THE DEVELOPMENT OF ONLINE ENCYCLOPEDIAS FOR THAI ASTROLOGY

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Abstract - The subject of astrology is a science that is based on the philosophy or perspective of the results of natural phenomena combined with the relationship of the environment to explain various situations. Systematically which is a science that is important and has a high impact on the way of life of people in Thai society for a long time from the past to the present. The study of Thai astrology is difficult, many learners have abandoned their education efforts and lacking accuracy in prediction and may affect the value of this science, which is considered one of the important wisdom and heritage of Thai people. Therefore, in this research, the researcher developed the Thai astrological encyclopedia with the objective to be used as a tool to help Thai astrological student learn to use and review themselves in parallel with studying in the classroom with primary Thai astrological students. The results of the test with the sample group of 20 people found that the average score in the post-test has increased by 48 percent and can enhance the learning as a source of additional knowledge $\overline{X}$ =4.65. Students can apply knowledge to study Thai astrology $\overline{X}$ =4.65. In addition, resulting in the students taking pride in studying the knowledge that is the wisdom of Thai ancestors and want to study to maintain more $\overline{X}$ =4.40.

Keywords - Thai Astrology, Prediction, Encyclopedias, Education

I. INTRODUCTION

Thai astrology is a complex and multi-dimensional relationship. There are many discussions about the complexity of studying of Thai astrology found in research topic and dissertation such as Nerida, M. Cook (1989) studied about Astrology in Thailand the future and the recollection of the past1 and she suggested that astrology in Thailand has become involved in deeper political and philosophical conflicts which are of ongoing social and political and that this is an important factor in that period. Moreover, in this research was argued about Thai astrological system that it has been widely recognized for several centuries, it is still maintained as something of an esoteric system which is only partly coincident with Buddhist and Western notions of temporal divisions and experience. It can therefore, be studied not as the Thai temporal system, but as one system which can be utilized for specific purposes. The Thai astrological system always has to accommodate to and compete with other systems, and thus the present situation can be seen as a continuation of this process. Astrology is an important part of Thai spiritual and practical life, and men have traditionally practiced it. Since World War II, however, more and more women have become involved in the practice of Thai astrology.2

Systematic study of Thai astrology can be divided into 5 phases, phase 1, starting before A.D.1932 by calculating and recording the movement of the stars. There is a transfer of knowledge from a person who is a famous astrologer. Phase 2 between A.D.1932-1967 began to exchange information between Thai astrologers and foreign astrologers by setting up the Astrologer Association of Thailand and changing from education through individuals to education through institutions. Phase 3, between A.D.1968-1977, has set up an astrological study plan as a curriculum and disciplines including astrologer calendar. However, texts are still a limitation in the principle and explanation. For the 4th phase between A.D.1978-1997, the development of astrological texts with explanations but often plus the attitude, experience, opinions of forecaster to be the main judge. In the 5th phase between the year 1997 to the present, electronic systems, computers, and internet have become more important role. The way of studying astrology was changed by using astrological processing programs instead.3 The first computerized astrological classes was providing by the international astrological association (IAA) with taught both Thai and Western (Saakon) astrology in many branches such as Uranian astrology, numerology, and palmistry.

One of important knowledge for studying astrology is the horoscope. The horoscope is a diagrammatic representation of the position of the planets it is also the basic framework for providing encoded in its form many of the more symbolic schemes which serve to supplement and realize the meaning derived from that configuration. The basic structure of the horoscope, for example, provides information on the twelve signs of the zodiac. These twelve signs have a system of ownership (rulership), whereby the planets are said to rule over the signs allotted to them. The signs of the zodiac are also conceived of as having elemental natures so that each of the four elements has three signs which are of that same element (the triplicities). The temporal passage marked by the changing

positions of the planets is also represented, where the movements of the planets in the signs of the zodiac as a picture of the heavens can to some extent be read by an experienced astrologer quite accurately, much like the hands on a clock. All of these aspects are implicit within the basic diagram upon which the calculated positions of the planets for a particular time are mapped. The schematic form of the horoscope is a complex blending of symbolic and cosmological factors which astrologers can use to add substance and depth to their analyses.

At present, there are many ways to using computer applications with Thai astrology such as 1. Calculated for made up a horoscope for prediction with a resolution in degrees and minutes which has the advantage of being faster and more accurate than the hand calculation but there are still limitations in tracking the orbits of the planets so still need to consider the planet position from the calendar continuously. 2. Forecasting the development of computer programs used in forecasting still has some limitations. This is because forecasting is both a matter of art science and statistics, in which computers cannot "think" and decide on a limited basis. Many sensitive decisions also require human intelligence that is combined with statistics to predict. 3. Collecting horoscope statistics in a format "Database" in order to facilitate the search, checking and various improvements 4. Teaching materials, at present the teaching aids ("CAI" - Computer Aid Instruction) in which teaching astrology in Thailand has not used computer-assisted instruction.

