

Development of Interactive Learning Media for General Education: A Case Study of GEZ0205 English for Health Care

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Abstract

This research aims to study the components and steps involved in developing interactive learning materials for the general education course, as well as to develop the interactive learning materials themselves and assess user satisfaction with their implementation. The research process is divided into three stages: 1) Examining the components and steps for developing interactive learning materials 2) Developing the interactive learning materials 3) Assessing the satisfaction of students and staff with the use of the interactive learning materials. The statistical tools used for data analysis include mean and standard deviation. The study was implemented with 1,065 students enrolled in the GEZ0205 English for Health Care course during the first semester of the academic year 2024 and 25 staff members from the General Education Office. The user satisfaction evaluation indicated a very high level of satisfaction, with a mean score of 4.70. In conclusion, the trial implementation of the interactive learning materials for the course demonstrated the highest level of user satisfaction.

Keywords: English for Health Care, General Education, Learning Media

1. Introduction

The Office of General Education and Innovative Electronic Learning Suan Sunandha Rajabhat University has a primary mission to manage general education courses for undergraduate programs, conduct research and development on learning innovations using electronic media, and provide academic services to meet the needs of agencies and communities. This aligns with the university's policy of promoting the effective application of technology and information among students and staff.

The Electronic Learning Innovation Division, under the General Education and Electronic Learning Innovation Office, has been tasked with advancing technology and information systems, developing teaching and learning materials, and innovating learning management practices. These resources are designed to support general education courses and enhance technological and informational accessibility for students, lecturers, and staff of Suan Sunandha Rajabhat University. Recognizing the importance of integrating online learning innovations and technologies into current general education instruction, the Electronic Learning Innovation Division ensures that every course in the general education program has a dedicated learning management website each semester. In the modern world of social media, students can be reached by using social media more effectively than any other public relations. The main objectives of this research were to give an in-depth interview with sample groups of students to understand their needs and wants as well as the best way to reach them more

effectively than any other public relation tools. The findings from the study revealed that the best way or the most effective way to reach students was by using social media, Facebook. It has no costs and can be shared among different groups of students instantly (Suksakul, N., & Wongleedee, K., 2023).

In light of this, it is essential to develop English learning materials focusing on vocabulary and communication skills related to Health Care. These materials aim to enhance learners' understanding of personal and family Health Care. The researcher conducted a needs assessment to determine appropriate topics for creating interactive learning resources aligned with the course GEZ0205: English for Health Care. These interactive materials emphasize engaging learning experiences that are enjoyable, accessible, and effective. They aim to equip learners with practical knowledge and skills to apply in real-life Health Care scenarios.

1.1 Research Objective

This research study was aimed to

- 1) To study the components and development process of interactive learning media for the general education course.
- 2) To develop interactive learning media for the general education course.
- 3) To evaluate the interactive learning media for the general education course.

