Enhancing Students' Awareness and Understanding in Using the Flexspace System at Suan Sunandha Rajabhat University

Suppalak Pongpipat[1], Chalermpol Tapsai[2] and Napasri Suwanajote[3]

[1,2,3]Suan Sunandha Rajabhat University, Thailand

Email: [1]Suppalak.po@ssru.ac.th, [2]chalermpol.ta@ssru.ac.th, [3]napasri.su@ssru.ac.th

Abstract

This study investigated students' awareness and understanding of the FlexSpace learning system at Suan Sunandha Rajabhat University. A sample of 350 undergraduate students completed questionnaires measuring awareness, understanding, and system-use factors. The results showed a high overall level of awareness and understanding (Mean = 4.57). A pre–post comparison indicated improvement from 3.42 to 3.89 after implementing instructional improvements, reflecting a 10% increase in perceptual efficiency. Recommendations include strengthening communication, improving system support, and ensuring adequate technological resources.

Keywords: Perceptual Guidelines, Accessing the Flexspace System, Student\

1. Introduction

Suan Sunandha Rajabhat University aims to develop graduates equipped with 21st-century digital skills. Despite the growing use of hybrid and self-directed learning environments, many students struggle with understanding digital platforms, including FlexSpace. This gap results in lower learning efficiency and underutilization of educational technologies. Enhancing perceptual efficiency, improving digital literacy, and strengthening support systems are essential to ensure meaningful learning outcomes and successful digital transformation in education.

Online learning lessons delivered through electronic media provide structured instruction that includes digital content, multimedia materials, interactive exercises, communication tools, and assessment functions. Such systems enhance teaching effectiveness and support flexible, self-directed learning anytime and anywhere. This approach aligns with national educational development policies promoting accessible digital learning resources across mobile technologies. Digital literacy—comprising the abilities to use, understand, create, and access digital tools—is essential for effective learning and instructional innovation. As digital transformation accelerates under Thailand 4.0, strengthening the digital literacy of educators and learners becomes critical for improving educational quality and ensuring the efficiency of digital learning environments. (Chamromman,S, 2023).

The use of electronic learning lessons enables learners to engage in collaborative learning within online environments, thereby strengthening their information literacy and ability to apply digital technologies to support personal and academic development. This aligns with the National Education Plan (2017–2036), which emphasizes computing and ICT literacy as core 21st-century competencies essential for all learners. For higher education students, these

competencies are particularly critical, as they directly influence future professional performance and the development of graduates who meet the quality standards outlined in the Thai Qualifications Framework for Higher Education (TQF:HEd). Establishing clear learning outcomes and aligning instructional processes with those outcomes ensures systematic support for student development and enhances the overall effectiveness of digital learning. (Srisomboon,K,2020).

The shift toward digital learning environments requires educators to redesign instructional approaches to align with learners' changing behaviors and attention patterns. Traditional resources, such as printed library materials and long-form lecture recordings, are increasingly underutilized, while concise, targeted digital content—particularly short video tutorials—has become the primary learning medium for today's students. Learners from Generations Y, Z, and Alpha exhibit strong digital orientations, quick information processing, and a preference for brief, engaging online materials. These characteristics highlight the need for instructional strategies that leverage social media, digital platforms, and content marketing principles to attract and sustain learner engagement in modern educational contexts. (Onlaor,C, 2023)

Education in the digital era has shifted from teacher-centered instruction toward technology-enhanced, learner-centered environments where "the world becomes the classroom." The integration of digital media fosters greater engagement, motivation, and active learning among students. Digital literacy—encompassing the abilities to use, understand, create, and access digital technologies—is essential for effective communication, collaboration, and modern work processes. Although digital technologies expand access to vast learning resources, meaningful learning still requires educators who possess strong digital competencies and can guide students in evaluating online information critically. Teachers play a key role in shaping positive learning environments, fostering discernment, and cultivating analytical and creative thinking to ensure effective learning in technology-rich contexts. (Suksai,L, 2023).

A key role in improving learning effectiveness involves promoting personalized learning, rapid access to information, and encouraging active participation in the learning process. Adjusting teaching methods to suit the characteristics of students has shown a relatively small effect ($\beta = 0.160$), explaining only 2.3% of variance in performance. This finding suggests that while pedagogical adjustments play a role, other influential factors—such as instructors' readiness and availability of educational resources—may have a greater impact. In summary, incorporating innovative learning management systems has significantly enhanced the quality of education, particularly in the field of political science. However, the development and implementation of such systems must carefully consider contextual factors and stakeholder readiness (Saengchan,B,2025).

2. Research Objectives

The aim of this study is to investigate student satisfaction with the teaching and learning management in the course " Enhancing Students' Awareness and Understanding in Using the Flexspace " at the General Education and E-Learning Innovation Office, Suan Sunandha Rajabhat University.