In order to support studying astrology easier and more convenient, the researcher was developed the encyclopedias of Thai astrology with two objectives increase knowledge and understanding of terminology and the meaning of Thai astrological vocabulary for achieving the purpose of being a prophet with Thai astrology.

II. EXPERIMENTAL DETAILS

A.Sample groups and tools

The sample consisted of 20 students who were studying Thai astrology at Chonburi astrology school with purposive sampling. Tools used in the experiment was encyclopedias of Thai astrology online and the data were collected by using quality assessment form, cognitive evaluation form, and satisfaction assessment form.

B.Development of research tools

The online encyclopedia for Thai astrology was developed by introducing the PADDIES MODEL (Suwat Waranusat, 2004) with the following steps: 1. Problem / Perception / Purpose 2. Analysis 3. Design 4. Do / Development 5. Implement / Improvement 6. Evaluation 7. Satisfy

C.Analysis

In the analysis stage, the researcher considers the important elements that are: problems, necessities, objectives, content, and activities by analyzing the need to create and develop tools using SWOT Analysis.

III. RESULTS AND DISCUSSION

A. The results of the development and evaluation of Thai astrological encyclopedia performance

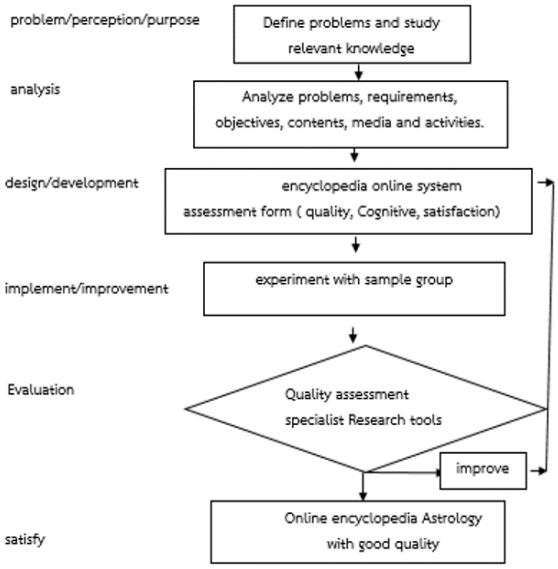


Fig. 1 The methodology of encyclopedias of Thai astrology online (PADDIES Model system)

Table 1. The results of the appropriate assessment by Thai astrological experts

Assessment list / number of sub-issues	$\overline{X}$	S.D.	Comment
1. Content / 5	4.00	0.23	very appropriate
2. Information search form / 4	4.17	0.83	very appropriate
3. The benefits of information content / 5	4.40	0.23	very appropriate
average	4.19	0.43	very appropriate

Table 2. The results of the appropriate assessment by information technology experts

Assessment list / number of sub-issues	$\overline{X}$	S.D.	Comment
1. Technical and design / 6	4.7	0.4	Most appropriate
2. Navigation / 4	4.5	0	Most appropriate
3. Technical / 4	4.8	0.4	Most appropriate
average	4.6	0.3	Most appropriate

The results of the assessment of the suitability of the Thai astrology encyclopedia online according to the opinions of 3 astrological experts, it was found that the proper online encyclopedia of Thai astrology has the overall level is at a high level, with an average (= 4.19, S.D. = 0.43) which classifies each component as follows:

1. In the content consists of 5 sub-issues. The overall is appropriate at a high level ($\overline{X}$ = 4.00, S.D. = 0.23).
2. In the search form, it consists of 4 sub-issues. Overall, it is appropriate at a high level. ($\overline{X}$ = 4.17, S.D. = 0.83)
3. The usefulness of the contents of 5 sub-issues. The overall is appropriate at a high level ($\overline{X}$ = 4.40, S.D. = 0.23). (Table 1.)

And the assessment according to the 2 information technology experts, it was found that the proper online encyclopedia of Thai astrology has the overall level is at a high level, with an average ($\overline{X}$ = 4.6, S.D. = 0.3) which classifies each component as follows:

1. Technical and design consist of 6 sub-issues. The overall is appropriate at a high level ($\overline{X}$ = 4.7, S.D. = 0.4).
2. Navigation, it consists of 5 sub-issues. Overall, it is appropriate at a high level. ($\overline{X}$ = 4.5, S.D. = 0.00)
3. Technical, consists of 4 sub-issues. The overall is appropriate at a high level ($\overline{X}$ = 4.8, S.D. = 0.4). (Table 2.)