2. Conceptual Framework

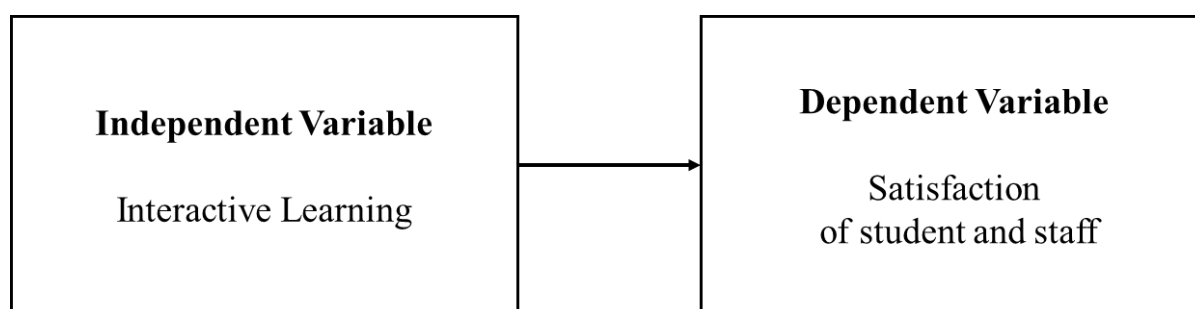


Figure 1. Conceptual Framework of the Study

Figure 1 illustrates the research model that guided the study. The independent variables included the study of components and processes for developing interactive learning materials, the development of interactive learning materials, and the evaluation of interactive learning materials. The dependent variable was the interactive learning materials developed for the course GEZ0205 English for Health Care. The arrow indicates the causal relationship between the independent and dependent variables, suggesting that the development and evaluation of interactive learning materials directly influenced the quality and effectiveness of the final product.

3. Literature Review

Instructional design for interactive learning is a multifaceted approach that enhances educational experiences through structured methodologies and technology integration. The ADDIE model is frequently employed, emphasizing stages such as analysis, design, development, implementation, and evaluation, which collectively foster effective learning environments. This synthesis of research highlights key components and methodologies that contribute to successful interactive learning.

Key Components of Instructional Design

ADDIE Model: A systematic approach that guides the development of educational programs, ensuring that learning objectives are met effectively (Romisa, N. F., & Rosita, N. D., 2024; Cárdenas, M. Á. L., & Estrada, C. C. P., 2022).

Constructivism: This theory underpins many instructional designs, promoting active learner engagement and knowledge construction through participation (Addo, D. E., Efut, E. N., Akpo, D. M., & Egor, O. W., 2023).

Multimedia Integration: Incorporating various media types (text, images, video) enhances interactivity and caters to diverse learning styles (Romisa, N. F., & Rosita, N. D., 2024).

Benefits of Interactive Learning

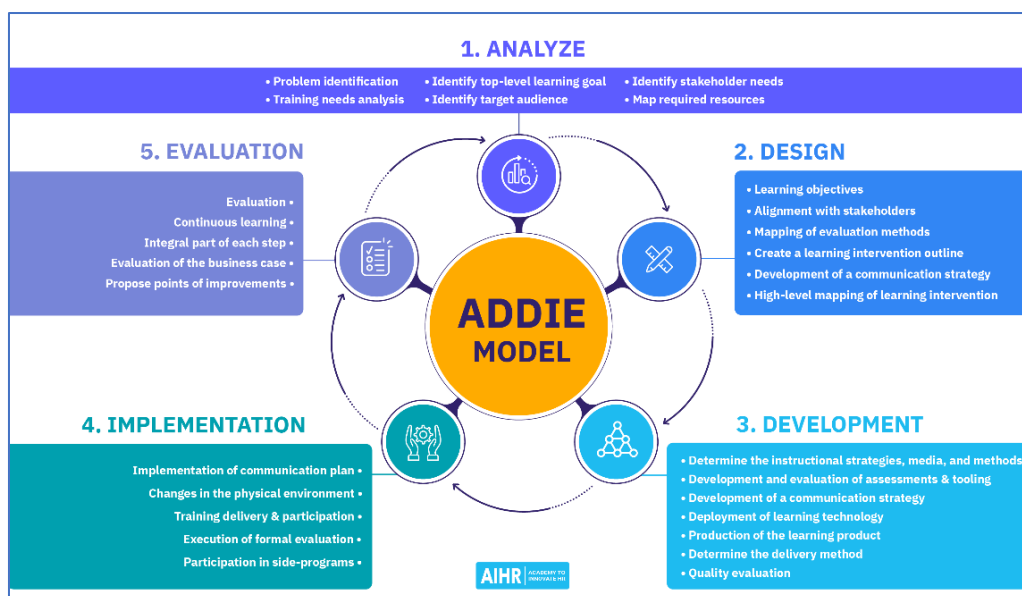
Enhanced Engagement: Interactive methods, such as problem-based learning and simulations, motivate students and improve retention.

