, evaluation, and refinement in real-world educational settings. This approach is particularly valuable as it generates theories and interventions that

are both theoretically grounded and contextually relevant. The current study directly adopts this proven DBR-inspired methodology, ensuring its findings are credible and its materials are practical for the intended context.

A primary limitation of this empirical cluster is its highly localized and contextual nature. While the findings are robust within their specific settings, their generalizability to different subjects, institutions, or cultural contexts may be limited. Furthermore, many of these studies, including the current one, focus on immediate learning gains (short-term achievement). There is a comparative lack of longitudinal research investigating the long-term retention of skills, their transfer to real-world work situations, or their comparative effectiveness against other innovative pedagogies like project-based learning or collaborative learning (Johnson & Johnson, 2018).

Therefore, the future direction for empirical research in this field must expand beyond establishing basic efficacy. Future studies should: (1) incorporate control groups and randomized controlled trials (RCTs) to strengthen causal claims; (2) track longitudinal data on skill retention and career impact; (3) conduct comparative effectiveness studies pitting instructional materials against other teaching methods; and (4) deeply integrate digital tools into the material design from the outset, moving beyond analog documents to interactive digital learning environments.

2.4 Research Conceptual Framework

The interplay between these three clusters forms the conceptual framework for this study, visualized in Figure 1. The Pedagogical Theory cluster provides the foundational principles ("why"). These principles inform and are codified by the Curriculum and Policy cluster, which defines the objectives ("what"). Together, they directly guide the Design and Development of the instructional materials. This intervention is then implemented and evaluated using methods from the Empirical Efficacy Studies cluster ("how"). The results and insights from this evaluation feedback to refine the materials, contribute to the empirical body of knowledge, and ultimately influence both pedagogical practice and future curriculum policy updates, creating a continuous cycle of improvement.

The conceptual framework of the study illustrated in Figure 1 below.
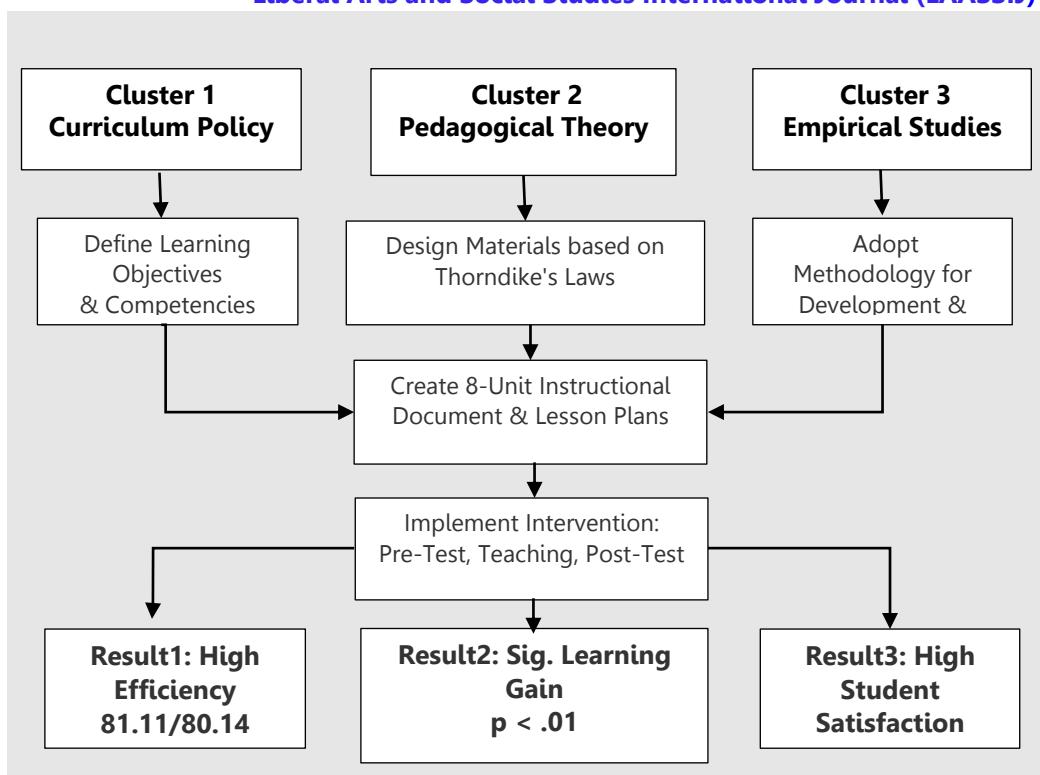
Figure 1 The Conceptual Framework

4. RESEARCH METHODOLOGIES

This study employs a quantitative research design, utilizing questionnaires as the primary data collection tool. The research methodology is outlined as follows:

4.1 Population and Sample

4.1. Population and Sample

The population for this study was first-year vocational certificate students enrolled at Pattani Technical College. A purposive sampling technique was employed to select a specific group that met the research criteria. The final sample consisted of 35 first-year students from the Electrical Power program who were enrolled in the compulsory course "English for Daily Life" (Code 20000-1201) during the first semester of the 2022 academic year. This intact group was selected as it represented the target demographic for whom the instructional materials were specifically designed.

4.2. Research Instruments

The study utilized four primary instruments, each developed and validated to ensure reliability and validity:

Instructional Document: An 8-unit instructional package was developed for the "English for Daily Life" course. The content and activities within each unit were explicitly designed around Thorndike's three laws of learning: readiness, exercise, and effect.

Lesson Plans: A series of eight detailed lesson plans, corresponding to the instructional units, were created. These plans outlined 36 hours of structured instruction, integrating the instructional document and specifying learning objectives, activities, and assessments aligned with the theoretical framework.

Achievement Test: An 80-item multiple-choice test was constructed to measure learning achievement. The test's content validity was rigorously assessed by a panel of experts, yielding an Index of Item-Objective Congruence (IOC) ranging from 0.67 to 1.00 for all items. The test's reliability was confirmed through pilot testing, resulting in a high Cronbach's alpha coefficient of .913.

Satisfaction Questionnaire: A 10-item questionnaire using a 5-point Likert scale (ranging from 1 = lowest satisfaction to 5 = highest satisfaction) was developed to gauge students' perceptions of the instructional materials and learning process. Expert validation ensured content validity (IOC = 0.67-1.00), and its reliability was established with a Cronbach's alpha of .951.

4.3. Data Collection

The data collection procedure followed a sequential process to ensure consistency and minimize confounding variables:

Pretest Administration: Prior to the intervention, the 80-item achievement test was administered to all 35 participants to establish a baseline measure of their knowledge.

Intervention Implementation: The researcher conducted the teaching intervention over a designated period, delivering all 36 hours of instruction according to the developed lesson plans and utilizing the 8-unit instructional document as the core teaching material.

Posttest Administration: Immediately following the completion of the instructional intervention, the same 80-item achievement test was readministered to the participants to measure their learning achievement gains.

Satisfaction Survey: Subsequent to the posttest, the satisfaction questionnaire was distributed to all participants to collect data on their subjective experience and satisfaction with the instructional materials and the overall learning process.

4.4. Data Analysis

The collected data were analyzed using both descriptive and inferential statistical methods via statistical software packages. The analysis procedures were as follows:

Efficiency Analysis: The efficiency of the instructional materials (E1/E2) was calculated using established formulas. Process efficiency (E1) was derived from the average scores on all in-class activities and worksheets. Output efficiency (E2) was calculated from the average scores on the posttest. The benchmark for success was set at the standard 80/80 criterion.

Descriptive Statistics: Means (M) and standard deviations (SD) were computed to describe the central tendency and variability of the pretest scores, posttest scores, and satisfaction questionnaire responses.

Inferential Statistics: A dependent-samples (paired) *t*-test was conducted to compare the mean scores of the pretest and posttest. This analysis determined whether the observed improvement in learning achievement was statistically significant at the .01 level.

This section presents the findings of the study on the efficiency of the instructional materials, the comparison of learning achievement, and the level of student satisfaction. The results are discussed in relation to the theoretical framework of Thorndike's Connectionism.

5.1 Efficiency of the Instructional Materials (E1/E2)

The efficiency of the instructional materials was evaluated against the standard benchmark of 80/80. The results, summarized in Table 3, demonstrate that the materials were highly effective.

Table 3: Efficiency Analysis of the Instructional Materials (N=35)

Efficiency Component	Full Score	Average Score	Percentage (%)
Process Efficiency (E1) **(Scores from worksheets & activities)**	80	64.89	**81.11**
Product Efficiency (E2) **(Scores from post-test)**	80	64.11	**80.14**
Overall Efficiency (E1/E2)			**81.11 / 80.14**

As shown in Table 3, the overall efficiency of the instructional materials was **81.11/80.14**, which exceeds the established benchmark of 80/80. This indicates that the materials were not only successful in facilitating the learning process (E1) but also effective in helping students achieve the intended learning outcomes (E2). The high process efficiency suggests that the in-class activities and worksheets were well-designed and appropriately challenging, leading to successful learning during the instructional phases.

5.2 Learning Achievement Comparison

A paired-sample t-test was conducted to compare students' learning achievement before and after using the instructional materials. The results, presented in Table 2, show a statistically significant improvement.

Table 4: Comparison of Pre-test and Post-test Scores for All Units (N=35)

Test	Full Score	Average Score ($\bar{X}$)	S.D.	t-value
Pre-test	80	25.37	5.00	
Post-test	80	64.89	4.62	**48.051**$*$
Progress (%)			**49.40%**	

$p < .01$

The data in Table 4 reveals a substantial and statistically significant increase in the mean score from 25.37 (pre-test) to 64.89 (post-test), with a progress percentage of **49.40%**. The extremely high t-value (t = 48.051, p < .01) confirms that the improvement in students' achievement was not due to chance. This remarkable gain can be attributed to the structured and scaffolded learning activities within the instructional materials, which effectively addressed the students' needs and enhanced their understanding of real-life English applications.

5.3 Student Satisfaction Results

Student satisfaction was measured using a 5-point Likert scale questionnaire. The overall and individual item results are presented in Table 5.

