

# **Creative History Learning Model Using Digital Storytelling through Cloud Learning to Enhance Analytical Thinking**

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**Abstract:** This research aims to develop a creative history learning model using digital storytelling through cloud learning to enhance analytical thinking. The research methodology is divided into 3 steps involving the use of digital storytelling through cloud learning to enhance analytical thinking. This involves 1) studying the creative history learning process, 2) developing the creative history learning model, 3) comparing the students' analytical thinking scores before and after learning. The sample consisted of Mathayomsuksa 5 students of the Chonburi Sukkhabot School in the 2<sup>nd</sup> semester of the academic year 2019. The research instrument was an assessment of the students' analytical thinking. Data were statistically analyzed with the use of mean and standard deviation measurements. The research findings were as follows

1) The creative history learning process using digital storytelling through cloud learning to enhance analytical thinking consisted of 4 steps: 1) The introductory stage included student orientation, specification of the learning objectives and historical topics; 2) The instruction stage included researching historical information, summarizing historical facts, creating digital storytelling media 3) The summary stage included presenting material by digital storytelling 4) Evaluation. The cloud learning resources used were Facebook Group, Google Drive, Google Form, and YouTube. The suitability evaluation score was at the highest level ( $\bar{x} = 4.63$ , S.D. = 0.41)

2) The students who learned through the creative history learning model using digital storytelling through cloud learning had analytical thinking scores after learning ( $\bar{x} = 26.13$ , S.D. = 1.63) which were higher than scores before learning ( $\bar{x} = 10.70$ , S.D. = 2.58). The results were statistically significant at the .05 level.

**Key words:** History learning, creative, digital storytelling, cloud learning, analytical thinking.

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## **1. Introduction**

Due to the rapid development in information and communication technology, different countries throughout the world face an inevitable free and borderless global economy. The new challenge in terms of globalization is the occurrence of the Internet of Things. The digital revolution will be a driving force for the population in that they will be able to access limitless information and learning sources, will be able to develop knowledge, and create multiples of intelligence. In the field of education in Thailand, it is necessary to put in place human resource development goals in order to prepare the manpower at various levels for

the job market upon graduation. This can be achieved by adjusting the curriculum and teaching methods so that they are flexible and diverse, in order to develop the potential and capacity of human resources in such a way as to make the workforce more skillful, knowledgeable, competent, and ready for change [1]. Therefore, teachers must adjust their teaching methods so that they are consistent with the changes, and they must know how to use educational technology to increase the efficiency of the teaching and learning media. In addition, they must adapt their teaching styles so that they suit the student environment. The Social Studies, Religion and Culture course is one of the eight courses in the Basic Education Core Curriculum which was introduced in A.D. 2008, which students of all levels must follow. It is considered to be an important course that will help students understand the way of life of humans, and how they live together in society, adapt to the environment, understand the course of development and change, understand themselves and others, be tolerant, accept differences, act morally, and be able to apply knowledge in life.

History is one of the basic education curriculum courses that students in Mathayomsuksa 4-6 have to study. The students must be knowledgeable, and understand about the historical development of humanity from the past to the present, about culture, wisdom, and important events in the world [2]. The content of the history course is wide and difficult. Teaching and learning activities involve mostly lecture-based methods. Most of the students have little involvement in teaching and learning activities. Teachers try to force students to learn too much, causing students to become bored with the subject, thereby affecting their development. Therefore, teachers need to find ways and styles of teaching that respond to students in the 21<sup>st</sup> century. The use of technology in teaching and learning is one way to grab students' attention.

Using digital storytelling in learning management is an interesting option for teachers in the 21<sup>st</sup> century allowing them to use technology, and to focus on encouraging students to learn by themselves. These activities create interest and genuinely inspire "Digital Native" students. Such students see their potential in terms of finding information, storytelling, data analysis, data synthesis, all of which lead to increased communication skills, presentation skills, the organization of ideas, questioning and working in teams. Digital storytelling is not just the production of video clips. Rather, it is intended to give students the opportunity to develop many skills through this process [3] and learning through the use of the cloud is an appropriate means of learning for the digital age. It emphasizes sharing learning resources, collaborating between students and teachers, and between students and students, in order to jointly create a collaborative learning environment, increase responsibility, increase opportunities for engaging with content, and adjusting the learning process to suit oneself. This will lead students to learn deeply through their own experiences. In addition, students have the freedom to choose from any type of study, and any learning time. Learning using the cloud-based learning system can transfer knowledge to students thoroughly and conveniently, and is suitable for learners in the 21<sup>st</sup> century. [4] The Basic Education Core Curriculum introduced in Thailand in A.D. 2008 as mentioned above, has set standards for the quality of students at the end of the academic year. It states that all students must pass the assessment in reading, thinking, analyzing and writing according to the criteria set by the school. The curriculum places emphasis on analytical thinking because such thinking is a skill that promotes learning and enables students to expand their knowledge, experiences and ideas [5]. The above concepts and theories inspired the researcher to develop a creative history learning model using digital storytelling through cloud learning in order to enhance analytical thinking and for use in the development of the students' analytical thinking in the upper secondary level.

