Developing an Effective Academic Management Framework to Enhance Online Education Practices

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Abstract

Online Teaching and Learning Management is a key aspect of academic management with innovative thinking, leveraging technology to enable flexible, inclusive learning. However, its effectiveness faces challenges such as technical difficulties, engagement barriers, and student accountability issues. This research aims to tackle those issues by investigating the relationship between academic management employing innovative thinking and its impact on undergraduate students' satisfaction with online teaching and learning, where the findings will inform the development of effective frameworks for enhancing online education practices. The findings show that the overall average satisfaction scores are at a medium level, indicating significant potential for improvement. The development of effective academic management frameworks for enhancing online teaching and learning should mainly focus on intensive training for instructors, training and follow-up for students, 24/7 technical support, increased awareness and communication about the benefits of online learning, support for content development, enhanced permission and storage, and finally incentive for engagement with the online learning system.

Keywords: Academic Management Framework, Online Education Practices, Innovative Thinking

1. Introduction

Academic management, a cornerstone of educational institutions, encompasses a wide array of functions, including curriculum development, instruction, assessment, and research. Effective academic management requires strategic planning, collaborative efforts, and a focus on quality assurance. However, education in Thailand, with its longstanding goal of nurturing well-rounded individuals, is undergoing significant transformation due to rapid societal and technological shifts. To navigate these changes while preserving its core mission, the education system must continuously evolve its academic management practices, emphasizing learning approaches that cultivate critical thinking and foster innovation in learners. As outlined in the National Educational Plan (2017–2026), delivering quality and standardized education requires innovative approaches that align with strategies aimed at enhancing the potential of individuals across all age groups while fostering a learning society. These strategies emphasize the development of learning models designed to meet the needs of 21st-century learners, focusing on cognitive development and prioritizing the cultivation of innovation (Office of the Education Council, 2017). This highlights the critical role of academic management in driving educational excellence within institutions (Sansanee Jassuwan, 2014).

Online Teaching and Learning Management can indeed be considered a significant aspect of academic management with innovative thinking. It embodies the principles of innovation by

leveraging technology, rethinking traditional teaching methods, and enabling adaptive, flexible, and inclusive learning environments. However, achieving effective online teaching and learning presents significant challenges due to various factors, including technical difficulties, engagement barriers, issues with maintaining student accountability and so on. Therefore, this research aims to investigate the relationship between academic management employing innovative thinking and its impact on undergraduate students' satisfaction with online teaching and learning. The findings will inform the development of effective frameworks for enhancing online education practices.

1.1 Research Objective

The objective of this research is to develop a robust academic management framework designed to enhance the effectiveness of online education practices.

2. Literature Review

The literature on developing an effective academic management framework to enhance online education practices can be categorized into several key variables, including academic management components, institutional and environmental factors, student-centric outcomes, and institutional/system outcomes. A detailed summary of these studies is provided below.

2.1 Academic Management Components

Academic management components are as follows:

1. Technology utilization including using of learning management system (LMS), virtual labs, AR/VR tools, (Picciano, 2017; Watson et al., 2020).
2. Curriculum design and delivery using flipped classrooms, modular learning, and interdisciplinary courses, (Halverson & Graham, 2019).
3. Instruction strategies including gamification, problem-based learning (PBL), and collaborative learning methods, (Helms, 2016).
4. Support systems including technical support for teachers/students and digital libraries, (Borup et al., 2020).

2.2 Institutional and Environmental Factors

Institutional and environmental factors are as follows:

1. Infrastructure and resources including availability of reliable internet, adequate devices, and cloud-based platforms, (Zainuddin et al., 2022).
2. Faculty and student preparedness including digital literacy and self-directed learning skills, (Bolliger & Halupa, 2023).
3. Engagement strategies including interactive discussion boards, real-time Q&A sessions, and group projects, (Stone & Springer, 2018).

