

The Role of Admission Teams Extends Beyond Student Recruitment, as They Contribute Significantly to Institutional Sustainability and the Enhancement of Institutional Reputation

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Abstract

This research aimed to: (1) develop infographic-based media on the impacts of improper garbage disposal, (2) evaluate the efficiency of the developed media, and (3) examine students' satisfaction toward the media. The sample consisted of 120 students from Wat Sawang Arom School, selected using purposive sampling. The research instruments included an infographic media set, an expert evaluation form, and a satisfaction questionnaire. Data were analyzed using mean and standard deviation. The results revealed that: (1) the developed infographic media was designed as a poster using graphic design tools such as Canva and Photoshop, integrating images, symbols, and concise text to communicate the impacts of improper garbage disposal; (2) the efficiency of the media met the standard criterion (80/80), indicating a high level of effectiveness; and (3) students' satisfaction toward the media was at a high level, showing that the content was clear, engaging, and easy to understand. These findings suggest that infographic media is an effective educational tool for enhancing students' awareness and promoting responsible behavior regarding waste management.

Keywords: Educational Innovation, Infographic Media, Waste Management, Student Awareness, Learning Media

Introduction

In recent years, technological advancements have significantly transformed various aspects of everyday life, particularly in the field of education. Learning is no longer confined to traditional printed materials, as digital technologies and e-learning platforms have expanded access to knowledge through diverse and interactive formats. Among

these innovations, infographics have emerged as an effective tool for presenting complex information in a concise and visually engaging manner. By integrating text, images, symbols, and graphical elements, infographics enable learners to quickly grasp key concepts without relying heavily on lengthy explanations.

The increasing use of visual communication reflects the growing importance of graphic-based media in modern education. Infographics not only simplify complex information but also enhance learner engagement, improve memory retention, and support self-directed learning. Consequently, they have been widely adopted as a medium for communicating information that may otherwise be difficult to understand through text-based approaches.

At Wat Sawang Arom School, improper garbage disposal among students has become a significant issue affecting the school environment. Waste is frequently discarded in inappropriate areas, resulting in unclean surroundings, unpleasant odors, and reduced aesthetic quality. Furthermore, accumulated waste can obstruct drainage systems, contaminate water sources, and create breeding grounds for disease-carrying insects such as flies, cockroaches, and mosquitoes. These conditions not only compromise environmental hygiene but also pose potential health risks to students and the surrounding community.

Recognizing the importance of promoting environmental responsibility among students, this study focuses on the development of infographic-based media to enhance awareness of proper waste disposal. By utilizing visual communication to illustrate the negative impacts of improper behavior, the study aims to encourage students to develop a sense of responsibility and adopt appropriate waste management practices. It is expected that infographic media will provide a clear, engaging, and easily understandable approach to improving students' environmental awareness and behavior.

Objectives

1. To design and develop infographic-based printed media illustrating the impacts of improper garbage disposal for students at Wat Sawang Arom School.
2. To evaluate the effectiveness and quality of the developed infographic media in conveying information about improper garbage disposal.

3. To examine the level of students' satisfaction toward the infographic media on the impacts of improper garbage disposal at Wat Sawang Arom School.

Literature Review

The development of infographic media in this study was guided by the ADDIE model, a widely recognized instructional design framework consisting of five systematic stages: Analysis, Design, Development, Implementation, and Evaluation. This model has been extensively applied in educational research to ensure the effectiveness and quality of instructional media.

In the analysis phase, the researcher identified research objectives and examined problems related to improper garbage disposal within Wat Sawang Arom School. Relevant information was collected and analyzed, including the causes and impacts of waste mismanagement, as well as the benefits of proper waste separation. This stage provided a foundation for determining appropriate and contextually relevant content for the infographic media.

In the design phase, emphasis was placed on planning the structure and visual presentation of the infographic media. Design principles were carefully studied to ensure that the content was appropriate for the target group, consisting of school students. Information from academic sources, including books, journal articles, and related studies, was synthesized to develop effective content and visual communication strategies. Clarity, simplicity, and learner-centered design were prioritized to enhance comprehension.

The development phase involved the creation of infographic media using graphic design tools such as Canva, Photoshop, and Illustrator. Visual elements, including images, symbols, colors, and text, were systematically selected to improve communication effectiveness. The design followed key principles such as visual hierarchy, focal emphasis, and Z-pattern layout to guide viewers' attention. In addition, color schemes were limited to a small number of dominant colors to maintain visual clarity and consistency. The developed media was subsequently evaluated by experts to ensure its quality, accuracy, and appropriateness.

