

การประยุกต์ใช้สื่อดิจิทัลสร้างสรรค์เพื่อส่งเสริมการท่องเที่ยวโครงการโรงงานสกัดน้ำมันพืชและ
ผลิตไบโอดีเซลครบวงจร จังหวัดเพชรบุรี ในการดูแลของมูลนิธิชัยพัฒนา

CREATIVE DIGITAL MEDIA APPLIED IN TOURISM PROMOTION OF VEGETABLE OIL
REFINING AND BIO-DIESEL INTEGRATED PRODUCTION PLANT IN PHETCHABURI
PROVINCE UNDER THE RESPONSIBILITY OF THE CHAIPATTANA FOUNDATION

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บทคัดย่อ

ปัจจุบันสื่อดิจิทัลเชิงสร้างสรรค์ได้เปลี่ยนแปลงวิธีที่ผู้คนและมีอาชีพ พัฒนา บอกเล่า และแบ่งปันเรื่องราวทางวัฒนธรรม งานวิจัยนี้มีวัตถุประสงค์เพื่อประยุกต์ใช้สื่อดิจิทัลในการออกแบบ กราฟิกผ่าน Comic e-book สำหรับส่งเสริมการท่องเที่ยวของโรงงานสกัดน้ำมันพืชและโรงงานผลิต ไบโอดีเซลครบวงจร มูลนิธิชัยพัฒนา จังหวัดเพชรบุรี คณะผู้วิจัยเก็บรวบรวมข้อมูลพื้นฐานจาก แหล่งข้อมูลทุติยภูมิและผู้เชี่ยวชาญเพื่อพัฒนาสื่อดิจิทัล โดยมีกระบวนการสร้างสรรค์แนวคิด ตามกรอบความเป็นมาของโครงการในพระราชดำริภายใต้ทฤษฎี การจินตนาการของสื่อดิจิทัล และ

การออกแบบกราฟิก ตามด้วยภูมิหลัง โครงเรื่อง ตัวละคร อิมเรื่องราว ความขัดแย้ง และฉาก ซึ่งการสร้างสื่อดิจิทัลนี้ สามารถขยายการรับรู้ให้กลุ่มเยาวชน และสื่อถึงทางเลือกดิจิทัลที่ทันสมัยและสร้างสรรค์ในการส่งเสริมแหล่งท่องเที่ยว

คำสำคัญ

สื่อดิจิทัล การส่งเสริมการท่องเที่ยว มุลินิธิชัยพัฒนา

ABSTRACT

In today's world, creative digital media has altered the way people and professional users develop, tell, and share stories of culture. A purpose of this study is to apply digital media and graphic design through comic e-book in tourism promotion of vegetable oil refining and bio-diesel integrated production plant of the Chaipattana Foundation in Phetchaburi Province. The digital media has been developed through information from secondary sources and relevant experts. A process of creating ideas was presented according to conceptual framework from royal projects background under theories and imagination of the digital media and graphic design followed by background, plot, character, theme, conflict, and settings. Creation of this digital media increases youth's perception and conveys to modern and creative digital alternative in tourism destination promotion.

Keywords

Digital Media, Tourism Promotion, Chaipattana Foundation

The Significance of the Problem

The vegetable oil refining and bio-diesel integrated production plant has serves as a model of environmentally-friendly bio-diesel production since 2006. It is located in Raimaipattana Subdistrict, Cha-am District of Phetchaburi province, on an 80 acre-piece of land. This royal project is operated by the Chaipattana Foundation with the focus of studying renewable energy production to benefit the people and national development at large. Due to the energy crisis, His Majesty King Bhumibol Adulyadej The Great initiated a study on the use of wind, water, sunlight energy, and use of agricultural products to replace oil. This project, then, carried out experimental studies on oil palm as an alternative energy and community-based knowledge transfer. It also promoted a better understanding of the philosophy of Sufficiency Economy by displaying the real function of oil palm cultivation, extraction, and production from the plant to products (The Chaipattana Foundation, 2017). According to Sustainable

Development Goals (SDGs), natural resources should be responsibly produced and consumed, altogether with climate problems (Villares, 2021).

Creative digital media involves an array of creative roles where interactive media storytelling and business collide (Prager, Thomas & Selsjord, 2015). In this information era, digital media has turned out to be the most common medium of social life with content of communication shifting from text-centered ones to interactive multimedia forms of images and videos (Feng & Wang, 2020).