2.3 Student-Centric Outcomes

Student-centric outcomes are as follows:

1. Student satisfaction including satisfaction with content delivery, teaching methods, and technology use, (Stone & Springer, 2018).
2. Learning outcomes including test score and achievement of learning objective, (Halverson & Graham, 2019).

3. Engagement levels including attendance rates, participation in discussions, and assignment submission rates, (Picciano, 2017).

2.4 Institute and System Outcomes

Institute and system outcomes are as follows:

1. Teaching effectiveness including quality of feedback, and alignment of teaching with objectives, (Helms, 2016).
2. Scalability and sustainability including ability to expand course offerings, and cost efficiency, (Watson et al., 2020).
3. Retention rates including dropout rates, and continue in course enrolment, (Bolliger & Halupa, 2023).

3. Conceptual Framework

Derived from a comprehensive review of the literature, the conceptual framework has been developed as shown in figure1.

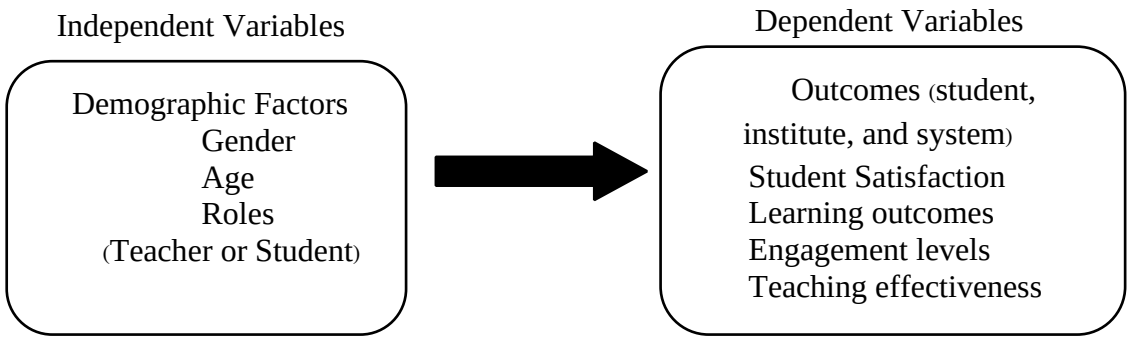

Figure 1 SEQ Figure * ARABIC 1: Research Conceptual Framework

4. Methodology

This study employs a quantitative descriptive design to explore the relationship between demographic factors (IV) such as sex, age, and roles (teacher or student) with student-centric, institute and system outcomes (DV). The target population for this study includes teachers and undergraduate students enrolled in the science of living course at Rajabhat Suan Sunandha university during 2/2023 semester. The sample consisted of 225 students selected using stratified random sampling to ensure representation across different academic programs and year levels. The sample size was determined based on power analysis, ensuring sufficient statistical power to detect medium-sized effects with a confidence level of 95% and a margin of error of ±5%. The questionnaire was structured into three distinct sections: demographic factors, students' opinions on online learning, and challenges associated with the online teaching and learning system. Data analysis was conducted based on descriptive statistics using average and standard deviation of score values. The results were then used to develop the effective frameworks for enhancing online education practices.

5. Results

The results of this study can be summarized as follows:

1. The respondents consist of 114 males (50.7%) and 111 females (49.3%).
2. Among the respondents, 80 individuals (35.6%) are aged 18–20 years, 78 individuals (55.3%) are aged 21–23 years, 64 individuals (28.4%) are aged 24–26 years, and 2 individuals (0.9%), who are all teachers, are aged 36–40 years.
3. The outcomes results are summarized as shown in table 1-2.