During the implementation phase, the infographic media was introduced to the target group in a real educational setting. Students were exposed to the media to enhance their understanding of the impacts of improper garbage disposal.

In the evaluation phase, both quantitative and qualitative data were collected and analyzed. Quantitative data were analyzed using descriptive statistics, including mean and standard deviation, to assess the efficiency and students' satisfaction toward the infographic media. Qualitative data were analyzed through document analysis and descriptive interpretation to provide additional insights into the effectiveness of the media.

Overall, the ADDIE model provided a systematic framework for the development and evaluation of infographic media, ensuring its effectiveness as an instructional tool for promoting students' awareness of proper waste management.

Research Conceptual Framework

This study is grounded in the concept that infographic media can serve as an effective educational tool for enhancing learners' understanding, awareness, and behavioral change. The conceptual framework was developed based on the integration of theoretical perspectives and empirical findings from previous studies related to infographic media and visual-based learning.

Previous research has consistently demonstrated that infographic media can significantly improve knowledge acquisition, learner engagement, and satisfaction. Well-designed visual media has been shown to simplify complex information, making it more accessible and easier to understand. Moreover, infographic media can positively influence learners' attitudes and behaviors, particularly in educational contexts that aim to promote awareness and behavioral change.

In addition, several studies have confirmed that instructional media developed through systematic design processes, such as the ADDIE model, can achieve high levels of effectiveness. Many studies report that such media meets established efficiency criteria, such as the 80/80 standard, and contributes to improved learning outcomes. Learners who engage with infographic media often demonstrate higher levels of comprehension and satisfaction compared to those exposed to traditional text-based instruction.

Based on these theoretical and empirical foundations, this study proposes that the development of infographic media using the ADDIE model will lead to effective learning outcomes. Specifically, the conceptual framework consists of:

Independent Variable: Infographic-based media on the impacts of improper garbage disposal

Dependent Variables: Efficiency of the infographic media

Students' satisfaction

The framework suggests that well-designed infographic media can enhance students' understanding and awareness of proper waste disposal, which may ultimately contribute to positive behavioral changes.

Research Methods

This study employed a research and development (R&D) approach aimed at designing, developing, and evaluating infographic-based printed media on the impacts of improper garbage disposal. The study also examined the efficiency of the developed media and students' satisfaction toward its use.

Population and Sample

The population consisted of 167 students from Wat Sawang Arom School under the Nakhon Ratchasima Primary Educational Service Area Office 1 during the first semester of the 2023 academic year.

The sample group included 120 students, selected using purposive sampling to ensure their relevance to the research objectives.

Research Instruments

The instruments used in this study included:

- Infographic-based printed media on the impacts of improper garbage disposal.
- An expert evaluation form used to assess the quality and effectiveness of the developed media.
- A satisfaction questionnaire used to measure students' perceptions toward the infographic media.

Instrument Development

The infographic media was developed based on the ADDIE model, which consists of five stages:

1. Analysis

In this phase, the researcher identified research objectives and collected relevant information regarding improper garbage disposal, including its causes, impacts, and the benefits of proper waste management. Data were gathered from academic sources such as books, articles, and related studies to determine appropriate content for the infographic media.

2. Design

This phase focused on planning the structure and visual presentation of the infographic media. Appropriate design principles were applied to ensure clarity, readability, and suitability for the target group. The content was organized to align with students' learning needs, emphasizing simplicity and visual appeal.

3. Development

During this stage, the infographic media was created using graphic design tools such as Canva, Photoshop, and Illustrator. Key visual design principles, including visual hierarchy, focal emphasis, and Z-pattern layout, were applied to guide viewers' attention. A limited color scheme was used to maintain clarity and consistency.

The completed media was evaluated by three experts in content, design, and technical aspects using a five-point rating scale to ensure its quality, validity, and appropriateness.

4. Implementation

The developed infographic media was implemented with the sample group. The media was displayed in classrooms across different grade levels for a period of two weeks, allowing students to engage with the content in their regular learning environment.

5. Evaluation

Both expert evaluations and student satisfaction data were collected to assess the effectiveness and appropriateness of the infographic media based on predefined criteria.

Data Collection

Data were collected by administering a satisfaction questionnaire to students who had been exposed to the infographic media. The questionnaire focused on content clarity, design quality, and overall usefulness of the media.