## **2. Research Objectives**

- 1) To study the creative history learning process using digital storytelling through cloud learning to

enhance analytical thinking.

- 2) To develop the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking.
- 3) To compare students' analytical thinking scores before and after learning through the creative history learning model using digital storytelling through cloud learning.

### 3. Research Hypothesis

Students who learn through the creative history learning model using digital storytelling through cloud learning have analytical thinking scores after learning that are higher than those before learning. This difference should be shown to be statistically significant at the .05 level.

### 4. Research Scope

- 1) Population and Sample

Population were 215 Mathayomsuksa 5 students of Chonburi Sukkhabot School in the second semester of the academic year 2019.

The sample was a class of 30 Mathayomsuksa 5 students of Chonburi Sukkhabot School in the second semester of the academic year 2019 selected by random sampling.

- 2) Variables

The independent variable was the creative history learning model through digital storytelling with cloud learning.

The dependent variable was analytical thinking.

- 3) Research Duration

This experiment lasted 8 weeks.

### 5. Conceptual Framework

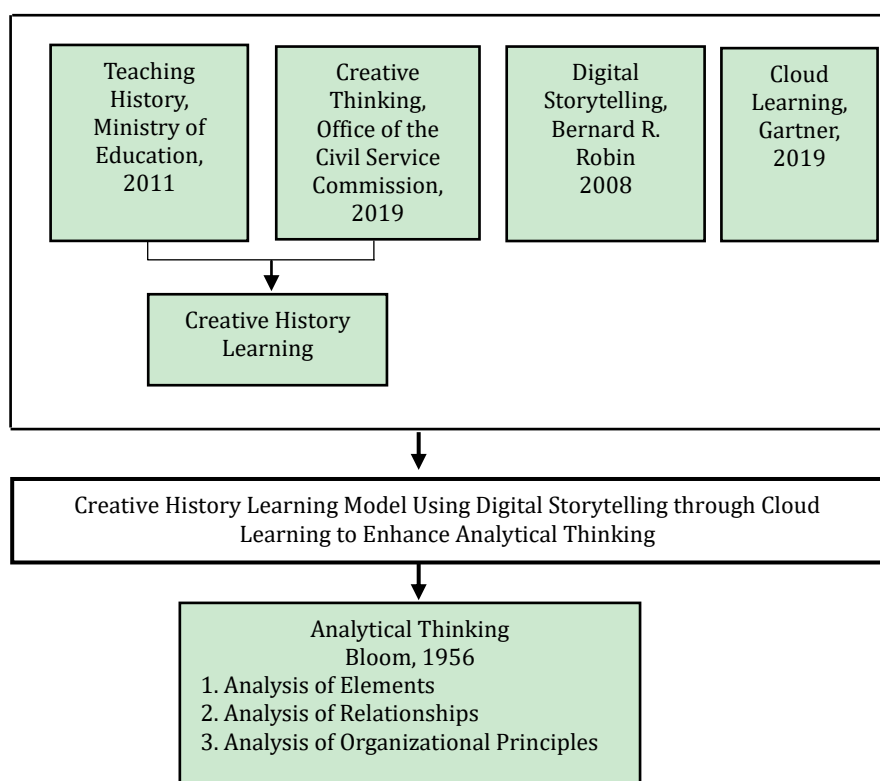


Fig. 1. Conceptual framework of the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking.

The conceptual framework of the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking is the application of creative history learning process integrated with digital storytelling through cloud learning. This is used to create the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking as presented in Fig. 2.