Collaboration: Encourages teamwork and peer learning, fostering a community of inquiry among learners (Cárdenas, M. Á. L., & Estrada, C. C. P., 2022).

Skill Development: Focuses on cognitive, affective, and psychomotor domains, equipping learners with critical thinking and problem-solving skills (Addo, D. E., Efut, E. N., Akpo, D. M., & Egor, O. W., 2023).

While the emphasis on structured instructional design is crucial, some argue that overly rigid frameworks may stifle creativity and adaptability in teaching. Balancing structure with flexibility can lead to more innovative and responsive educational practices.

Figure 2. ADDIE Model Source <https://www.aihr.com/blog/addie-model/METHODOLOGY>



1. Population and Sample Group

The population includes personnel from the Office of General Education and Electronic Learning Innovation, students enrolled in general education courses, and instructors teaching general education courses. The experimental sample consists of:

- Educational services staff: 14 people
- Electronic learning innovation staff: 4 people
- General administrative staff: 6 people
- Planning, budgeting, and quality assurance staff: 1 person
- Students enrolled in general education courses: 1,065 people

2. Study Methods

The researcher has planned the development of interactive learning materials for the general education course: A case study of GEZ0205 English for Health Care as follows:

2.1 Needs Analysis

Conduct a study and analysis of the needs of students and instructors in the GEZ0205 English for Health Care course to identify suitable content and formats for interactive learning materials.

2.2 Learning Materials Design

Plan and design interactive learning materials by defining learning objectives, content, presentation formats, and related activities to align with the needs and objectives of the course.

2.3 Learning Materials Development

Develop interactive learning materials according to the design plan using authoring tools within PowerPoint (iSpring Suite) to create effective learning experiences and enhance learner engagement.

2.4 Preliminary Testing and Evaluation

Test the use of learning materials with a sample group to assess their effectiveness and appropriateness. Collect feedback and suggestions through questionnaires or other evaluation tools.

2.5 Revision and Continuous Development

Analyze the results of the testing and feedback to revise and further improve the learning materials for greater effectiveness.

2.6 Implementation and Final Evaluation

Implement the revised learning materials in the GEZ0205 English for Health Care course and evaluate user satisfaction as well as measure learners' learning outcomes.

3. Location

The Office of General Education and Innovative Electronic Learning, Suan Sunandha Rajabhat University.

4. Study Period

October 1, 2023, to August 31, 2024.

5. Data Analysis

This research used descriptive statistics: numbers, percentages, means, and standard deviations to describe general data and satisfaction of users of interactive learning media for general education courses: a case study of GEZ0205 English for Health Care course.

4. Results

From the study titled "Development of Interactive Learning Materials for General Education Courses: A Case Study of GEZ0205 English for Health Care," the findings are as follows:

The respondents included those who completed the satisfaction survey for the interactive learning materials designed for the general education course: A case study of GEZ0205 English for Health Care. The respondents were: 1,065 students from Suan Sunandha Rajabhat University during the first semester of the 2024 academic year, 25 staff members from the Office of General Education and Electronic Learning Innovation. Details are presented in Table 1-2.

Table 1: Respondents

Category	Number	Percentage
Student	1,065	97.70
Staff	25	2.30
Total	1,625	100

Table 2: User Satisfaction Levels

Evaluation Criteria	Average Score	Standard Deviation	Satisfaction Level
1. Design			
1.1 The design of the learning materials is visually appealing.	4.65	0.49	Highly Satisfied
1.2 The layout is appropriate for the learning materials.	4.77	0.45	Highly Satisfied
1.3 The structure is suitably arranged for the learning materials.	4.69	0.48	Highly Satisfied
1.4 The design of images aligns with the learning materials.	4.72	0.47	Highly Satisfied
1.5 The materials are easy to use.	4.70	0.47	Highly Satisfied
2. Usability			
2.1 The design of the learning materials is visually appealing.	4.65	0.49	Highly Satisfied
2.2 The layout is appropriate for the learning materials.	4.77	0.45	Highly Satisfied
2.3 The structure is suitably arranged for the learning materials.	4.69	0.48	Highly Satisfied
2.4 The design of images aligns with the learning materials.	4.72	0.47	Highly Satisfied
2.5 The materials are easy to use.	4.70	0.47	Highly Satisfied
Overall Satisfaction	4.70	0.47	Highly Satisfied