Table 1 Students-Centric and Institute Outcomes

Questions	$\bar{x}$	S.D.	Level
1. Online classrooms help achievement of teaching goals.	2.78	0.79	Medium
2. Online classrooms help students learn and understand more effectively.	2.72	0.77	Medium
3. Online classrooms can assist with time management in teaching tasks.	2.69	0.82	Medium
4. Online classrooms provide content that aligns with the teaching objectives.	2.72	0.79	Medium
5. Online classrooms can organize content into categories, making it easier to deliver lessons.	2.70	0.84	Medium
6. Online classrooms can ensure the appropriateness of content for each subject in the teaching and learning process.	2.71	0.79	Medium
7. Online classrooms are appropriate in their use of language for teaching presentation.	2.71	0.79	Medium
8. Online classrooms effectively convey teaching content through clear visuals, audio, and videos.	2.71	0.79	Medium
9. Online classrooms provide examples that align with the lessons.	2.74	0.82	Medium
10. Online classrooms offer exercises that align with the teaching and learning process.	2.72	0.82	Medium
11. Online classrooms can provide links to additional resources.	2.64	0.85	Medium
12. Online classrooms include periodic assessments during the course.	2.76	0.78	Medium
13. Online classrooms can conduct assessments that reflect the quality of both learners and instructors.	2.74	0.73	Medium
Overall	0.71	0.73	Medium

Table 2 Problems and Challenges in Online Teaching and Learning

Questions	$\bar{x}$	S.D.	Pass/Fail
1. Setting up an online classroom system is straightforward.	2.66	0.66	Pass
2. Student lists can be efficiently managed within the online classroom system.	2.67	0.67	Pass
3. Creating courses in the online classroom system is easy and hassle-free.	2.60	0.68	Pass

Questions	$\bar{x}$	S.D.	Pass/Fail
4. Managing instructional materials in the online classroom system is easy and seamless.	2.53	0.67	Pass
5. Creating and editing information pages is straightforward and efficient.	2.61	0.69	Pass
6. Adding website links is simple and convenient.	2.56	0.69	Pass
7. Adding images is straightforward and user-friendly.	2.60	0.68	Pass
8. Uploading teaching materials (Word, PowerPoint, PDF) is quick and hassle-free.	2.57	0.66	Pass
9. Adding audio files is simple and efficient.	2.62	0.69	Pass
10. Embedding videos from YouTube is quick and easy.	2.63	0.68	Pass
11. Assigning tasks or homework in the online classroom system is efficient and straightforward.	2.60	0.70	Pass
12. Reviewing homework and assigning grades in the online classroom system is efficient and convenient.	2.68	0.70	Pass
13. Creating surveys or quizzes in the online classroom system is simple and user-friendly.	2.65	0.71	Pass
Overall	2.61	0.61	Pass

From Tables 1 and 2, it is evident that the overall average satisfaction scores for both outcomes are at a medium level, indicating significant potential for improvement. In addition, for student-centric and institutional outcomes, the top three ranked item is "Online classrooms help achieve teaching goals" ($\underline{x}$= 2.78, S.D. =0.79), “Online classrooms include periodic assessments during the course” ($\underline{x}$= 2.76, S.D. =0.78), “Online classrooms provide examples that align with the lessons” ($\underline{x}$= 2.74, S.D. =0.82), “Online classrooms can conduct assessments that reflect the quality of both learners and instructors” ($\underline{x}$= 2.74, S.D. =0.73), respectively. While the lowest score is “online classrooms can provide links to additional resources” ($\underline{x}$= 2.64, S.D. =0.85).

Similarly, for online classroom system outcomes, the top three ranked item is " reviewing homework and assigning grades in the online classroom system is efficient and convenient." ($\underline{x}$= 2.68, S.D. =0.70), “student lists can be efficiently managed within the online classroom system.” ($\underline{x}$= 2.67, S.D. =0.67), “setting up an online classroom system is straightforward.” ($\underline{x}$= 2.74, S.D. =0.82), respectively. While the lowest score is “managing instructional materials in the online classroom system is easy and seamless.” ($\underline{x}$= 2.53, S.D. =0.67).