Table 3: Student Satisfaction Levels Towards the Instructional Materials (N=35)

No.	Statement	Mean (X̄)	S.D.	Level of Satisfaction
1.	Having the opportunity to know scores from worksheets or tests.	4.77	0.43	Highest
2.	The teacher's fairness in scoring each activity.	4.71	0.46	Highest
3.	The materials include images and vocabulary that aid understanding.	4.69	0.47	Highest
4.	The learning management increases enthusiasm for learning.	4.60	0.50	Highest
5.	The learning allows for exchanging opinions and knowledge with peers.	4.54	0.51	Highest
6.	The materials enable the use of IT to develop English skills.	4.46	0.61	High
7.	I practiced listening, speaking, reading, and writing until fluent.	4.40	0.65	High
8.	The materials improve listening, speaking, reading, writing, and comprehension.	4.34	0.59	High
9.	The tests in the materials encourage self-development.	4.34	0.59	High
10.	The handouts make it easy to understand principles of daily English.	4.26	0.66	High
	Overall Satisfaction	**4.51**	**0.45**	**Highest**

The overall satisfaction level was 4.51, which is in the "Highest" category. As detailed in Table 3, students were most satisfied with transparent evaluation (Items 1 & 2) and the visual aids within the materials (Item 3). The lowest satisfaction, though still "High," was with the clarity of the handouts (Item 10). This suggests that while the materials were highly effective and engaging, there is a minor opportunity to further improve the clarity and presentation of the informational content in the handouts.

5.4 Discussion in Relation to Thorndike's Connectionism Theory

The design and implementation of the instructional materials were grounded in Thorndike's Connectionism Theory, which posits that learning is formed through associations between stimuli and responses, reinforced by readiness, exercise, and effect.

Law of Readiness: The materials were structured into clear, sequential units, preparing students mentally and motivationally for each lesson, which aligns with the high process efficiency (E1=81.11%).

Law of Exercise: The numerous worksheets, activities, and unit tests provided ample opportunity for repetition and practice, strengthening the correct language responses. This is directly reflected in the significant improvement in post-test scores.

Law of Effect: The immediate feedback from worksheets and tests (a key factor in student satisfaction) acted as positive reinforcement, making the learning experience satisfying and encouraging continued effort.

The results strongly support the application of Thorndike's theory in this context. The significant learning gains (49.4% progress) and high student satisfaction (4.51/5.00) demonstrate that a learning environment designed with clear stimuli (lessons/activities), opportunities for response (practice), and positive reinforcement (feedback) is highly effective for teaching practical English skills in a vocational setting. The significant improvement in learning achievement and high student satisfaction supported the applicability of Thorndike's

theory in vocational education contexts, particularly in skill-based subjects like practical English. The materials successfully created a learning environment where students could form and reinforce correct language responses through structured practice and positive outcomes.

6. CONCLUSION AND SUGGESTIONS

This study was driven by the need to develop effective instructional materials for the "Real-Life English" course within the vocational education curriculum. The conclusion summarizes the key contributions, acknowledges the study's limitations, and offers suggestions for future research.

6.1 Key Contribution

This study successfully synthesized three critical domains: it responded to the vocational curriculum's mandate for practical English skills by developing structured materials based on a solid pedagogical theory (Thorndike's Connectionism) and employed the proven empirical methodology of local efficacy studies. The results confirm that this integrated approach is highly effective.

The developed instructional materials not only met but exceeded the strict efficiency standards (E1/E2 = 81.11/80.14), demonstrating their quality and practicality. Their implementation resulted in significant and substantial learning gains (a 49.4% improvement, p < .01) across all eight thematic units, proving their effectiveness in enhancing students' practical English proficiency. Furthermore, the materials were received with a very high level of student satisfaction ($\bar{X}$ = 4.51), particularly regarding transparent evaluation and engaging activities. This demonstrates that a theory-driven, well-structured approach can achieve both high learning outcomes and positive learner perceptions.

6.2 Limitations of the Study

The primary limitation lies in the study's research design. The use of a one-group pretest-posttest model without a parallel control group makes it difficult to definitively rule out the influence of external factors such as other simultaneous instruction, general maturation of the students, or the placebo effect of participating in a study on the observed improvement. While the magnitude of the learning gain is large and statistically significant, a controlled experimental design (e.g., a true experiment with a control group using traditional materials) would substantially strengthen the claim of causality, confirming that the improvement is attributable solely to the intervention of the new instructional materials.

6.3 Suggestions for Future Studies

Based on the findings and limitations of this research, the following directions for future studies are suggested:

First, employing a control group design - Future research should utilize a quasi-experimental or true experimental design with a control group to establish a more robust causal link between the instructional materials and the observed gains in learning achievement. Second, investigating long-term retention - A longitudinal study could be conducted to assess the long-term retention of the knowledge and skills acquired through these materials,

determining their lasting impact. Third, exploring broader application - The study could be replicated with different student populations (e.g., different vocational fields, different regions of Thailand) to test the generalizability of the materials and the pedagogical approach. Forth, incorporating qualitative methods - Future studies could include qualitative methods, such as interviews or focus groups, to gain deeper insights into the students' learning experiences and the reasons behind their high satisfaction, particularly to understand how the principles of Thorndike's theory (readiness, exercise, effect) were perceived in practice. Last, refining based on feedback - The slightly lower satisfaction score on the clarity of handouts (though still high) indicates an area for refinement. Future iterations of the materials could focus on enhancing the design and user-friendliness of the textual components.

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A Strategic Approach to Buddhist Tourism Management at Sarnath (The Site of the First Sermon) in the Buddhist Pilgrimage Circuit of India: A Case Study of the Sarnath Veneration Sites, India

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ABSTRACT

This research aims to: 1) study the context and potential of Buddhist tourism management at Sarnath, a significant Buddhist site and one of the four principal veneration sites (Sankavāniyasthānas); 2) analyze the strengths, weaknesses, opportunities, and threats (SWOT) of Buddhist tourism within the Buddhist Pilgrimage Circuit in India; and 3) propose appropriate and sustainable strategic guidelines for Buddhist tourism management. The study employed a qualitative research methodology, utilizing in-depth interviews with key informants including Buddhist monks, Buddhist scholars, Indian tourism authorities, tour operators, and religious tourists. Field observations at Sarnath, located in Varanasi, Uttar Pradesh, India, were also conducted. The findings reveal that Buddhist tourism management at Sarnath should focus on five key strategic areas: (1) Conservation and restoration of ancient monuments alongside environmental management; (2) Establishing international cooperation networks among Buddhist nations and religious organizations; (3) Developing facilities, infrastructure, and safety measures to accommodate tourists; (4) Promoting and branding the site through the soft power of Buddhism; and (5) Local community involvement in economic and social development while preserving spiritual values. These strategies reflect an approach to Buddhist tourism management that aligns with global heritage conservation and the sustainable development of cultural tourism.

Keywords: Buddhist Tourism, Sarnath, Sankavāniyasthānas, Management Strategy

1. INTRODUCTION

Buddhism is a religion with over 500 million followers worldwide and has a profound influence on the way of life, culture, and beliefs of people in many regions (Ghimire, 2019). The four principal veneration sites in India—Lumbini, Bodh Gaya, Sarnath, and Kushinagar—are crucial locations linked to the life of the Buddha, holding immense religious, historical, and cultural value (Worapongpat, 2023d). Sarnath, in particular, located in Varanasi, Uttar Pradesh, is the site where the Buddha delivered his first sermon (Dhammacakkappavattana Sutta), making it a significant destination for Buddhist tourism that attracts pilgrims and tourists from all over the world (Hall, 2006).

Despite Sarnath's sacred and historical significance, it still faces challenges in tourism management, such as overcrowding, the impact of commercial tourism on monument conservation, inadequate facilities and infrastructure, a lack of local community participation, and competition from other religious tourism sites in the region (Worapongpat, 2023c). These issues highlight the necessity of developing a Buddhist tourism management strategy that can balance the preservation of spiritual values with the development of a tourism economy (Hemprapai et al., 2023).

Buddhist tourism is not merely about sightseeing; it is also a journey to seek religious and cultural meaning, as well as an experience of learning and spiritual enrichment (Kanchanathaveekul, Buddhapoompitak, Srithongphim, & Tangmungmee, 2024). Therefore, studying appropriate strategic approaches to tourism management at Sarnath is crucial for preserving the Buddhist heritage, developing the local economy, and fostering cooperation among Buddhist countries worldwide (Worapongpat, 2023b). This research focuses on examining strategic guidelines for Buddhist tourism management at Sarnath using qualitative analysis to provide practical policy recommendations and actionable guidelines at the local, national, and international levels.

Objective

1 To study the strategic management approach for Buddhist tourism at Sarnath (the site of the first sermon) in the Buddhist pilgrimage site area in India.
2 To analyze the strengths, weaknesses, opportunities, and obstacles of Buddhist tourism management in the Buddhist pilgrimage site area in India.
3 To propose appropriate and sustainable Buddhist tourism management strategies for the development of Buddhist pilgrimage sites.

2. LITERATURE REVIEW

2.1. Concept of Buddhist Tourism and Pilgrimage

Buddhist tourism is a significant dimension of spiritual and cultural tourism that connects religious devotion with heritage appreciation (Manop Nakkanrian, Nakkanrian, & Saramas, 2022). It involves travel motivated by faith, cultural curiosity, and spiritual enrichment at sacred sites associated with the life of the Buddha (Worapongpat, 2023a). The Buddhist pilgrimage circuit in India—comprising Lumbini, Bodh Gaya, Sarnath, and Kushinagar—plays a crucial role in transmitting Buddhist values while fostering intercultural understanding and sustainable economic growth (Palmer & Chuamuangphan, 2021). Among these sites, Sarnath stands as the location of the Buddha's first sermon, marking it as an essential site of veneration and religious learning.