Even though this royal project is open for visitors particularly students and agricultural schools, it is not recognized as a tourist attraction. Mixture of rising digital media and travel culture will certainly produce unique and attractive products. In consequence of promotion and emphasis learning based on the late King's initiatives of energy development. Digital media for graphic design in tourism promotion of the vegetable oil refining and bio-diesel integrated production plant was employed to allow visitors to experience storytelling in a creative way.

Research Objective

To develop creative digital media and graphic design through comic e-book in the tourism promotion of vegetable oil refining and bio-diesel integrated production plant, the Chaipattana Foundation.

Research Methodology

This research was conducted by professors from the Faculty of Fine and Applied Arts and Burapha Business School in participating with students.

An initial stage was site visiting in a research area and studying the secondary data. Concepts and storyboards were developed after students' brainstorming as shown in Figure 1.

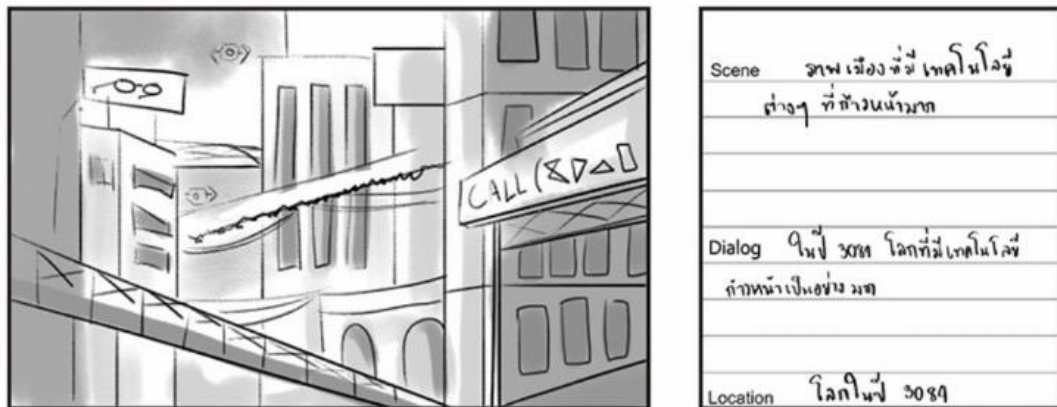


Figure 1 Draft of Storyboard

These concepts were presented to relevant experts in the fields of digital media production and tourism with the purpose of confirming ideas and validating accurate information. Then, the first draft concepts were drawn. The conceptual design process of the Structure of Intellectual Model (SI model) (Griffin & Morrison, 2010) continues after the experts' confirmation as illustrated in Figure 2.

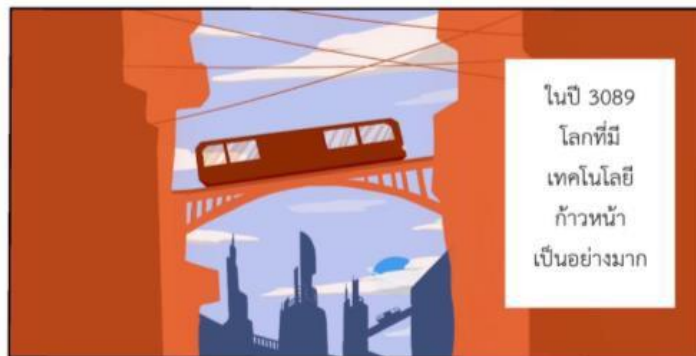


Figure 2 Final Draft

The project was analyzed all gathered information and pictures to determine the physical environment, core concept, mood and tone, character, and setting. A component of how to tell the story put into a sequence in the comic. Unique and interesting of applications between graphic design, technique, and material selected in drawing. This comic uses a watercolor brush technique and digital paint with motion graphics to highlight information, comic book style by computer, and watercolor material as shown in Figure 3.



Figure 3 Layout design development

The research design methodology steps start with the study and research area information by visiting the selected site and studying related secondary data, then analyzing all gathered data for next steps. After the review and site visit, the conceptual ideas later were designed by a method of group brainstorming, class presentation, and sharing together in a classroom to start draft the comic. Then, all feedback emerged and was collected to be analyzed and improved to develop the artwork. These comic layouts were drafted by a watercolor artwork technique and converted into digital paint artwork to collect the feedback again after analyzing feedback and re-design. These were launched as a comic e-book publicly shown by linked in public server of the Chaipattana Foundation. Moreover, reviewed feedback gathering to analyze feedback and collect data. This research applied qualitative research methodology as summarized all research processes in Figure 4.