## **6. Research Methodology**

- 1) Study the creative history learning process using digital storytelling
  - a) Study documents and research related to learning history, creativity IS THIS WHAT YOU MEAN? and designing the creative history learning process using digital storytelling. The instruments used were a content analysis form. The data were analyzed using content analysis technique.
  - b) Synthesize the history learning process
  - c) Synthesize the digital storytelling process
  - d) Synthesize the creative learning process
  - e) Apply the synthesis results to the design of the creative history learning process using digital storytelling
  - f) Evaluate the suitability of the creative history learning model using digital storytelling.
- 2) Develop the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking
  - a) Study related documents and research to develop the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking.
  - b) Synthesise components of the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking to develop the creative history learning model.
  - c) Develop the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking by applying the information obtained from research phase 1: the creative history learning process using digital storytelling and cloud learning.
  - d) Use 7 experts experienced in the field, selected by purposive sampling to evaluate the suitability of the creative history learning model using digital storytelling through cloud learning in terms of enhancing analytical thinking.
  - e) Design lesson plans based on the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking in accordance with the learning content and objectives. Have the experts evaluate the suitability of the lesson plan.
- 3) Compare the analytical thinking scores of the students before and after learning through the creative history learning model using digital storytelling through cloud learning. This is done with regard to the topic

“Important events in international history during the modern/current period” by carrying out an analytical thinking test before and after studying. This will involve a four-choice answer test with regard to 30 questions. The test was created based on Bloom [6] and was evaluated by the Index of Item-Objective Congruence (IOC) by the experts. Data were collected from the sample by using the analytical thinking ability test. The scores were statistically analyzed in terms of Mean and Standard Deviation.

## **7. Result**

- 1) Result of the studying creative history learning process using digital storytelling

The study results procedure consisted of 8 steps: 1) specifying the learning objective, 2) specifying the historical topic, 3) researching historical information, 4) analyzing historical evidence, 5) summarizing historical facts, 6) creating digital storytelling, 7) presenting digital storytelling, 8) measurement and evaluation.

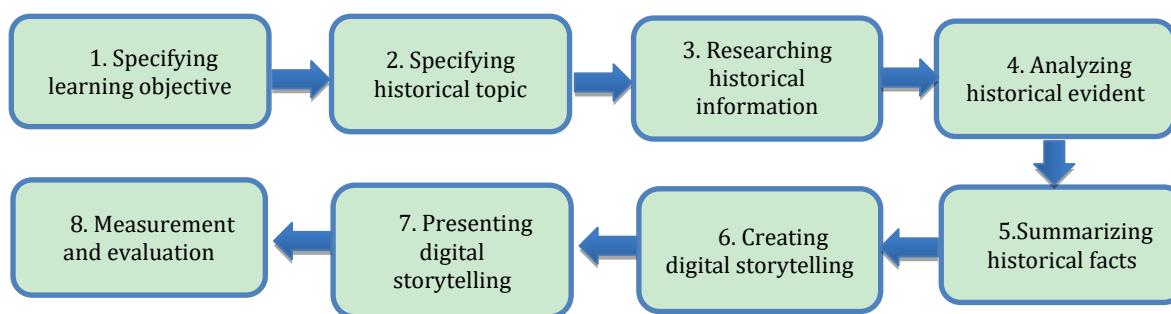


Fig. 2. The creative history learning process using digital storytelling through cloud learning to enhance analytical thinking.

The suitability of the evaluation results of the creative history learning process using digital storytelling as evaluated by the experts, was seen to be at the highest level with an average of all steps as shown:  $\bar{x} = 4.66$ , S.D. = 0.45.

2) The results of the development of the creative history learning model using digital storytelling through cloud learning to enhance analytical thinking consisted of 3 stages as follows:

- Introductory stage

- A. Student orientation, clarifying learning objectives, learning management, learning measurement and evaluation through a Facebook Group.
- B. Defining learning goals in which students and teachers jointly set their learning goals through the Facebook Group, and students take the pre-test through the Google form
- C. Defining historical topics
  - a) Teachers assign topics for students according to the 2008 Basic Education Core Curriculum on important events in international history during the modern/current period.
  - b) Students divide into groups of 5 and choose topics of interest through the Facebook Group.

- Instruction stage

- A. Researching historical information
  - a) Students plan their own learning
  - b) Students share responsibility according to their aptitude.
  - c) Students search for information and collect historical evidence relating to the topic of their choice, gather information and uploaded this to Google Drive.
- B. Analyzing historical evidence
  - a) Students assess external historical evidence
  - b) Students assess internal historical evidence, gather information and uploaded information to Google Drive.
- C. Summarizing historical facts
  - a) Students summarize facts from external and internal assessments in chronological order, then upload information to Google Drive.
- D. Creating digital storytelling media
  - a) Students define the storyline
  - b) Students create a storyboard from a summary of facts.
  - c) Students send the storyboard to the teacher to check the accuracy of the content.
  - d) Students bring the storyboard back for updates as instructed by their teacher.
  - e) Students create digital storytelling materials and upload data to Google Drive

- Summary stage

- A. Presenting with digital storytelling

- a) Students present their digital story to the class.
  - b) Classmates provide feedback
  - c) Teachers provide creative feedback.
  - d) Students publish their work via cloud learning including Facebook, Facebook Group, YouTube, according to their interests.
- Evaluation
    - A. Measurement and evaluation
      - a) Students do critical thinking assessment through Google form.