2.2. Sarnath and Its Religious Significance

Sarnath represents a nexus of religious, historical, and archaeological value, embodying both tangible and intangible heritage dimensions. Scholars highlight that sustainable management of such pilgrimage sites must balance conservation, visitor experience, and religious authenticity (Worapongpat & Brorewongtrakhul, 2024). Effective tourism management at Sarnath, therefore, requires strategies that respect monastic traditions while enhancing the cultural value of the destination (Phra Kru Pariyatti Wachirakhun, 2021).

2.3 Strategic Tourism Management and Sustainability

Sustainable tourism management emphasizes stakeholder collaboration, resource conservation, and community engagement (Phra Supakit Supanyo & Phra Methee Pariyatti Wiboon, 2023; Worapongpat, Nirandon, Issaralam, Khamsai, & Hemchatluechai, 2023). For Buddhist pilgrimage sites, a strategic approach must integrate both spiritual goals—preserving Buddhist teachings and values—and economic objectives—supporting local livelihoods through responsible tourism (Phraathikanchaiya Piyatharo, Muangmai Sirirote, & Namsena, 2023). Butcher, Worapongpat, Wongkumchai, Soprakan, Bhasabutr, and Somchob (2023) argue that value co-creation and community participation enhance visitors' perceived benefits and social value, promoting long-term sustainability (Rai, 2020).

2.4 Community Participation and Cultural Integration

Local participation is a cornerstone of sustainable tourism in sacred spaces (Worapongpat & Sandusit Borivongtrakul, 2022). Studies in Thailand and Nepal demonstrate that involving monastic communities and lay participants in planning enhances cultural authenticity and reinforces faith-based experiences (Worapongpat, 2022d). Moreover, the patterns of ideological and network formation among monks influence the way cultural tourism is framed and perceived (Sanvises & Kaewnuch, 2025). These findings provide insights for Sarnath, where local religious institutions, government authorities, and international pilgrims must collaborate for balanced development (Worapongpat, 2022c).

2.5 Marketing and Visitor Perception

In the digital era, strategic communication and destination branding are vital for promoting Buddhist tourism (Santachitto, 2021; Worapongpat, 2022b). Research on Thai Buddhist tourism suggests that social media platforms and digital storytelling strengthen the image of Buddhist destinations while encouraging responsible travel behavior (Shinde, 2021). Translating these strategies to Sarnath could improve visitor engagement, enhance the site's global image, and support post-COVID tourism recovery (Worapongpat, Choothong, Piamsuphakpong, Salathong, & Issalam, 2021).

2.6 Research Gaps and Implications for Sarnath

While prior studies have examined Buddhist tourism in Nepal, Thailand, and China (Worapongpat, 2021, 2022a), limited research has addressed strategic management frameworks specific to Sarnath. There is a need to explore integrated approaches that combine religious preservation, community empowerment, and digital innovation (Sotrin Chokkatitwattana, 2022). This study aims to fill that gap by proposing a strategic management model for sustainable Buddhist tourism at Sarnath, aligning spiritual authenticity with economic and cultural sustainability (Worapongpat & Phokanittanon, 2020).

2.7 Research Conceptual Framework

Based on previous studies on Buddhist tourism, pilgrimage management, and sustainable tourism (Tuntipisitkul, Tsusaka, Kim, Shrestha, & Sasaki, 2021; Unhasuta, Sasaki, & Kim, 2021), this framework integrates strategic management theory,

sustainable tourism principles, and faith-based tourism concepts to develop an effective model for managing Buddhist tourism at Sarnath.

In brief, Buddhist tourism blends spiritual devotion with cultural appreciation, attracting travelers seeking enlightenment and cultural insight at sacred sites linked to the Buddha's life. The major pilgrimage circuit—Lumbini, Bodh Gaya, Sarnath, and Kushinagar—serves as both a spiritual route and a cultural bridge promoting global understanding and sustainable growth. Sarnath, where the Buddha delivered his first sermon, holds deep religious and historical importance, symbolizing both tangible and intangible heritage. Sustainable management at such sites requires balancing conservation, visitor satisfaction, and religious authenticity. Strategic tourism management emphasizes collaboration among stakeholders, responsible resource use, and community engagement to ensure both spiritual preservation and economic benefits. Local participation, including involvement from monks and laypeople, strengthens authenticity and fosters shared ownership in tourism development. Cultural networks and monastic influence shape how Buddhist tourism is experienced and understood. In the digital era, destination branding and storytelling through social media can enhance Sarnath's image and attract mindful visitors. Despite rich studies on Buddhist tourism elsewhere, research on Sarnath's strategic management remains limited, highlighting the need for integrated, sustainable models. This study thus proposes a conceptual framework combining strategic management, sustainable tourism, and faith-based principles to guide Sarnath's development as a model of sustainable Buddhist tourism.

The proposed framework highlights that strategic tourism management at sacred Buddhist sites must integrate spiritual, socio-cultural, environmental, and economic dimensions to promote long-term sustainability and preserve cultural authenticity. It identifies key strategic management factors—such as inclusive planning and policy development aligned with Buddhist principles, stakeholder participation involving monks, communities, and government, responsible resource and heritage management, effective marketing and digital communication, and sustainable infrastructure improvement—as essential drivers. These factors influence visitors' perceived spiritual and cultural value, which in turn shape their satisfaction and intention to revisit. The framework posits that these mediating variables—perceived value and visitor experience—bridge the connection between strategic management practices and sustainable tourism outcomes. Ultimately, sustainable Buddhist tourism development is achieved through the preservation of heritage, community well-being, and enriched faith-based experiences, with strong community and monastic involvement reinforcing the overall sustainability of Sarnath's tourism. Thus, the Conceptual Model Diagram shown in figure1

Figure 1 Research conceptual framework "A Strategic Approach to Buddhist Tourism Management at Sarnath (The Site of the First Sermon) in the Buddhist Pilgrimage Circuit of India: A Case Study of the Sarnath Veneration Sites, India"
(Source: Ntapat Worapongpat, 2025)

3. RESEARCH METHODOLOGY

3.1 Participants

The key informants for this study were experts and stakeholders involved in the development of Buddhist tourism at Sarnath, Varanasi, Uttar Pradesh, India. They were divided into three main groups:

Group 1: Buddhist monks and scholars specializing in Buddhism.

Group 2: Officials from tourism authorities (Ministry of Tourism India, Archaeological Survey of India, Uttar Pradesh Tourism) and tourism entrepreneurs.

Group 3: Religious tourists and local community members.

Approximately 15-20 individuals were selected using a purposive sampling method. The study employed a qualitative, phenomenological approach combined with ethnographic fieldwork and a triangulation technique to enhance data reliability

3.2 Research Instruments

Three research instruments were developed to collect data aligned with the study's objectives: a semi-structured interview, observation checklist and focus group discussion

The study mainly utilized a semi-structured interview guide, developed based on a review of relevant literature and the context of Buddhist tourism. The researcher

personally conducted the interviews, using digital recorders, a camera, and a notebook for documentation. With the consent of the informants, a probing technique was used to encourage them to freely elaborate on their experiences and perspectives Ending by the focus group discussion:- A focus group discussion was organized to present and validate the draft strategies. Participants included Buddhist monks, scholars, representatives from Indian government agencies, and tourism operators. The goal was to collectively select and evaluate the most suitable strategies for Buddhist tourism

3.3 Data Collection Procedures

Data was collected using three methods:

First, the in-depth interviews: Conducting one-on-one interviews with key informants. Second, the observation checklist for both participants and non-participants, this is the note-taking all circumstances like the atmosphere, faith, rituals, and the management of tourist areas. Last, the document and literature reviews for analyzing relevant documents from sources such as UNESCO, the Ministry of Tourism India, the ASI, as well as existing research on Buddhist tourism.

3.4 Data Analysis

Data analysis was conducted in three steps:- Verbatim transcription: Transcribing all recorded interviews.

Content analysis: Coding the transcribed data using a three-stage process: Open Coding, Axial Coding, and Selective Coding.

Interpretative synthesis: Synthesizing the coded data to formulate the components and strategic guidelines for Buddhist tourism management.

4. FINDINGS AND DISSCUSSIONS

Following the research objectives aimed at studying and developing strategic guidelines for Buddhist tourism management at Sarnath (the site of the First Sermon) within the Buddhist Pilgrimage Circuit of India, this study collected, analyzed, and synthesized qualitative data from experts, academics, and relevant stakeholders. The findings are presented according to each objective

4.1 Objective 1 Strategic Guidelines for Buddhist Tourism Management at Sarnath

The research found that the management of Buddhist tourism at Sarnath should prioritize five key dimensions:Religious and Spiritual Dimension: Preserving the sacred value of the site and promoting spiritual practices such as meditation, chanting, and listening to Dharma to connect tourists with the Buddha's teachings.Cultural and World Heritage Dimension: Communicating the stories of the Buddha's life and the value of the UNESCO World Heritage Site using multilingual media and digital technology.Visitor Management Dimension: Implementing systems to accommodate pilgrims and tourists in terms of traffic, pedestrian flow, access to monuments, and safety.Local Community Dimension: Enhancing the role of the community in welcoming visitors, providing services, and generating income from tourism in a balanced manner.Sustainability Dimension: Conserving ancient monuments, managing the environment, and utilizing clean energy to maintain the site's value in the long

term.Based on documentary research and qualitative analysis, the study found that tourism management at Sarnath should consider a Buddhist dimension alongside the management of a global religious site. (Awais-E-Yazdan, Popescu, Birau, & Bărbăcioru, 2025; Worapongpat, 2023f). This includes five core components:Spiritual Authenticity: Preserving the religious and spiritual value.Heritage Communication: Communicating the value of Buddhism and its World Heritage status.Pilgrimage & Visitor Management: Managing pilgrims and tourists effectively.Community Engagement: Involving the local community.Sustainability & Preservation: Ensuring environmental and monumental sustainability.