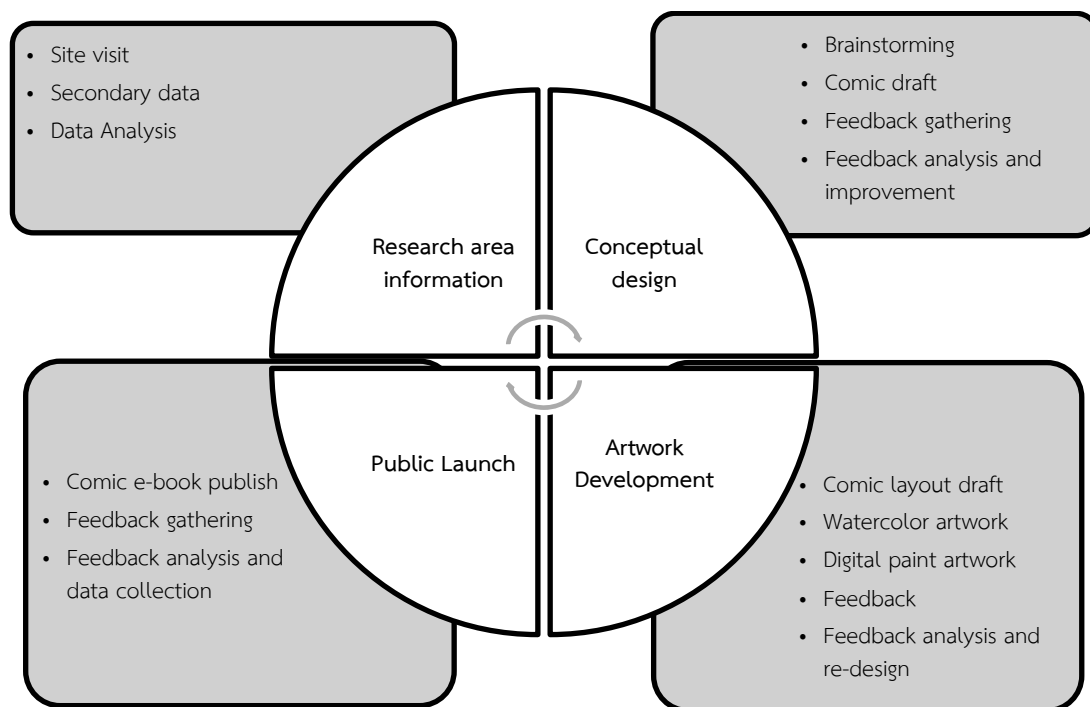


Figure 4 Qualitative Research Methodology

Research Results

The research objective aims to create creative digital media through comic e-book in developing tourism promotion for vegetable oil refining and bio-diesel integrated production plant in Phetchaburi province. Then, semantics are used for communicating meanings and making it is easier to understand to convey content through images with complete and appropriate in type of the story. Social context, historical context, cultural context, past and present of the place create well understanding of creativity and make the story more interesting. Principles for creativity and conveying the story and content through images for completeness consist of studying and understanding a whole related content to plan what and how importance concept will be communicated to message receivers. These can be reflected by concept, style, creative technique, and perception pattern. After synthesized destination background and information, this research developed the draft of digital communication through the comic e-book, which used non-fiction novel storytelling and was titled “Hunting for BioDiesel, Energy for Future.” This comic e-book is drawn digitally to make awareness of its importance, value and understand of the sufficiency economy through the project of tourism storytelling by digital media for vegetable oil refining and bio-diesel integrated production plants. Furthermore, the significant value of the research result is the bio-diesel destination image and the bio-diesel project’s

products will be improved. This research components, which are background, plot, character, theme, conflict, and settings (Wattanaphanich & Premseerat, 2016) consist of background, plot, character, theme, conflict, and settings as follows:

A. Background

The story (Figure 5) is about an explorer's adventure trip to seek for natural resources and bring knowledge to heal a world at the present, which is in the year 3084 at that time.