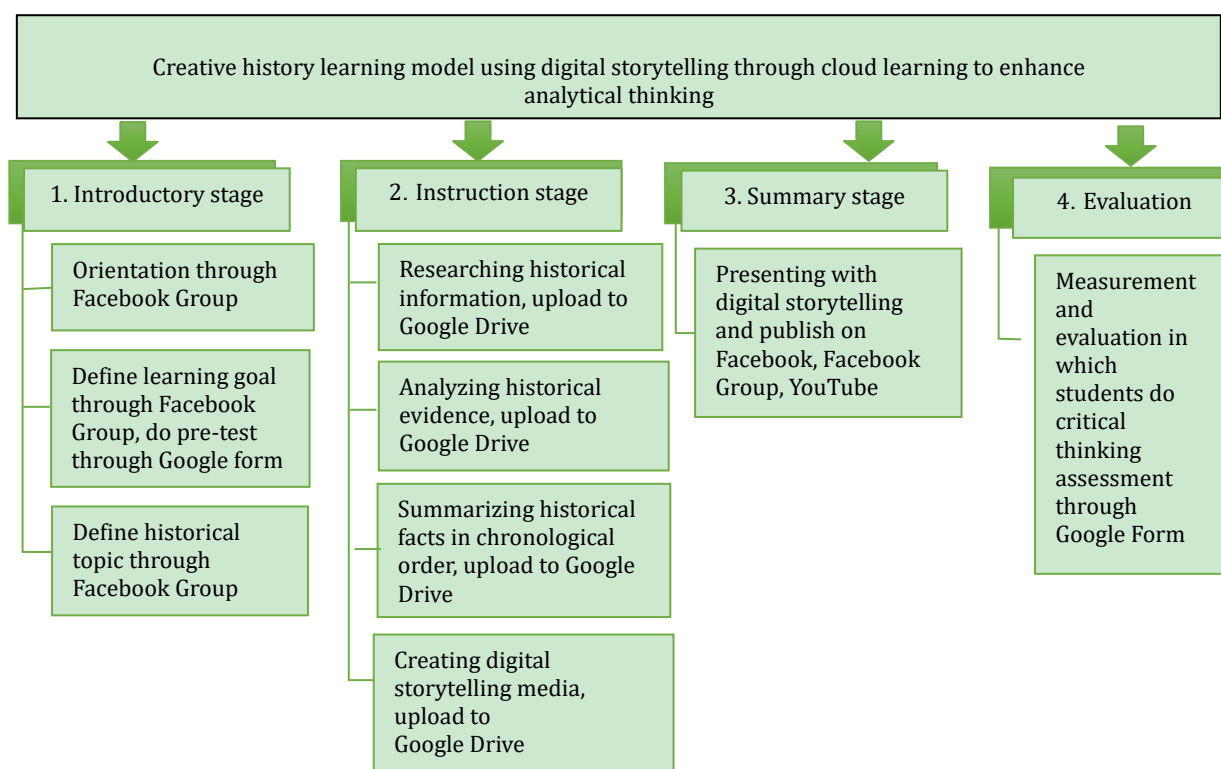


Fig. 3. Creative history learning model using digital storytelling through cloud learning to enhance analytical thinking.

The evaluation of the suitability of the creative history learning model using digital storytelling to enhance critical thinking as evaluated by the experts, was at the highest level with an average of  $\bar{x} = 4.63$ , and a S.D. = 0.41 for all steps.

- 3) Result of the comparison of students' analytical thinking scores before and after learning with the creative history learning model through digital storytelling via cloud learning.

The comparison of the students' analytical thinking scores before and after learning on the topic of "Important events in international history during the modern/present period" is as presented below:

Table 1. Students' analytical thinking assessment score before and after learning through the creative history learning model using digital storytelling through cloud learning on a topic entitled "Important events in international history during the modern/present period" of Mathayomsuksa 5 students of Chonburi Sukkhabot School

| Analytical thinking score | n  | Full score | $\bar{X}$ | S.D. | t-test |
|---------------------------|----|------------|-----------|------|--------|
| Pre-test                  | 30 | 30         | 10.17     | 2.58 | -33.08 |
| Post-test                 | 30 | 30         | 26.13     | 1.63 |        |

From Table 1 we can see that students' analytical thinking score after learning ( $\bar{x} = 26.13$ , S.D. = 1.63) was

higher than before learning ( $\bar{x} = 10.70$ , S.D. = 2.58). This difference is statistically significant at the .05 level.