4.2 Objective 2: SWOT Analysis of Buddhist Tourism Management.

The research findings present the following SWOT analysis: Strengths: Sarnath is the site of the First Sermon, the birthplace of Buddhism, recognized as a World Heritage Site, and a focal point of faith for Buddhists worldwide. Pilgrms from many countries visit continuously throughout the year. It is located on the main pilgrimage route: Bodh Gaya - Varanasi - Kushinagar - Lumbini."Weaknesses:Inadequate infrastructure and facilities (accommodation, transportation).Limited Buddhist-specific guides and a lack of systematic crowd management during peak seasons. Signage is primarily in English and Hindi, lacking multilingual options. Opportunities:The global rise of spiritual tourism.The Indian government's strong policy to promote the Buddhist Circuit. Cooperation from (Butcher & Chomvilailuk, 2022; Worapongpat, 2023e).Buddhist countries like Thailand, Sri Lanka, Myanmar, Japan, and China, which can lead to joint investment and development.

Digital technology plays a vital role in communicating Buddhist and religious values to global audiences, enhancing awareness and engagement with sacred heritage. However, several threats challenge the sustainability of these sites, including the deterioration of ancient monuments from overuse and poor maintenance, overcrowding, and commercial activities encroaching on sacred zones. Excessive religious commercialism and cultural misunderstandings among diverse visitor groups can also lead to minor conflicts. Additionally, environmental issues such as waste accumulation, water contamination, and air pollution in the Varanasi area further endanger the spiritual atmosphere and ecological integrity of the region.

4.3 Objective 3: Proposed Strategies for Sustainable Buddhist Tourism

The proposed framework outlines five interrelated strategies for sustainable management of Sarnath's Buddhist heritage. **Strategy 1** focuses on preserving Buddhist and spiritual values through the delineation of sacred zones, promotion of meditation and chanting activities, and training of knowledgeable spiritual guides. **Strategy 2** enhances heritage and value communication via multilingual signage, immersive AR/VR storytelling of the Buddha's first sermon, and the establishment of a Buddhist interpretation center. **Strategy 3** addresses pilgrimage and visitor management by introducing a booking system during festivals, creating designated service zones, and improving accessibility for all visitors. **Strategy 4** strengthens local community engagement through employment opportunities, the production of Buddhist-themed souvenirs, and training programs that deepen cultural and religious awareness. Finally, **Strategy 5** promotes sustainability and monument preservation by applying green tourism principles, restoring monuments in line with UNESCO

standards, and creating an international conservation fund to ensure Sarnath's long-term protection and cultural continuity.

Table 1 Synthesizing the coded data to formulate the components and strategic guidelines for Buddhist tourism management

Factor	Details	Core Strategy	Sub-Strategies
Strengths	- High religious and cultural potential - Local community collaboration - Unique historical and religious identity	Community Empowerment	- Organize community-led activities - Create community-based tourism projects - Develop local entrepreneurs
Weaknesses	- Insufficient promotion - Limited tourism infrastructure - Unsystematic visitor management	Social Communication	- Develop multilingual promotional media - Use digital platforms and social media - Manage real-time visitor data
Opportunities	- Increased interest in religious tourism - Government and international support - Use of digital technology in tourism	Incentive Creation	- Organize educational programs - Create experiential activities - Support tourist benefits and privileges
Threats	- Competition with other sites - Environmental and climate change - Maintaining sacred tranquility	Identity and Uniqueness Enhancement	- Create unique selling points for each site - Design cultural and religious activities - Implement environmental protection measures

4.3 Objective 3: Proposed Sustainable Strategies

The proposed sustainable strategies emphasize a holistic approach to preserving Sarnath's spiritual, cultural, and environmental integrity while promoting responsible tourism. Five core strategies are identified: (1) **Preserving Buddhist and Spiritual Values** through sacred zone designation, regular meditation and Dharma events, and trained religious guides; (2) **Communicating Buddhist World Heritage Value** via multilingual interpretive media, immersive digital technologies such as AR/VR, and the creation of a Buddhist learning center; (3) **Pilgrimage and Visitor Management** by implementing booking systems, upgrading infrastructure, and ensuring safety and hygiene; (4) **Local Community Engagement** through job creation, promotion of Buddhist-themed products, and capacity-building programs; and (5) **Sustainability and Monument Conservation** by applying green tourism principles, conducting UNESCO-aligned restorations, and establishing a conservation fund supported by international Buddhist collaborations. Together, these strategies aim to achieve balanced spiritual preservation, community empowerment, and sustainable tourism development at Sarnath.

The management of Buddhist tourism at Sarnath must be developed in a systematic and integrated manner. It requires preserving Buddhist values while simultaneously managing tourism to meet the needs of modern pilgrims and tourists. At the same time, sustainability must be built through monument conservation and community engagement. The SWOT analysis shows that while Sarnath has strong potential in terms of faith and world heritage, failure to address limitations in

infrastructure and management could hinder its international development. The proposed strategies, therefore, provide an academic framework that can serve as a guide for the sustainable management of Buddhist tourism in the future.

4. 3. 1 Management of Buddhist Tourism at Sarnath

The findings show that the management of Buddhist tourism at Sarnath must be based on an integration of religious, spiritual, and modern tourism management dimensions. The preservation of Buddhist values is paramount, a notion consistent with Sharpley & Sundaram's (2005) concept of Spiritual Tourism, which posits that religious tourism is not merely about visiting sacred sites but about creating a spiritual experience that shapes the pilgrim's identity. The research also aligns with UNESCO's (2015) emphasis on Cultural Heritage Management, which highlights that the conservation of World Heritage sites must be linked to the transmission of cultural and religious values. Therefore, organizing Dharma activities, talks, and developing multilingual learning materials at Sarnath not only meets the spiritual needs of tourists but also acts as a form of Buddhist soft power, disseminating the Buddha's teachings globally.

4.3.2 SWOT Analysis of Buddhist Tourism

The SWOT analysis found that Sarnath's most significant strength is its sanctity and religious value as the site of the First Sermon. Its primary weakness is the limited infrastructure and visitor management. This finding is consistent with Singh's (2017) research on India's "Buddhist Circuit," which identified inadequate public utilities and crowd management as key problems at World Heritage sites. In terms of opportunities, spiritual tourism has become a global trend, as noted by Timothy & Olsen (2006), who described how religious tourism has evolved into a global phenomenon that generates both revenue and cultural exchange. Conversely, the threat of excessive religious commercialism reflects the Commodification of Religion, a concept discussed by Cohen (1998), who warned that if religious tourism becomes overly commercialized, it can undermine the spiritual value and sanctity of a site.

4.3.3 Proposed Sustainable Management Strategies

The five main strategies identified by this research—preserving Buddhist values, communicating heritage, managing pilgrims, engaging the community, and ensuring environmental sustainability—are consistent with the UNWTO's (2018) concept of Sustainable Tourism Development. This framework emphasizes that tourism development must balance economic, social, cultural, and environmental aspects. Furthermore, the focus on community involvement aligns with Murphy's (1985) Community-Based Tourism (CBT) concept, which identifies the local community as a primary stakeholder in creating tourism sustainability. The findings confirm that if the community around Sarnath plays an active role as a service provider, it will help generate income, reduce inequality, and foster a sense of ownership over the religious heritage.

4.3.4 Originality and Body of Knowledge

This study on strategic Buddhist tourism management at Sarnath, the site of the Buddha's First Sermon, contributes new insights by integrating religious, cultural, and community dimensions into a unified sustainable model. It emphasizes that effective

management must balance the preservation of spiritual and cultural heritage with the creation of meaningful visitor experiences and active local participation. The use of SWOT analysis enables a systematic understanding of challenges and opportunities, guiding the development of practical strategies aligned with sustainable development goals. Five core dimensions—community engagement, tourism communication, tourist motivation and experience, cultural identity promotion, and destination differentiation—form the foundation of these strategies. Overall, the study advances a comprehensive framework that supports the long-term sustainability of the Buddhist Pilgrimage Circuit through holistic and participatory management practices.
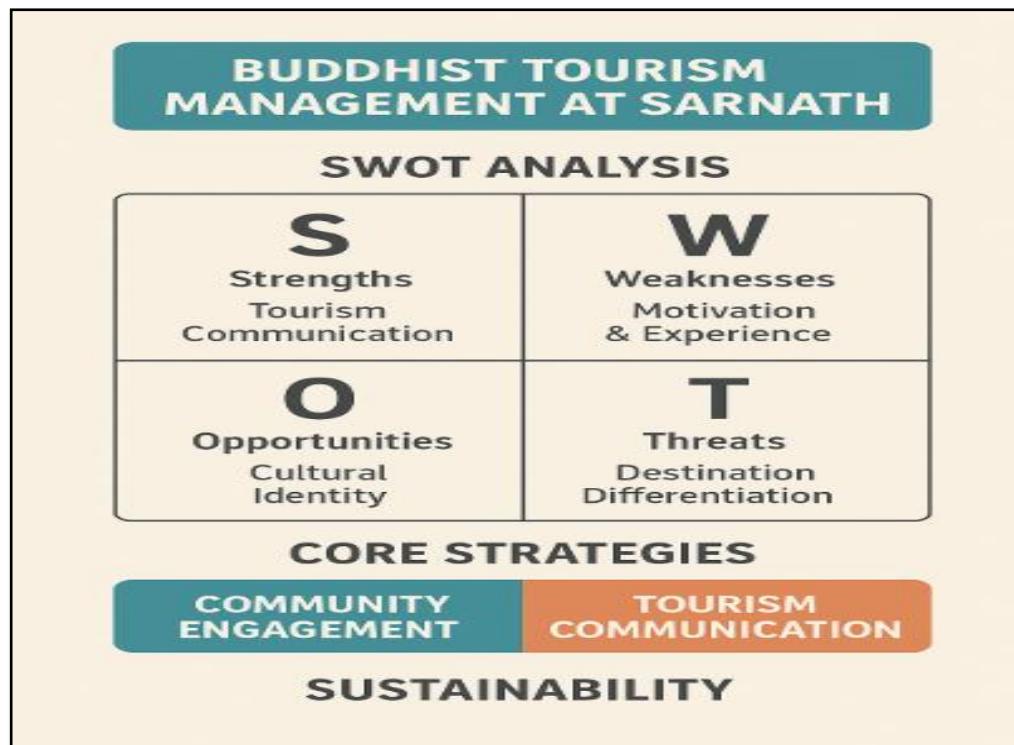
Figure 2: New Knowledge Concepts from Research on the Buddhist Tourism Management Strategies at Sarnath: A Case Study of the Holy Sites of India
(Source: Ntapat Worapongpat, 2025)

Figure 2 illustrates that Buddhist tourism management consists of three crucial dimensions: SWOT analysis, core strategy formulation, and sustainability. The SWOT dimension identifies potential and challenges, the core strategies provide concrete actions, and sustainability is the ultimate goal for the development of the Buddhist Pilgrimage Circuit.