Data Analysis

The collected data were analyzed using descriptive statistics. Mean and standard deviation were used to evaluate both the effectiveness of the infographic media and the level of students' satisfaction.

Results

Objective 1: To design and develop infographic-based printed media

The results showed that the infographic-based printed media on the impacts of improper garbage disposal was successfully developed based on the ADDIE model. The media was presented in the form of a poster integrating images, symbols, colors, and concise text.

The efficiency of the developed media was evaluated using the 80/80 criterion. The results revealed that the efficiency (E1/E2) of the infographic media was 82.50/84.20, which met the established criterion of 80/80.

In addition, the quality of the infographic media was evaluated by three experts. The overall evaluation result was at a high level (Mean=4.65, S.D.=0.48), indicating that the media was appropriate and suitable for the target group.

Objective 2: To evaluate the effectiveness and quality of the media

The results indicated that the effectiveness of the infographic media was at a high level. The expert evaluation in terms of content accuracy, design, and technical aspects showed an overall mean score of 4.65 (S.D.=0.48).

Objective 3: To examine students' satisfaction

The results showed that students' satisfaction toward the infographic media was at a high level overall (Mean=4.52, S.D.=0.51).

When considering each aspect, the findings revealed that:

Content clarity was at a high level (Mean=4.55, S.D.=0.50)

Design and visual attractiveness were at a high level (Mean=4.60, S.D.=0.49)

Usefulness of the media was at a high level (Mean=4.42, S.D.=0.53)

Discussion

The findings indicate that infographic-based media can serve as an effective educational tool for promoting students' awareness of improper garbage disposal. The efficiency results (E1/E2) met the 80/80 criterion, suggesting that the developed media was effective in supporting both learning processes and learning outcomes.

One possible explanation is that infographic media integrates visual elements with concise information, allowing students to quickly grasp key concepts. This reduces cognitive load and enhances comprehension compared to traditional text-based materials. This finding is consistent with previous studies indicating that visual communication improves learning effectiveness.

Furthermore, the high level of student satisfaction reflects the appropriateness of the media design for the target group. The clarity and visual appeal of the infographic likely contributed to increased attention and engagement among students.

Another important finding is the improvement in students' awareness of improper garbage disposal. The infographic media illustrated real-life consequences, such as environmental pollution and health risks, which may have influenced students' perceptions and attitudes. This suggests that exposure to concrete and relatable examples can enhance learners' sense of responsibility.

In addition, the expert evaluation supports the quality of the developed media, particularly in terms of content organization and visual design. This indicates that applying systematic design processes, such as the ADDIE model, contributes to the development of effective instructional media.

New Knowledge

This study contributes new knowledge in the area of educational innovation by demonstrating how infographic-based media can be effectively used to promote environmental awareness and behavioral change among students.

The findings suggest that improper garbage disposal in the school context is closely associated with students' lack of awareness, responsibility, and understanding of social coexistence. These issues not only affect individual behavior but also contribute to

broader environmental problems within the school, such as unclean surroundings and pollution.

The development and implementation of infographic media in this study provided a structured approach to addressing these challenges. By presenting information through visually engaging and easily understandable formats, the media helped students recognize the real-life consequences of their actions. As a result, students showed increased awareness and a greater willingness to participate in maintaining cleanliness within the school environment.

Furthermore, this study highlights the role of infographic media as an effective tool for bridging the gap between knowledge and practice. The integration of visual communication with relevant contextual content enables learners to better understand complex issues and apply that understanding to their daily behavior.

In summary, the new knowledge generated from this research emphasizes that infographic-based educational media can serve not only as a tool for knowledge dissemination but also as a mechanism for fostering responsibility, awareness, and positive behavioral change in real-life contexts.

Suggestions

Infographic-based printed media can be effectively applied as instructional media across various subjects. Teachers should design content that is appropriate for each subject area and present information in a simple, visually engaging format to enhance students' understanding.

Infographics can serve as an effective learning tool for summarizing complex content. By presenting information through visual elements rather than lengthy text, students can better understand key concepts and remain engaged in the learning process.

The developed infographic media can be adapted into digital formats, such as motion graphics or video presentations. Incorporating animation, sound, and narration may further enhance students' interest and improve learning outcomes.

Suggestions for Future Research

Future studies should explore the development of infographic media in digital formats, such as short video clips or animations, and distribute them through social media platforms (e.g., TikTok, Facebook, and YouTube) to increase accessibility and engagement.

Further research should investigate the effectiveness of infographic media in different subject areas and educational levels to determine its broader applicability.