## **8. Discussion**

With regard to research on the creative history of learning models using digital storytelling through cloud learning to enhance analytical thinking, from analysis and from the synthesis of documents, including proposals from experts, there are a number of issues for discussion. These are as follows:

- 1) Creative history of learning model using digital storytelling through cloud learning to enhance analytical thinking consist of 4 stages, namely the introduction stage, the instruction stage, the summary stage and Evaluation. Each stage involves the following procedures:
  - The Introductory stage is a step which aims to stimulate the interest of the students to create enthusiasm for learning. It begins with student orientation, clarifies the learning objectives, explains learning management, learning measurement and evaluation. The aim of this stage is to build a mutual understand between teacher and students. The students and the teachers then define the learning goal to ensure that the teaching and learning flow in the same direction as in identifying the historical topics specified by the Basic Education Core Curriculum 2008, so that students can learn according to the standards and indicators of learning detailed as a part of the Basic Education Core Curriculum 2008 of the Ministry of Education.
  - The instruction stage. During this stage the learners are self-taught – an integral part of the learning process. The teacher acts as a coach to provide advice and guidance for the students. The students conduct historical research with the help of various learning sources, including cloud sources and various textbooks. Once the information is obtained, students must analyze both internal and external historical evidence to determine the reliability of the information and a create digital storytelling medium based on the individual's aptitude. The students then uploads his findings to the shared Google Drive created by the teacher [7].
  - The summary stage. The students present their work through digital storytelling with the help of the available technology in terms of their aptitude and interests. Presentations are presented to the class, but students can also share their work on Facebook, Facebook Group, YouTube or Google Drive according to their interests, to allow other students to view and revise the lesson. Doing so will enable students to review their knowledge anytime, anywhere
  - Evaluation is the final stage of learning and allows the teacher to measure the success of the learning that has taken place in terms of the learning objectives and goals. In this way it is possible to measure and evaluate the students' analytical thinking through Google Form. The creative history learning model using digital storytelling through cloud learning in order to promote analytical thinking, confirms that the history learning method has 6 step, namely: 1) Create questions or subjects of interest, 2) Search for educational resources, 3) Compile all relevant information, 4) Examine, analyze and evaluate the value of evidence, 5) Interpret the evidence to answer the questions why? and how? 6) Present the findings reasonably and interestingly. This learning process focuses on how students develop their analytical thinking skills, which are important skills when it comes to studying history. In addition, the creative history learning model using digital storytelling through cloud learning promotes analytical thinking as a learning approach which in turn helps students to learn better. This is because there are systematic methods of operation such as historical methods [8], and the use of cloud learning in learning management creates interest for students and encourages them to keep learning throughout their lives. Even more, cloud learning is almost an integral part of human daily life nowadays. The most popular application is Facebook because it is a program that can be used to



communicate and access news easily. We live in a learning society in which everyone can access information easily and quickly. There are also other programs which can be used to manage learning in addition to Facebook such as YouTube. This can be used to listen to music, watch movies, documentaries, and access video knowledge. Another, Google Drive, can upload various forms of data to their own drives, or may allow one to share various pieces of information with friends. In addition, Google Form programs can be used as online tests. These cloud learning features are easy to use, and are suitable for use in the classroom. Teachers can apply teaching and learning strategies as appropriate. It is a great way to promote learning for students in the digital age [9].

- 2) In terms of the comparison of students' analytical thinking scores before and after learning through the creative history learning model using digital storytelling through cloud learning of a topic entitled "Important events in international history during the modern-present period", it is found that the mean post-test score is higher than the pre-test score with statistical significance at the level of .05. This is in accordance with the hypothesis. This is because the creative history learning model using digital storytelling through cloud learning is a systematic learning management tool that allows learners to participate in learning management throughout the operation in every step, engage in practice analytical thinking, and use technology which conforms with studying in the digital era [10] and in accordance with the research of Sereesatisap (2015). The result of our research shows that student learning resulting from the above-mentioned learning style, increased their analytical thinking significantly [11].

### Conflict of Interest

The authors declare no conflict of interest.

### Author Contributions

Wilasinee Ponputtha studied literature review, designed model learning and wrote paper. Panita Wannapiroon analyzed the data and had approved the final version.

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