5. CONCLUSION AND RECOMMENDATIONS

The results of the research objective 1 revealed that the strategic approach to Buddhist tourism management in Sarnath must consider the preservation of religious and cultural values, along with the development of tourism activities appropriate to the context of both Thai and international tourists. Therefore, relevant agencies should: Develop a Buddhist tourism management guidebook that emphasizes religious values

and sustainability; promote local community participation in tourism activities to foster a sense of ownership and responsibility for the conservation of religious heritage sites; and develop infrastructure and facilities consistent with the religious context, such as organizing walking routes, providing tourist information points, and providing an appropriate environment.

The results of the research objective 2 revealed that the strengths of Buddhist tourism management lie in community cooperation and the potential of religion and culture. However, weaknesses and obstacles include inadequate public relations, a lack of government support, and insufficient environmental and tourist safety management. Therefore, relevant agencies should: Develop a multilingual public relations strategy across multiple channels, both digital and print, to reach a wider audience; allocate budgets and resources to improve tourist management, tour guide training, and infrastructure development; and implement environmental and safety measures, such as waste management and visitor numbers control. and measures to maintain peace and order in sacred places.

Results from the research objective 3 found that an appropriate and sustainable Buddhist tourism management strategy should consist of five main strategies: community mobilization, social communication in tourism, motivation, identity promotion, and destination prominence.

Therefore, relevant agencies should use the results of the SWOT analysis to develop sub-strategies to systematically improve tourist management. Promote experiential tourism activities that connect Dharma and culture, such as Dharma practice programs, learning about Buddhist history, and experiencing community life. Establish collaborative networks between government agencies, the private sector, and local communities to ensure sustainability and continuity in tourism development.

Recommendations for Further Research This research findings highlight that effective Buddhist tourism management must integrate religious, cultural, community, and communication dimensions in a balanced manner. This approach can be applied to the development of religious tourism at other pilgrimage sites in India and other countries with religious heritage sites.

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Figure 3. Strategies for Buddhist tourism management at Sarnath:
A case study of the pilgrimage sites in India.
(Source: Ntapat Worapongpat, 2025)

Figure 4. Strategies for Buddhist tourism management at Sarnath:
A case study of the pilgrimage sites in India.
(Source: Ntapat Worapongpat, 2025)

Reinforce Discipline Values in Islamic Religious Education and Moral Character Learning

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ABSTRACT

This research investigates discipline values in primary education by integrating Islamic religious education and character education in Palopo City. Using a mixed methods approach with a socio-cultural education perspective, the study covers nine Palopo and South Sulawesi districts. The sampling included 27 teachers from Islamic religious education and character education and 100 students from a total population of 17,647. Data collection methods comprised observation, questionnaires, interviews, and documentation. The study found that the content of the books aligns with disciplinary indicators, emphasizing the crucial role of teachers in integrating these values into the curriculum. Eight key sub-indicators, such as Commitment, Punctuality, and Obedience, were identified as focal points for reinforcing discipline. The dominant approach includes role modeling, honesty, canteen programs, and instilling beliefs. The findings highlight the significance of teachers in conveying disciplinary values, emphasizing the need for further efforts to link these values with specific sub-indicators. Continuous evaluation and innovation are crucial for optimal understanding of disciplinary values. The research enhances the effectiveness of Islamic religious education and character education in promoting discipline values in primary education in Palopo City.

1. INTRODUCTION

Discipline is crucial in Islamic Religious Education as a fundamental aspect of character development[1]. This discipline is not just limited to the conventional understanding of following rules and regulations but extends to a comprehensive approach encompassing self-control, ethical conduct, and adherence to the principles of Islam[2]. Islamic Religious Education instills discipline in learners, emphasizing the importance of a well-regulated and morally upright life[3]. Presidential Regulation (Perpres) Number 87 of 2017 on Character Education Reinforce underscores the

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significance of discipline as a key character trait. In the context of Islamic Religious Education, discipline goes beyond mere obedience; it involves the cultivation of a strong moral compass and a sense of responsibility towards oneself and society[4]. Parents, the primary influencers, are entrusted with nurturing discipline in their children, while schools and the community collaborate to reinforce these values[5].

Educational institutions are pivotal in integrating discipline into the curriculum and teaching methods. The focus is on creating an environment conducive to developing and reinforcing discipline, fostering a culture that values self-awareness, responsibility, and ethical behavior[6]. In this regard, teachers serve as role models, guiding learners on the path of disciplined living and emphasizing the practical application of these principles in their daily lives[7]. The concept of discipline seamlessly aligns with the philosophy of the Independent Learning Curriculum, emphasizing self-directed learning and responsibility. The values promoted by the Corruption Eradication Commission (KPK), including discipline, are integral to achieving societal and national goals[8]. Through Islamic Religious Education and Moral Character Education, the reinforcement of discipline values contributes to the learner-centered approach of the Independent Learning Curriculum, fostering a sense of responsibility and self-control. Islamic Religious Education and Moral Character Education are effective tools for instilling discipline and creating individuals with strong characters and a commitment to ethical living[9]. The curriculum content is strategically designed to impart meaningful lessons on discipline, promoting self-control, accountability, and ethical decision-making[10].

Recognizing the indispensable roles of teachers and parents, collaboration becomes paramount in instilling discipline values[11]. Teachers guide learners not only academically but also in developing strong moral character. As the first educators,

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parents contribute significantly to shaping a disciplined mindset in their children, creating a harmonious partnership with educational institutions[12]. In the pursuit of instilling discipline, the collaborative efforts between educational institutions and parents take center stage. Through effective synergy, students are nurtured into disciplined individuals who positively contribute to society, fostering a disciplined and morally upright community in Palopo City.

This research aims to identify the values of discipline through implementing Islamic religious education and character education in primary education institutions in Palopo City. Additionally, the study seeks to explore the specific forms of reinforcement of discipline values teachers employ in the teaching process at primary education institutions in Palopo City. Furthermore, the research objectives encompass examining students' understanding of the values of anti-corruption and anti-radicalism imparted through the curriculum of Islamic religious education and character education in the primary education setting of Palopo City. By focusing on these three research questions, the study aspires to provide a profound insight into the effectiveness and positive impacts of integrating discipline values within the context of primary education in Palopo City.

2. LITERATURE REVIEW

Discipline Value

Discipline can be understood as obedience and adherence to prevailing rules[13]. Fundamentally, humans can serve as role models by conducting themselves to reflect values and norms aligned with their beliefs. One's level of discipline can be observed through behavioral patterns in daily life, serving as an example for the surrounding community[14]. Discipline, an individual's ability to diligently and responsibly execute established rules or tasks, is paramount and necessitates cultivation during the elementary school phase[15]. Children need to learn to exercise discipline in performing tasks and following rules in their environment. Sukitman and Hidayat posit various approaches to instill the value of discipline in elementary school children[16]. Firstly, involving children in comprehending and adhering to rules in their surroundings, encompassing rules at school, home, and within society. Secondly, providing children with an understanding of the consequences of non-compliance with rules, such as specific sanctions or punishments. Thirdly, assigning clear tasks with appropriate deadlines enables children to prepare and complete them within the stipulated time

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adequately. Fourthly, children should be encouraged to manage their time effectively to ensure timely and disciplined completion of tasks. Lastly, expressing appreciation and recognition for children's discipline is a motivation to sustain such disciplined behavior.

The inculcation of the value of discipline in elementary school children aims to shape individuals characterized by discipline and integrity. This foundation equips them to confront diverse challenges and tasks in the future, facilitating the development of responsible and independent individuals[17]. In the context of the anti-corruption student value map, the discipline value comprises eight keywords: commitment, punctuality, priority, planning, focus, diligence, obedience, and consistency[18]. These values guide children in shaping disciplined character, subsequently aiding in preventing corrupt behavior at the individual and societal levels.

Islamic Religious Education and Moral Character Education Learning

Article 1, paragraph 1 of Government Regulation Number 55 of 2007 states that Religious Education aims to provide religious knowledge and shape students' attitudes, personalities, and skills in practicing their religious teachings. Meanwhile, Article 2, paragraphs 1 and 2 emphasize the function of Religious Education in shaping Indonesian individuals who are faithful, pious, morally upright, and capable of maintaining peace and harmony in interfaith relations. Moral and character education is an integral part of moral and ethical education[19]. The term "character" originates from the Sanskrit word "buddhi," referring to consciousness and intelligence[20]. Character education emphasizes the formation of societal traits, such as tolerance and social responsibility[21]. Despite nuanced differences, these three terms—character education, moral education, and ethical education—share similar goals in shaping individuals of quality, moral virtue, and noble character[22]. According to the Decision of the Head of the Education Standardization, Curriculum, and Assessment Agency, the content of Islamic Religious Education and Moral Character Education aims to provide education that prepares students spiritually and morally, as well as understanding the fundamentals of Islam and its application in daily life[23]. This learning encompasses a tendency towards goodness, a permissive attitude, a noble character,

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and compassion toward the universe[24]. It is hoped that through this education, students can lead their daily lives with love, tolerance, and care for the environment.