From Table 2, the analysis of user satisfaction with the interactive learning materials for the general education course, specifically GEZ0205 English for Health Care, across the two aspects revealed that overall user satisfaction was at the highest level, with a mean score of 4.70. For the **design aspect**, the criterion with the highest satisfaction was the appropriateness of the layout for the learning materials and the speed of accessing information, both with a mean score of 4.77. This was followed by the appropriateness of the learning materials for the learners, with a mean score of 4.75. The alignment of image design with the learning materials and the applicability of knowledge gained to real-life situations both scored a mean of 4.72. Ease of use received a mean score of 4.70, while the appropriateness of the structure scored 4.69. The visual appeal of the learning materials scored 4.65. Lastly, the ease of understanding of the learning materials scored 4.58.

5. Conclusion

From the study on developing interactive learning materials for general education courses: A case study of GEZ0205 English for Health Care, the researcher developed interactive learning materials to support online teaching for the Office of General Education and Electronic Learning Innovation. The materials were tested with 1,065 students enrolled in general education courses during the first semester of the 2024 academic year and 25 staff members from the Office of General Education and Electronic Learning Innovation. The interactive learning materials were integrated into the office's online learning system for testing.

The results showed that students and staff who used the interactive learning materials expressed high satisfaction, with an average score of 4.70. This indicates that using interactive learning materials, such as a case study of GEZ0205 English for Health Care, in online teaching for students and staff, was effective, modern, and aligned with current needs. As with previous research of Kongpha, R., Cheerapakorn, P., Nookhong, J., & Pintuma, S. (2024, March) has studied the Utilizing Interactive Media for Learning in General Education Courses: Insights from The General Education in Higher Education and found that the overall satisfaction across all four aspects was at a level of 4.59, which translates to 91.78%. The satisfaction with the system's display reached the highest level, scoring 4.65, equivalent to 93.00% satisfaction. The satisfaction with the interactive media design scored 4.69, marking a 93.78% satisfaction level. In terms of satisfaction with using interactive media, it scored 4.56, indicating a 91.20% satisfaction level. Lastly, satisfaction with the effectiveness of the interactive media attained a score of 4.46, representing an 89.17% satisfaction level. This research indicates that interactive media is an effective learning tool, capable of engaging learners, fostering participation, and facilitating efficient learning. However, in developing interactive media, considerations should be given to design, system usability, system efficiency, and presentation factors. This ensures that the media aligns appropriately and meets the users' needs to the highest extent possible.

The development of these materials fostered collaboration among all departments within the Office of General Education and Electronic Learning Innovation, promoting mutual learning and exchange. This process required close coordination with the instructors, including discussions and meetings to gather relevant data for developing the interactive materials. These efforts ensured that the materials provided maximum benefit to the learners and promoted happy learning. As with previous research of Kongpha, R., & Chatwattana, P. (2023) has studied the Virtual Interactive Learning Model Using Imagineering Process via Metaverse and found that the results, which are in consistence with the expectation of the researchers, show that (1) this research can be used as a guideline to develop the virtual interactive learning system using imagineering process via metaverse, which can promote happy learning, and it

consists of six steps of imagineering process integrated with learning through virtual environments via metaverse; thereby, users can interact in the virtual world and exchange knowledge with one other through virtual reality technology, (2) the overall suitability of the development of the virtual interactive learning model using imagineering process via metaverse (overall elements) is at the very high level, and (3) the overall suitability of the development of the virtual interactive learning model using imagineering process via metaverse is at the very high level.

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