3. Conceptual Framework

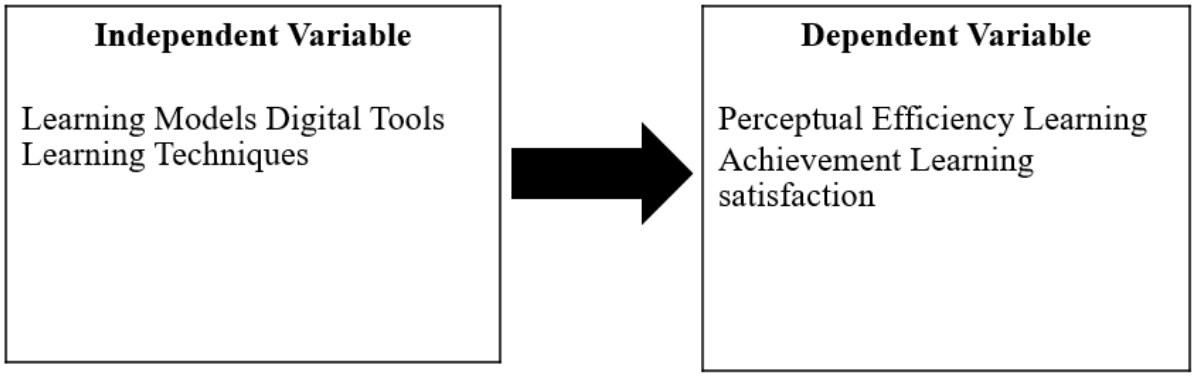

Figure 1. Conceptual Framework of the Study

4. Methodology

This study employed a **survey research design** and was conducted using a **quantitative research approach**. The purpose of the study was to investigate the enhancement of students' awareness of accessing and using the FlexSpace system at Suan Sunandha Rajabhat University during the academic year 2025.

1. Population and Sample

The population consisted of undergraduate students enrolled in General Education courses, specifically the course **GEZ0307: Life Without Obesity**, including first-year through fourth-year students, totaling **50,000 students**. The sample comprised **350 students**, selected to represent the population.

2. Research Instruments and Data Collection

Research Instrument

The instrument used for data collection was a **questionnaire**, designed to gather information regarding students' awareness of FlexSpace system usage and the perceived benefits of using the system. The questionnaire consisted of various types of questions, including **closed-ended questions**.

Data Collection

Data were collected through an **online questionnaire** distributed using **Google Forms**. The questionnaire link was disseminated via email and social media platforms, such as LINE groups and Facebook groups for students.

Variables

Independent Variables

- Learning approaches (Active Learning, Problem-Based Learning, Flipped Classroom)
- Instructional tools (Virtual Reality, AI Tutor, Game-Based Learning)
- Learning techniques (Mind Mapping, Mindfulness practice, Collaborative learning)

Dependent Variables

- Perceptual efficiency (measured by comprehension tests, thinking skills assessments, spatial perception assessments, etc.)
- Academic achievement
- Learning satisfaction

3. Research Setting

The study was conducted at **Room 1721, 2nd Floor, Building 17**, Suan Sunandha Rajabhat University.

4. Duration of the Study

The research was conducted from **October 1, 2024, to August 31, 2025**.

5. Data Analysis

Data were analyzed using **descriptive statistics**, including the calculation of **mean values**, with statistical analysis performed using the **SPSS** program.

5. Result

Based on responses from 350 students, overall perception and understanding of the FlexSpace system were rated at a **high level** (Mean = 3.89, SD = 0.67). Details by dimension are shown below:

Perception Dimension	Mean	SD	Level
Accessibility	4.12	0.71	Very High
Understanding of menus/functions	3.76	0.65	High
Support from instructors/staff	3.95	0.69	High
Perceived usefulness	4.08	0.62	High
Digital literacy	3.54	0.68	High
Overall	**3.89**	**0.67**	**High**

Summary:

Students exhibited a high level of perception and understanding of FlexSpace, with the highest mean score in **Accessibility (4.12)**. The lowest score was in **Digital Literacy (3.54)**, which, although high, indicates a continued need for skill development.

Pre-test / Post-test Comparison

Dimension	Pre-test ($\bar{x}$)	Post-test ($\bar{x}$)		Change Level
Accessibility	3.78	4.12	+0.34	Improved
Understanding of menus/functions	3.45	3.76	+0.31	Improved
Support from instructors/staff	3.62	3.95	+0.33	Improved
Perceived usefulness	3.82	4.08	+0.26	Improved
Digital literacy	3.21	3.54	+0.33	Improved
Overall Mean	**3.42**	**3.89**	**+0.47**	

Interpretation:

1. The overall mean increased from **3.42 (Moderate)** to **3.89 (High)** after the intervention.

2. The highest improvements were in **Accessibility (+0.34)** and **Digital literacy (+0.33)**.

3. All dimensions showed positive development, confirming that promotional strategies and hands-on activities effectively enhanced students' awareness and system-use capabilities.

Statistical testing indicated a **significant improvement at the .05 level** after implementing Active Learning–based communication strategies.

Additional Lessons Learned

1. Practical training contributed to a notable increase in understanding of system menus/functions (from 3.45 to 3.76).

2. Digital communication enhanced perceived usefulness (from 3.82 to 4.08).

3. Digital literacy, while improved, still requires further reinforcement to achieve optimal competency.

6. Conclusion

The study confirmed that targeted communication strategies and experiential workshops significantly enhanced students' awareness and understanding of the FlexSpace system. Accessibility and perceived usefulness played major roles in influencing system-use efficiency, while digital literacy remained an area requiring continued development. The findings emphasize the importance of multi-channel communication, user-friendly guides, and strong institutional support to sustain effective digital learning environments.

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References

Supharat Chamromman. (2023).Development of online lessons to enhance digital technology skills for education among teacher students of the Faculty of Education, Srinakharinwirot University. Journal of Educational Research, 18(1), 15–30.

Kanarak Srisomboon. (2020).Development of an electronic lesson for the course "Human and Environment" for undergraduate students. Journal of Social Science Research, 11(2), 127–146.

Cheewin Onlaor.(2023).21st Century Learning: The Digital World. Journal of Learning Promotion, 3(5), 1–13.

Lakkhana Suksai. (2023).Instructional management to develop learners in the digital era. MCU Ubon Ratchathani Journal of Buddhist Studies, 5(2), 515–532.

Barameeboon Saengchan. (2025).Innovations in the use of AI in teaching undergraduate students majoring in Political Science at Suan Sunandha Rajabhat University. Ratchapak Journal, 19(64), 446–456.