The learning content of Islamic Religious Education and Moral Character Education in Grade V includes scholarly elements such as Quran-Hadith, Aqidah, Akhlak, Fiqh, and the History of Islamic Civilization[25]. The focus is on developing students' abilities to read, memorize, and understand the Quran and comprehend concepts of creed, noble character, fiqh rules, and the history of Islamic civilization[26]. The learning objectives include engaging students in the appreciation of the Quran, introducing the concept of belief, shaping good behavior, understanding Islamic legal rules, and drawing wisdom from Islamic history[27]. In the final phase, students must possess specific skills, such as reading short surahs, understanding creed concepts, and applying fiqh rules daily.

Phase C (grades V and VI of elementary school/MI/Package A Program) presents the learning outcomes in the Quran-Hadith, Aqidah, Akhlak, Fiqh, and the History of Islamic Civilization[28]. Furthermore, learning in Grade V is divided into various themes, covering learning materials and objectives[29]. Teachers are granted the freedom to develop lessons according to the characteristics of students, ensuring the relevance of materials, applying effective methods, collaborating with parents, utilizing technology, and instilling positive habits to shape students' good character[30]. This approach combines the freedom of teacher creativity with the responsibility of maintaining standards and ethics in education.

3. RESEARCH METHODOLOGY

Research Design

A systematic methodology is required to ensure the quality of the findings to obtain accurate data and facilitate the research process in the field. The research employs a mixed methods approach, integrating quantitative and qualitative research

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methods[31]. Combining these two types of research is essential to complement the required data[32]. In designing the research, the research team integrates both narrative and numerical data to address the research problem. Thus, the researchers utilize both test and non-test data collection techniques to acquire comprehensive data[33]. These diverse sources of information provide more detailed and anticipated results.

Specifically, the research design employs an exploratory sequential design, a research design where the first phase aims to explore the research problem through the collection and analysis of qualitative data. The development of instruments or interventions follows this, and then a third phase involves quantitative research. This design utilizes two research methods (quantitative and qualitative) in a sequence, where each method is implemented one at a time (not simultaneously) in two different research phases. This approach is also known as a two-phase design[34]. The quantitative and qualitative data collected are used to formulate answers to the research questions, subsequently processed and formulated to conclude. For a clearer understanding of the stages in this research, refer to the following flow diagram.
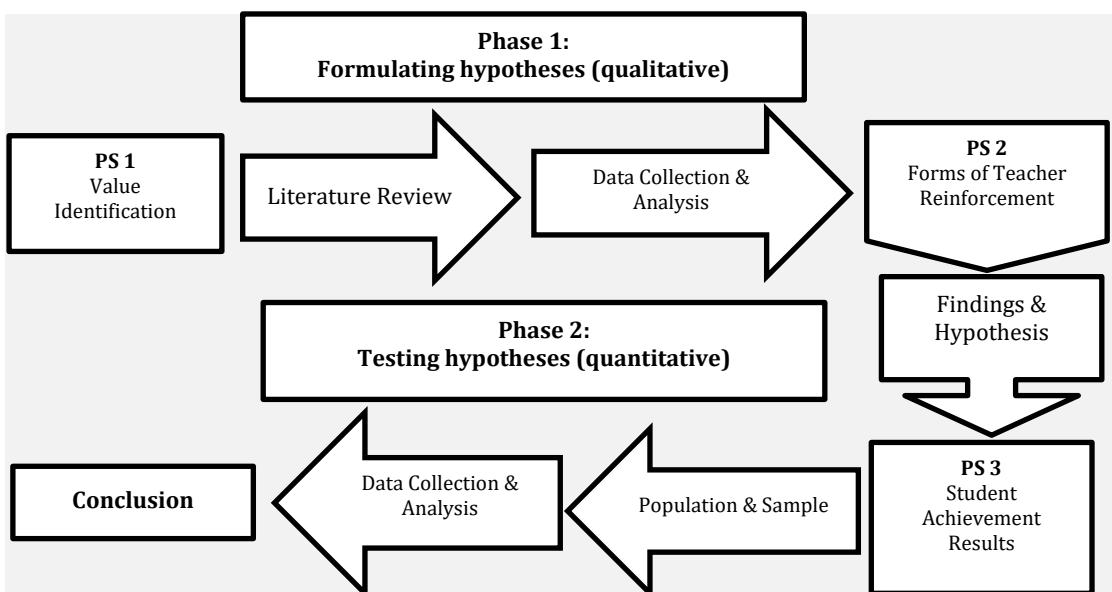
Figure 1. The research flow using Sequential Exploratory Research Design (Adapted from Creswell in Malini H, 2020)

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[32] Patrick Mikalef et al., "Big Data Analytics and Firm Performance: Findings from a Mixed-Method Approach," *Journal of Business Research* 98, no. July 2018 (2019): 261–76, https://doi.org/10.1016/j.jbusres.2019.01.044.

[33] Patricia Leavy, *Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches* (Guilford Publications, 2022), https://www.google.com/books?hl=id&lr=&id=qUiKEAAAQBAJ&oi=fnd&pg=PP1&dq=mixed+m ethods+approach&ots=RxJfFkGmcN&sig=sSrR0bQP24ofjj9Fq_AF_sx9mIs.

[34] Stern et al., "Methodological Guidance for the Conduct of Mixed Methods Systematic Reviews."

Time and Location

The research is conducted in the city of Palopo, South Sulawesi, which consists of 9 districts with a total population of 81 elementary/MI (Madrasah Ibtidaiyah) education units (School Data of Palopo City - Dapodikdasmen, n.d.). The student population is 17,647 (Student Data of Palopo City - Dapodikdasmen, n.d.). For further details regarding the population of educational units and students, refer to the table below:

Table 1. The Population of Educational Units in the 9 Districts of Palopo City

Region	The Number of Elementary Schools / District	Public Elementary Schools	Private Elementary Schools	Students
Wara District	17	12	5	2,419
Bara District	10	9	1	4,790
Wara Timur District	13	8	5	2,379
Wara Utara District	8	6	2	3,183
Telluwanua District	10	9	1	1,299
Wara Barat District	10	9	1	1,617
Wara Selatan District	4	3	1	844
Mungkajang District	5	5	0	630
Sendana District	4	4	0	486
Total	**81**	**65**	**16**	**17.647**

Data Source: (Student Data of Palopo City - Dapodikdasmen, n.d.)

Population and Sample

The population of primary education units (SD/MI) in Palopo City is 81 at the SD/MI level. This study determined the sample size using the Slovin formula, i.e., n = N / (1 + (N x e²)), resulting in a sample of 27 teacher informants. In selecting teacher samples, the research team employed non-probability sampling and purposive sampling techniques with the following criteria[35]: firstly, schools must have teachers and students who are Muslims; secondly, teachers must teach Islamic Religious Education and Moral Education subjects; thirdly, sampled students must be Muslims in the fifth grade. Using these criteria, 27 teachers were chosen as informants for this research.

Research Instrument

In this research, the research team utilizes three types of instruments. Firstly, direct observation is conducted on Islamic Religious Education and Moral Education teaching processes in 27 elementary/MI schools in Palopo City, previously determined as the research sample. Secondly, interviews were carried out by the research team with

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[35] Steve Campbell et al., "Purposive Sampling: Complex or Simple? Research Case Examples," *Journal of Research in Nursing* 25, no. 8 (2020): 652–61, https://doi.org/10.1177/1744987120927206.

27 Islamic Religious Education and Moral Education teachers selected as informants based on the predetermined school sampling. The questions posed and the received answers are recorded using devices to facilitate verbatim transcription and substantive analysis for subsequent stages. Thirdly, a questionnaire consisting of a set of statements is administered by the research team in two sessions at different times. The research team assigns weights to each response using the Guttman scale. For each positive statement, a score of 1 is given for agreement and 0 for disagreement. Conversely, for each negative statement, a score of 1 is given for disagreement and a score of 0 for agreement. This meticulous process is designed to obtain comprehensive and relevant data regarding the teaching of Islamic Religious Education and Moral Education in the context of this research.

4.FINDINGS

4.1 Identification of Discipline Values Implemented by Teachers through the Content of Islamic Religious Education and Moral Character in Primary Education Units in the City of Palopo

The material on Islamic religious education and moral character follows the value of discipline, as both emphasize integrity in all aspects of life. Discipline, characterized by the ability for self-direction with minimal reliance on external factors, plays a crucial role in shaping robust character and ethical behavior. Within the Islamic context, discipline encompasses dimensions such as justice, equality, and transparency, extensively expounded upon in the Quran.

Meanwhile, moral character can also help strengthen the value of discipline by cultivating good character and ethics within individuals. Moral character emphasizes values such as Commitment, Punctuality, Prioritization, Planning, Focus, Diligence, Obedience, and Consistency, all closely related to the integrity and morality required to reinforce the value of discipline. The results of the alignment of the material with each validated sub-indicator by experts are detailed in the table below:

Indicator Value vs Subject Matter Topics		Sub-Indicator Values vs Discussion of Material		
Indicator Value	**Subject Matter Topics**		**Sub-Indicator Values**	**Discussion of Material**
	Chapter 2 Getting Closer to the Names of Allah	1	Commitment	*Not Found*
Discipline	**Chapter 3** I Am a Pious Child	2	Punctuality	**Chapter** 2 (p. 42) **Chapter** 4 (p. 88, 98, 100) **Chapter** 7 (p. 160,178)
	Chapter 4 Living Generously through Sharing	3	Prioritization	*Not Found*

Indicator Value vs Subject Matter Topics		Sub-Indicator Values vs Discussion of Material	
Indicator Value	**Subject Matter Topics**	**Sub-Indicator Values**	**Discussion of Material**
	Chapter 6 Living in Peace through Togetherness	4 Planning	**Chapter** 4 (p. 89)
		5 Focus	*Not Found*
		6 Diligence	**Chapter** 6 (p. 138)
	Chapter 7 When Life Comes to a Halt	7 Obedience	**Chapter** 2 (p. 39) **Chapter** 3 (p. 63) **Chapter** 4 (p. 88,91,97) **Chapter** 7 (p. 174)
		8 Consistency	**Chapter** 3 (p. 63,64)

The search results for the alignment of anti-corruption value indicators in the book "Islamic Religious Education and Moral Character" for Grade V reveal that there is alignment between the content in the book and the discipline value indicators. A total of 5 topics in the book "Islamic Religious Education and Moral Character for Grade V" have been proven to be relevant to the discipline value indicators. Furthermore, the analysis of sub-indicators of discipline values reveals that several sub-indicators also correspond to the chapters in the book. Discipline sub-indicators that include "punctuality," "planning," "diligence," "obedience," and "consistency" have aligned with the five chapters of the material. Thus, the book "Islamic Religious Education and Moral Character for Grade V" can be considered an effective tool in building awareness about the importance of strengthening discipline values needed to shape positive character in students' daily lives. The role of teachers in delivering this material and implementing discipline values in everyday school practices is crucial in the educational context.