6. Conclusion

The finding shows that respondents are satisfied in several aspects of online classroom. These are explained in detail as follows:

- Online teaching systems are aligned with the current digital age, offering significant advantages for both instructors and students.
- The system fully integrates information technology into teaching and learning, making it an effective platform for knowledge dissemination.
- It serves as a hub of extensive knowledge and resources, stored within the online platform, allowing students to learn and develop continuously.
- The content is systematically presented and well-organized, enabling students to access and review materials independently.

- Students can download files, revisit lessons at their convenience, and learn without requiring physical resources typically used in traditional classrooms.
- Students can submit assignments conveniently in digital formats, while instructors can review, grade, and compile scores efficiently through the system.
- The platform allows instructors to continuously develop their materials and upload multimedia content, including images, audio, video, and other formats, to enhance the learning experience.
- Online learning provides a cost-effective and convenient alternative, offering an organized, secure, and well-maintained environment for storing and protecting data.
- The system enables continuous learning opportunities, ensuring students can access knowledge anytime without restrictions.

Regarding the issues and challenges of online teaching and learning, respondents provided feedback highlighting several concerns such as:

- There are difficulties in updating course content due to a heavy workload from teaching duties or other assigned tasks.
- Many instructors only have time to work on the system during lunch breaks or after work.
- Excessive teaching hours each term leave little time for preparing and updating course content for online classrooms.
- Instructors struggle to upload materials because they forget the steps involved and lack motivation.
- Convenience of use is hindered by issues such as slow internet connections and problems with computer systems that cannot upload files.
- Students show a lack of interest in online classrooms due to insufficient preparation, lack of time, or low motivation.
- The system is primarily used as a supplementary tool for teaching and cannot support large file uploads due to limited storage and file size restrictions.
- Instructors are proficient only at a basic level, as they lack training in system usage. Prolonged periods of non-use lead to forgotten steps for creating courses or accessing accounts, particularly when multiple instructors share a course.
- Instructors are concerned about copyright issues for materials being uploaded, as the textbooks used are not always owned by them or the institution.
- The online classroom system is outdated, which limits its functionality, such as the inability to verify if students are actively participating in the courses.
- The system could be improved to offer better features while maintaining ease of use.

Finally, to develop a robust academic management framework designed to enhance the effectiveness of online education practices. The following approaches can be used as explained below:

- Conduct intensive practical training workshops for instructors every term before the start of the teaching sessions.
- Provide students with training on how to use the system, along with follow-up assessments at least once per term.
- Establish a dedicated unit to provide round-the-clock support for troubleshooting and resolving issues.
- Enhance awareness and communication about the benefits of online classrooms to encourage greater use and engagement.

- Assign staff to assist with creating graphics, videos, and other materials, as well as facilitating tasks such as course creation, file uploads, and content updates.
- Offer guidance to instructors who are less experienced with the system to help them gain proficiency.
- Expand program access permissions for instructors to allow for more flexibility in usage.
- Increase storage capacity to support larger data uploads and improve file exchange between students and instructors.
- Open dedicated laboratories where instructors can access and utilize the online learning system.
- Introduce motivational incentives and rewards to encourage greater participation in the system.
- Assign coordinators to facilitate usage and create a supportive environment for system adoption.

Academic administration based on innovative approaches can extend to the development of academic administration strategies, their application, and the enhancement of teaching and learning management. This includes designing learning processes aimed at improving learner quality, thereby increasing the efficiency and potential of both learners and educators. It integrates approaches to develop competencies in digital technology, such as standardized assessment systems, skill development activities, and fostering knowledge, skills, and aptitude in utilizing digital technology for teaching and learning. Additionally, it involves self-development and organizational advancement in digital technology usage, contributing to the creation of digital technology learning resources. This approach emphasizes the significance of improving educational quality and further contributes to the advancement of national education standards. (Noichun, N, 2024)

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