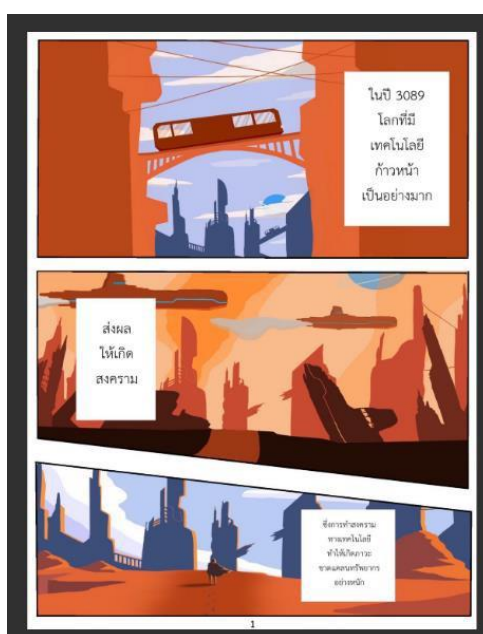


Figure 5 Background Introduction

B. Plot

In 3084, technology highly developing around the world until this causes to the world ignition. The resources scarcity is the great issue. Dr.X1 decides to assign siblings, Illus and Maya, to travel back in time. They must travel back to the past to find a solution to help their planet in the future as Figure 6 below.



Figure 6 Story

C. Character

The characters are developed. There are three main characters which are Illus, Maya, and Dr.X1 (Figure 7). From the first draft of character design, there are some adjustments were made, such as improved character characteristics and added more details to be seen clearly in Illus character. Character of Maya is added more elaborated details to be more feminine and modern; while, adding more details in Dr.X1 character. Moreover, each character's color is set at this stage.

Table 1 Character Design Development

Type	Character	Physical
Main	Two sibling: Illus and Maya	Future generations from year 2541
Support	Scientist: Dr. X1	Scientist or Head of explorer team from future

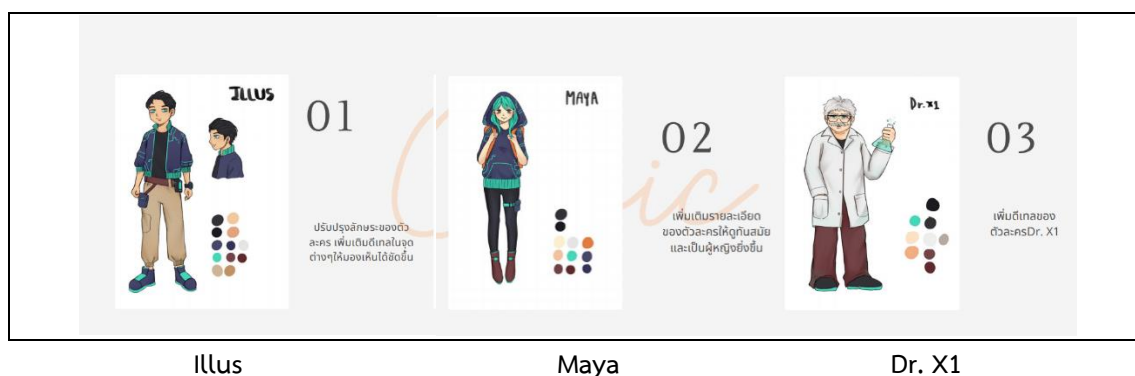


Figure 7 Character

D. Theme

The story is to be told in terms of futuristic and adventurous (Figure 8) activities among siblings.



Figure 8 Adventurous Theme

E. Conflict

The suspense (Figure 9) encourages readers to understand the sufficiency economy agricultural concept of how to spend natural resources and apply knowledge to the world in the future. The crisis shows joyful environment to gain knowledge in the vegetable oil refining and bio-diesel integrated production plant.

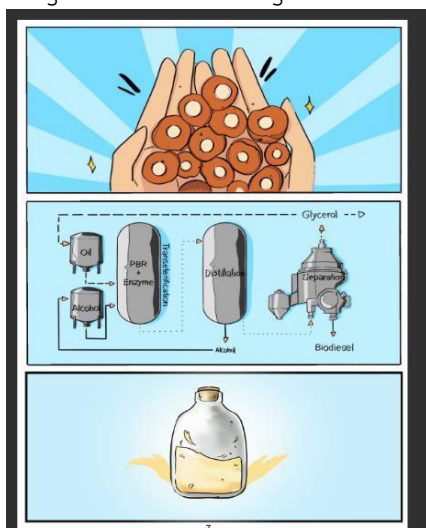


Figure 9 Joyful and easy to learn information

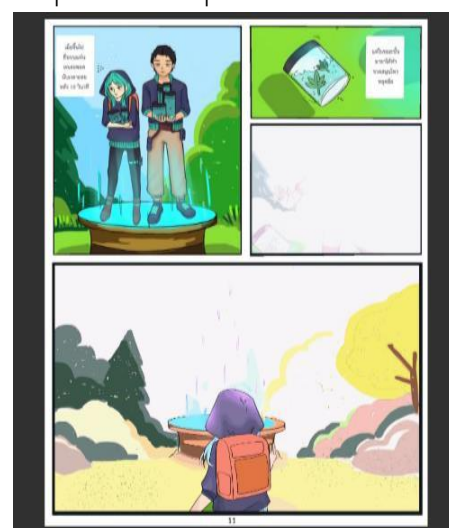


Figure 10 The Climax of the story

The climax is the time traveling limited only three days and once merely. Illus can come back to the future, but Maya is still lost somewhere in the past (Figure 10).