Future studies may also examine the impact of allowing students to design their own infographic media, as this may enhance creativity, critical thinking, and deeper learning.

References

- Srisa-at, B. (2012). *Teaching development*. Suviriyasan.
- Saiyot, L. (2013). *Statistical methods for curriculum and instruction research*. Sukhothai Thammathirat Open University.
- Saiyot, S., & Saiyot, A. (2000). *Measuring affective aspects*. Suviriyasan.
- Binraman, K. P., Princhankol, P. P., & Thamviphat, K. (2022). Development of digital content with infographics on social media to promote bakery product sales. *Journal of Innovation Learning and Technology*, 2(2), 68-77.
- Tantiwong, W., Jirachai, P., & Meecharoen, S. (2023). Creating digital lesson media with active learning to promote infographic creation. *Journal of Learning Innovation and Technology*, 3(1), 68-82.
- Kang, C., Warawut, W., Klinhom, N., & Watcharasakunee, S. (2021). Development of infographic video media for research proposal writing. *Journal of Science and Technology, Southeast Bangkok College*, 1(1), 1-17.
- Mekmuangthong, C. (2021). Developing creativity in Thai language communication using infographic techniques. *Maha Sarakham Rajabhat University Journal*, 15(3), 95-106.
- Sirisermphong, P. (2021). Development of infographic media on preventive behaviors for COVID-19 among primary school students. *Journal of Research and Innovation of Bangkok Vocational Education*, 4(2), 119-139.

- Khunsri, J. (2022). Development of infographic media using participatory communication for forest fire awareness. *Interdisciplinary Journal of Social Sciences and Communication*, 5(2), 1-9.
- Leesa, J., & Thanapatmeemanee, H. M. (2020). Development of web-based lessons integrating infographic media for Grade 6 students. *Roi Et Rajabhat University Journal*, 14(2), 76-86.
- Kongthong, P. (2020). Development of learning activities using Facebook and infographic design. *Sikkha Journal of Education*, 7(2), 126-138.
- Thanakitcharoensuk, T., & Srisaeng-on, Y. (2022). Development of augmented reality infographic media for improving elderly quality of life. *Journal of MCU Nakhondhat*, 9(9), 91-105.
- Intajak, M., & Topitak, K. Y. (2022). Development of reading comprehension skills using KWLH-Plus with infographic media. *Journal of Research and Innovation of Bangkok Vocational Education*, 5(2), 179-200.
- Woraphongphat, N. T. (2021). Development of English reading skills using e-learning lessons for Grade 6 students. *Humanities Journal Mahamakut Rajavidyalaya University*, 14(2), 28-42.
- Woraphongphat, N. T., Wachi Ruangphaisan, S., & Phakamas, P. S. (2021). Development of a digital platform using problem-based learning in business economics. *Journal of Liberal Arts and Service Industry*, 4(2), 427-444.
- Woraphongphat, N. T. (2022). Development of English reading skills using e-learning lessons. *Humanities Journal Mahamakut Rajavidyalaya University*, 14(2), 28-42.
- Woraphongphat, N. T. (2022). Development of M-learning lessons on local wisdom. *Chaiyaphum Review Journal*, 5(3), 28-40.
- Woraphongphat, N. T. (2022). Study of academic achievement using social media technology. *MCU Journal of Philosophy Review*, 5(2), 22-32.
- Woraphongphat, N. T. (2023). Active learning and educational games in science education. *MCU Kanchanaparitha Journal*, 3(2), 145-158.
- Woraphongphat, N. T. (2023). Learning management technology in social studies. *Chaiyaphum Review Journal*, 6(2), 19-34.

- Woraphongphat, N. T. (2023). Instructional innovation in Thai language learning. *MCU Journal of Philosophy Review*, 6(2), 1-13.
- Woraphongphat, N. T. (2023). Learning management using historical films. *Journal of Buddhist Studies*, 8(2), 201-215.
- Woraphongphat, N. T. (2023). Educational technology in computational science. *Chaiyaphum Review Journal*, 6(2), 24-35.
- Woraphongphat, N. T. (2023). Development of programming learning using STAD technique. *Humanities Journal Mahamakut Rajavidyalaya University*, 15(2), 1-13.
- Atthaphonsil, A. Y., & Sunathawanitkul, T. (2022). Development of animated infographic media for Grade 6 students. *Journal of Humanities and Social Sciences Rajapruk University*, 8(3), 130-145.