4.2 The Forms of Strengthening Discipline Values Implemented by Teachers through the Content of Islamic Religious Education and Moral Character in Primary Education Units in the City of Palopo

Next, the research field interview results from informants (Islamic religious education and moral character teachers) are presented. The interview data was processed using the N-Vivo 12 Plus application. The reinforcement of discipline values implemented by teachers in the primary education units in the City of Palopo is presented in the following chart below:
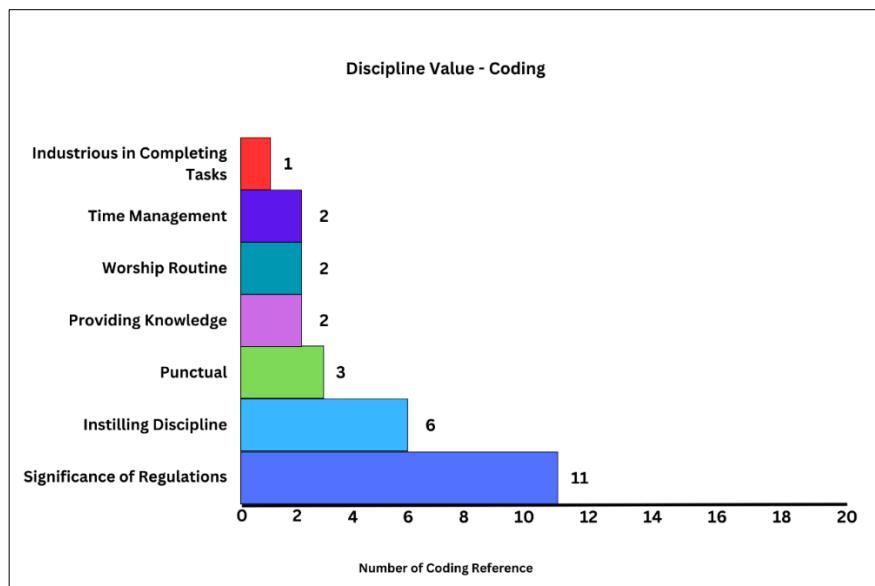
Source: N-Vivo data analysis

Figure 2. Discipline Value Reference Coding

The analysis of interviews with 27 participating teachers, processed through reference coding, provides a comprehensive overview of strategies for strengthening discipline values in the context of Islamic Religious Education and Moral Character learning in the primary education environment. The data identified several systematically implemented efforts to enhance student discipline. Respect for rules emerged as the most dominant step, with 11 out of 27 informants emphasizing the importance of compliance with established norms and rules. Instilling disciplined attitudes, punctuality, time management, and providing education, religious routines, and diligence in completing tasks were also key focuses in reinforcing discipline values.

Moreover, the interviews revealed that the consistent application of uniform consequences for rule violations demonstrates the school's commitment to upholding discipline values. This finding reflects that respecting rules is the primary foundation in shaping commitment, diligence, obedience, and consistency, critical sub-indicators for achieving effective discipline. The uniform consequences for rule violations signify implementing these values without exceptions. This discovery provides a deeper understanding of discipline reinforcement strategies in the primary education environment, emphasizing the fundamental values underlying them.

4.3 Students Understanding of Discipline Values through the Content of Islamic Religious Education and Moral Character in Primary Education Units in the City of Palopo

This study reveals that teachers' efforts to integrate discipline values into the Islamic Religious Education and Moral Character curriculum in Palopo City have yielded significant results. Most students demonstrate a good to very good understanding of the discipline values taught, indicating the effectiveness of the delivered content and teaching methods teachers employ in conveying the anti-corruption message to students. A profound understanding of these discipline values is

crucial to prevent disruptions in the learning process and facilitate easier absorption of conveyed information.

However, the research also highlights the existence of a portion of students who still require additional attention. This finding suggests room for improvement in the learning process, encompassing content delivery, teaching methods, and the character education approach applied. Teachers may consider self-evaluation, revisiting the curriculum, and implementing more interactive and engaging teaching methods to ensure each student can absorb and comprehend the anti-corruption values more easily.

Although the research results indicate a positive trend, continuous efforts from teachers are necessary to ensure that every student understands and internalizes the anti-corruption values effectively. Through quality and sustainable education, it is hoped that the younger generation of Palopo City will grow into individuals responsible for their actions and decisions, thereby positively impacting the development of a more moral and ethical society.

5. DISCUSSION

5.1 Identification of Discipline Values Implemented by Teachers through the Content of Islamic Religious Education and Moral Character in Primary Education Units in Palopo City

The research findings reveal that the discussed material emphasizes fundamental principles such as timeliness, planning, diligence, obedience, and consistency in daily life. Within the framework of teaching disciplinary values, particularly in Islamic Religious Education, students are instructed to adhere to rules and norms and internalize moral values that will guide them in facing various challenges in their daily lives[36]. Furthermore, character education is acknowledged as an effective means to shape students' character, providing an essential moral foundation for making wise decisions, overcoming trials, and evolving into responsible individuals[37].

The research results affirm that the Grade V Islamic Religious Education and Character Education book is concretely relevant to the indicators of disciplinary values. The sub-indicator analysis also illustrates the alignment between various sub-indicators and the content found in the book, such as timeliness, planning, diligence, obedience, and consistency. Therefore, this book is considered an effective tool in aiding the formation of students' awareness regarding good time management, emphasis on task priorities, and focus on achieving their educational goals in their daily routines. The role of teachers in delivering this material and applying these values in daily school practices is highly significant in the educational context[38]. The research findings provide a crucial foundation to ensure that religious and character education at the elementary level can effectively support disciplinary values.

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[36] Oktio Frenki Biantoro, "Urgenscy of Islamic Religious Education Teachers in Character Building for Students in Junior High Schools."

[37] Ihin Solihin, Aan Hasanah, and Hisny Fajrussalam, "Core Ethical Values of Character Education Based on Islamic Values in Islamic Boarding Schools," *International Journal on Advanced Science, Education, and Religion* 3, no. 2 (2020): 21–33, https://doi.org/10.33648/ijoaser.v3i2.51.

[38] Ninik Indawati et al., "Improving The Religious Character of Educators Through Exemplary of Principles," *AL-TANZIM: Jurnal Manajemen Pendidikan Islam* 6, no. 3 (2022): 789–801, https://doi.org/10.33650/al-tanzim.v6i3.3691.

5.2 The Forms of Discipline Value Reinforcement Conducted by Teachers through the Content of Islamic Religious Education and Moral Education in Basic Education Units in the City of Palopo

Strengthening the discipline values in teaching by Islamic education and character education teachers in primary education units in the city of Palopo involves several detailed strategies. Firstly, in explaining rules and consequences, teachers need to communicate in detail the rules that apply in the class and the consequences students will face if these rules are violated. By providing in-depth understanding, students will be more motivated to comprehend and adhere to the rules and recognize the urgency of discipline in the context of learning[39].

The second step is enforcing rules consistently and fairly. Teachers need to implement these rules without exceptions so that students feel that each individual is treated fairly[40]. Consistency in enforcing rules provides firmness towards norms and the value of discipline, creating a structured and reliable learning environment[41].

The next detailed step is to provide recognition for discipline. Teachers can implement a clear and measurable reward system, such as giving praise, certificates of appreciation, or other positive feedback to students who exhibit disciplined behavior[42]. These rewards can serve as positive stimuli for students to maintain good levels of discipline. On the other hand, imposing consequences for indiscipline should also be proportionate. Teachers must ensure that each action or behavior violating the rules receives appropriate and meaningful consequences[43]. It will help students understand that indiscipline has negative consequences and stimulate behavioral change. The effectiveness of time management also plays a crucial role in strengthening discipline values. Teachers can teach students how to manage time well, provide assignments with clear deadlines, and oversee the structured implementation of time[44]. Thus, students understand the value of discipline and develop critical time management skills[45].

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[39] Nurhasnah et al., "The Development of Character Education Curriculum Model for Islamic Elementary Schools in Muaro Jambi," *Journal of Physics: Conference Series* 1471, no. 1 (2020), https://doi.org/10.1088/1742-6596/1471/1/012030.

[40] Eniwati Khaidir and Fitriah M. Suud, "Islamic Education in Developing Students ' Characters At As-Shofa Islamic High School ," *International Journal of Islamic Educational Psychology* 1, no. 1 (2020): 50–63, https://journal.umy.ac.id/index.php/ijiep/article/download/8518/5356.

[41] Mirzon Daheri, "Religious Moderation, Inclusive, and Global Citizenship as New Directions for Islamic Religious Education in Madrasah," *Nazhruna: Jurnal Pendidikan Islam* 5, no. 1 (2022): 64–77, https://doi.org/10.31538/nzh.v5i1.1853.

[42] Maslani Maslani et al., "Implementation of Character Education in Islamic Education," *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia* 9, no. 1 (2023): 521, https://doi.org/10.29210/1202322884.

[43] Siti Dewi Maharani, Zulela MS, and Nadiroh Nadiroh, "Transformation of The Value of Religious Characters in Civic Education Learning in Elementary Schools," *International Journal of Multicultural and Multireligious Understanding* 6, no. 2 (2019): 295, https://doi.org/10.18415/ijmmu.v6i2.683.