F. Setting

There are two settings (Figure 11), which are the world in the past and at the present or year 3084.

Table 2 Setting Design Development

Type	Physical	Concept
Environment	The past - Year 2001	Full of resources and center of education
	Year 3084	Drought and run out of resources
Cultural	The past - Year 2001	Thai culture and customs presentation
	Year 3084	Formal and casual look in the future

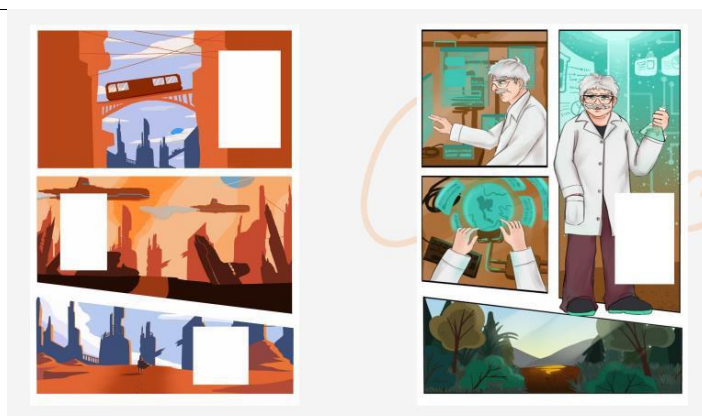


Figure 11 Setting



Figure 12 Final project

Discussion

Digital technology allows the tourism and hospitality industries to have an appropriate insight into the tourist's world. This research emphasizes the importance of conducting research on graphic design development, especially the use of technology and digital media with imagination in order to promote tourism, the final project as shown in Figure 12 or from this link <https://indd.adobe.com/view/c6837fc3-e9b2-42e6-9a64-aa732ff8673>.

The findings of the research through all the processes influenced to students who participated in this project, although the output was an e-comic book. These students were proudly in their opinions, imagination, art work and place-connected.

This leads to the tourist attraction acknowledged, not only that e-comic book are a promotional tool as tourism marketing as referred in the study of Živković, Gajić & Muharemović (2013) which suggested that tourism and hospitality mainly rely on information and communication technologies for promotional activities, sales, and the development of customer relationships. When a tourist is making a final purchasing decision, the most important information comes from different digital media options. Numerous surveys in tourism and hospitality management indicate a growing number of tourists who use modern digital media.

Moreover, the design as same as the popular Webtoon, which is broadly read among teenagers. The e-comic book persuades and encourages tourists to visit attractions, meanwhile they may travel in to various tourist destinations. The tourist flows generate tourism income to local community who concerned as multiplier effects, for example, food outlets, restaurants, grocery store, and souvenir shops. Further development of characters in this research can be attended to digital gaming, not least because many of the platforms and technologies discussed above have been developed within the context of gaming. The influence of games in tourism reaches far beyond virtual environments: one of the most notable expansions of gaming culture into tourism comes by way of gamification, or ‘funware’, which refers to typical elements of game playing such as point scoring, competition with others, and rules of play, being introduced into other areas of activity (Van Nuenen & Scarles, 2021). Not only gaming, the comic can be collected and exhibited as Studio Ghibli Museum, which is connected to tourism worldwide (Norris, 2018).

Recommendation

This digital media should be tested with a quantitative research method by surveyed questionnaires in order to investigate satisfaction and perception on a comparison of before and after getting the knowledge from this comic e-book, toward attractions categorized by generations to analyze feedback and propose the tourism development plan. This may be benefited the vegetable oil refining and bio-diesel integrated production plant in developing media and promotion to the right tourist target. Moreover, the tourism and hospitality industries have exposed themselves to a number of digital marketing strategies and tourism is converted as a hotspot for social media strategy makers such as Facebook. Further study may embed the e-comic book link into the Facebook platform.

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