[44] Muhammad Aji Nugroho, "Embedding Multicultural Values in Islamic Education: A Portrayal of Contemporary Indonesian Textbooks," *Edukasia Islamika* 4, no. 2 (2019): 226, https://doi.org/10.28918/jei.v4i2.2298.

[45] Khaidir and Suud, "Islamic Education in Developing Students ' Characters At As-Shofa Islamic High School ,."

Furthermore, encouraging students to take responsibility for tasks and assignments can be realized through participative learning methods. Teachers can delegate responsibility to students in planning and completing their tasks. It not only teaches discipline but also fosters independent and responsible attitudes[46].

Finally, setting a good example of discipline requires teachers to be consistent role models in demonstrating disciplined behavior. Teachers can arrive on time, complete tasks promptly, and adhere to the applicable rules[47]. Through these real-life examples, students can emulate and apply disciplined behavior daily.

Implementing these strategies is expected to create a structured learning environment that respects and nurtures discipline values in students in the city of Palopo. The role of teachers as facilitators, communicators, and exemplary models significantly impacts shaping students' character and behavior.

5.3 The Results of the Achievement of Discipline Value Reinforcement Conducted by Teachers through the Content of Islamic Religious Education and Moral Education in Basic Education Units in the City of Palopo

Islamic Religious Education and Moral Character Education play a central role in shaping the character and worldview of students, especially in the effort to prevent radicalism in Palopo. The achieved success reflects a strong commitment from the Palopo city government to strengthen discipline values among the younger generation through education. It is hoped that through the efforts of strengthening discipline values, a peaceful, tolerant, and diversity-respecting society will be created.

This research provides a positive overview of the disciplinary education approach that has been integrated into the curriculum of Islamic Religious Education and Moral Character Education in Palopo. This approach has the potential to serve as a model that can be adopted by other regions facing similar challenges. Despite the positive results, efforts to strengthen discipline should not stop here. Continuous monitoring and evaluation are necessary to ensure that the curriculum and teaching methods remain relevant to the evolving social and ideological developments[48].

Furthermore, close collaboration between the government, schools, and the community is crucial to maintaining the success of this program[49]. Active support and participation from all parties will ensure the sustainability of anti-radicalism education and help create a more structured and productive environment for the younger

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[46] Irnie Victorynie, M Husnaini, and Noor Amili, "Model of Religious Character Education: A Case Study in Al-Hilal Islamic Primary School Bekasi, Indonesia," *Journal of Social Studies (JSS)* 16, no. 2 (2020): 103–20, https://doi.org/10.21831/jss.v16i2.

[47] Indawati et al., "Improving The Religious Character of Educators Through Exemplary of Principles."

[48] Elihami Elihami, "An Innovation of Character of Islamic Religious Studies Education Towards Education 4.0 in Elementary School: Bibliometric Reviews," *Jurnal Basicedu* 6, no. 1 (2021): 146–56, https://doi.org/10.31004/basicedu.v6i1.1832.

[49] Evi Nur Fajri Wijaya, Sri Marmoah, and Tri Murwaningsih, *Disciplined Character Education to Realize Independent Learners at Elementary School* (Atlantis Press SARL, 2023), https://doi.org/10.2991/978-2-38476-114-2_38.

generation[50]. By continuing to take appropriate steps, Palopo and other regions have the potential to continue playing a role in creating a disciplined society.

The reinforcement of discipline values through the teaching of Islamic Religious Education and Moral Character Education has a profound impact on the development of students. One significant achievement is the formation of a positive character. Students will internalize attitudes of obedience to rules, responsibility, and orderliness in their daily lives[51]. This process also encourages the development of self-management skills, where students learn to manage their time, plan, and maintain focus, making them independent and responsible individuals[52].

In addition, Islamic education and moral character education will lead students to delve into moral and ethical values. They will understand the importance of integrity, honesty, and consistency in shaping character. Awareness of responsibility also becomes a focus, where students become more conscious of the consequences of every action and their responsibilities[53].

Improved academic achievement is also a result of strong discipline, as disciplined students tend to have good study habits[54]. Furthermore, the reinforcement of discipline values creates a positive learning environment in the classroom, establishing a well-organized and well-managed atmosphere, providing students with a sense of security, and enhancing their focus[55].

Students with strong discipline will develop orderly habits, such as punctuality, completing tasks accurately, and understanding the importance of planning[56]. Additionally, Islamic education provides a foundation for tolerance, cooperation, and justice, contributing positively to forming a harmonious society that respects diversity[57].

Beyond internal benefits, the reinforcement of discipline values also plays a role in preventing potential radical behavior. Balanced Islamic education and disciplinary values can shield students from the influence of extremism. Finally, students with strong discipline values are likelier to have positive social relationships, interact well

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[50] Hisny Fajrussalam, Agus Salim Mansyur, and Qiqi Yuliati Zaqiah, "Gaining Education Character Based on Cultural Sundanese Values: The Innovation of Islamic Education Curriculum in Facing Era Society 5.0," *Jurnal Iqra': Kajian Ilmu Pendidikan* 5, no. 1 (2020): 104–19.

[51] Muis et al., "Role of the Islamic Education Teacher in the Moral Improvement of Learners."

[52] Abidin and Murtadlo, "Curriculum Development of Multicultural-Based Islamic Education As an Effort To Weaver Religious Moderation Values in Indonesia."

[53] Nurhasnah et al., "The Development of Character Education Curriculum Model for Islamic Elementary Schools in Muaro Jambi."

[54] Imam Mujahid, "Islamic Orthodoxy-Based Character Education: Creating Moderate Muslim in a Modern Pesantren in Indonesia," *Indonesian Journal of Islam and Muslim Societies* 11, no. 2 (2021): 185–212, https://doi.org/10.18326/ijims.v11i2.185-212.

[55] Wijaya, Marmoah, and Murwaningsih, *Disciplined Character Education to Realize Independent Learners at Elementary School.*

[56] Elihami, "An Innovation of Character of Islamic Religious Studies Education Towards Education 4.0 in Elementary School: Bibliometric Reviews."

[57] Solihin, Hasanah, and Fajrussalam, "Core Ethical Values of Character Education Based on Islamic Values in Islamic Boarding Schools."

in groups, respect others, and uphold social norms. Through these achievement processes, the reinforcement of discipline values becomes a crucial foundation for the personal development of students and has the potential to shape a more harmonious, responsible, and ethical society.

6. CONCLUSION

The research conducted in the City of Palopo reveals a strong alignment between the content of Islamic Religious Education and Moral Character Education in primary education units and the reinforcement of discipline values. The study highlights the fundamental principles emphasized in the curriculum, such as timeliness, planning, diligence, obedience, and consistency, which contribute significantly to character development. Teachers in Palopo City play a crucial role in implementing systematic strategies to strengthen discipline values, including clear communication of rules, consistent enforcement, recognition, consequences for indiscipline, effective time management, encouragement of responsibility, and setting a positive example. The success achieved reflects a commitment to creating a peaceful and tolerant society, although the study underscores the need for continuous monitoring, evaluation, and collaboration to ensure the sustainability and relevance of anti-radicalism education.

The research emphasizes the multifaceted benefits of disciplined students, ranging from positive character formation to academic achievement and the prevention of potential radical behavior. It underscores the importance of teachers as key influencers in shaping student behavior and character. The findings suggest that ongoing efforts and collaborative initiatives are essential to maintain the enduring impact of discipline reinforcement in contributing to a responsible and ethical society in Palopo City.

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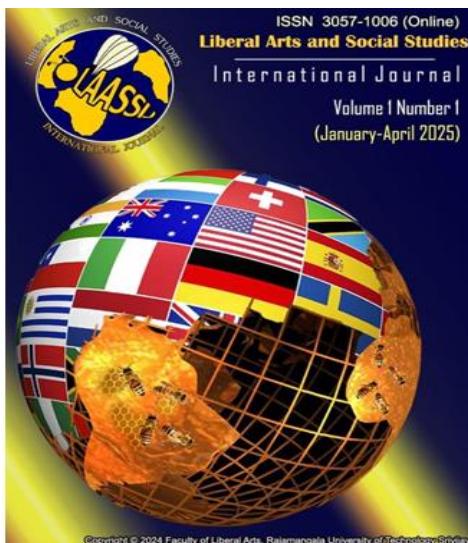
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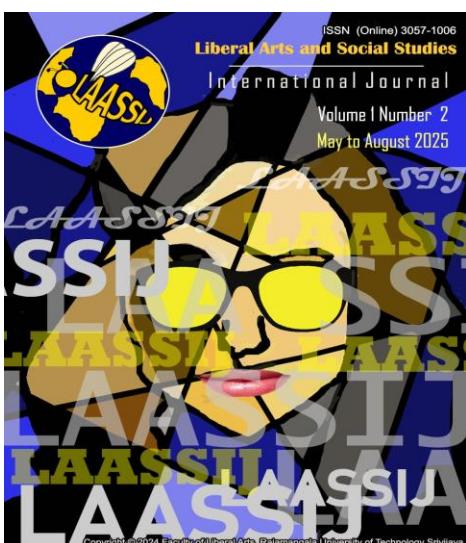
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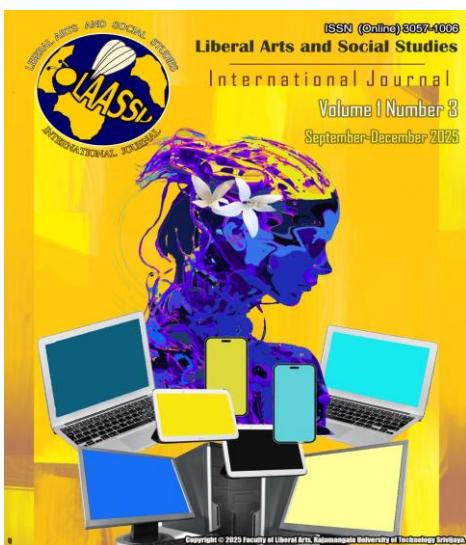
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