B. Comparison of learning achievement before and after using online encyclopedia on Thai astrology

Table 3. The efficiency of an online encyclopedia on Thai astrology

Experimental group (no)	The average from pre test score (Epre) 30 points		The average from post test score (Epost) 30 points	
	Average score	percent	Average score	percent
20	13.2	44	27.6	92

From table 3. showing that the analysis of the efficiency of the astrological encyclopedia found that the average score from the test during the class was 13.2 points, equivalent to 44 percent. The average score from the achievement test was 27.6 points, equivalent to 92 percent. Online Encyclopedia Astrology Epre is 44 and the efficiency after Epost process is equal to 92. So, Thai astrology encyclopedia which was developed makes learners' effectiveness increased to be equal to 48. Supporting by the level of satisfaction of learners towards the online encyclopedia Thai astrology has the most satisfaction level (average score equal to 4.58). Therefore, this data can be concluded that the online encyclopedia astrology that the researcher has developed has quality and can be used for self-study effectively.

Table 4. Comparison of learning achievement before and after using online encyclopedia on Thai astrology

score	Number of sample group	min	max	$\overline{X}$	S.D.
pre test	20	5	22	13.2	5.45
post test	20	18	30	27.6	2.74

From table 4 The tests before and after learning of the Thai astrological student using an online encyclopedia. It was found that the average score was 13.2 points and 27.6 points respectively. And when comparing scores before and after learning, it was found that the score higher than before the study.

C. The results of students' opinions on learning by using the Thai astrology encyclopedia online

In designing and developing the Thai astrological encyclopedia online in content issues the researcher has compiled Vocabulary related to Thai astrology from 22 books of Thai astrology in the National Library. Organized into categories to be consistent with the content used in teaching Thai astrology of the National Astrology Association and the Astrologer Association of Thailand. Can be divided into 21 categories, such as zodiac, houses, planets, Thaksa, Mahathaksa, Triwai, Galayok, Type of zodiac, planet quality, Forecasting model, Horoscope, etc. By looking for explanations along with accompanying pictures that help to build an understanding of the vocabulary in that category. Then save the data into an excel file and convert it into an online encyclopedia system developed. The experiment was with 20 students of Chonburi astrological school and provide a test of knowledge and understanding of Thai astrological vocabulary in 30 items before and after class.

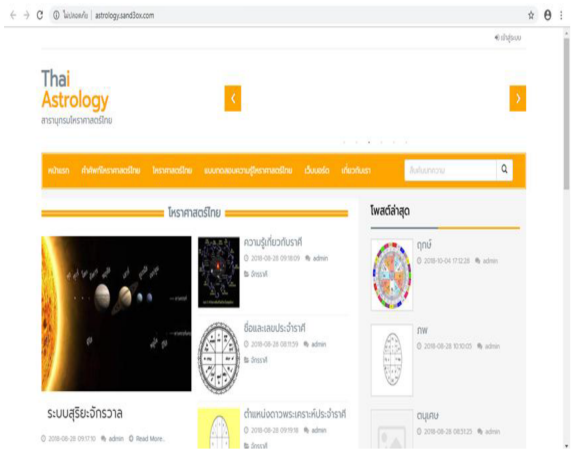


Fig.2 The first page of online encyclopedias of Thai astrology

For the design of the website, page to make it look beautiful and easy to use content with important topics are as follows: Thai astrology vocabulary, Thai Astrology Articles, Thai Astrology Quiz web board. The articles about astrology can change for more content. In the Thai astrology vocabulary menu, learners can search for the desired vocabulary and also have a test which for the understanding of Thai astrology subjects by themselves. There is also a menu that displays links to interesting websites to help learners come to know more.

In addition, there is a design page for admin to manage information on the web for updating and maintaining data as well as granting access to data which consist of 1. web page, manage the system which consists of website information, slide images of interesting websites, user comments, manage content which consisting of content categories/articles, Thai astrological terminology, web boards which consist of category web board notifications, posts /delete, report answer, manage quizzes, usage history. The analysis of the opinions of 20 Thai astrological students on the online encyclopedia Thai astrology was found that the opinions of students are at the most agreed level. All items were as follows: help students to have a study source for more knowledge ($\overline{X}$ = 4.65), get more diverse knowledge ($\overline{X}$ = 4.55), can be applied in the field of Thai astrology ($\overline{X}$ = 4.65). The order of content is easy to study, easy to understand ($\overline{X}$ = 4.80). The images and animations are suitable for the content ($\overline{X}$ = 4.45). The content can be used to reference in various astrological subjects ($\overline{X}$ = 4.45). Like screen design ($\overline{X}$ = 4.40). Students were proud of the wisdom of Thai astrology ($\overline{X}$ = 4.60). Quickly find information from the search form ($\overline{X}$ = 4.65). However, experts and learners have additional suggestions such as, should have to add more content in Thai astrology and other related subjects and some words should have more details.



Fig.3 Vocabulary display and meaning

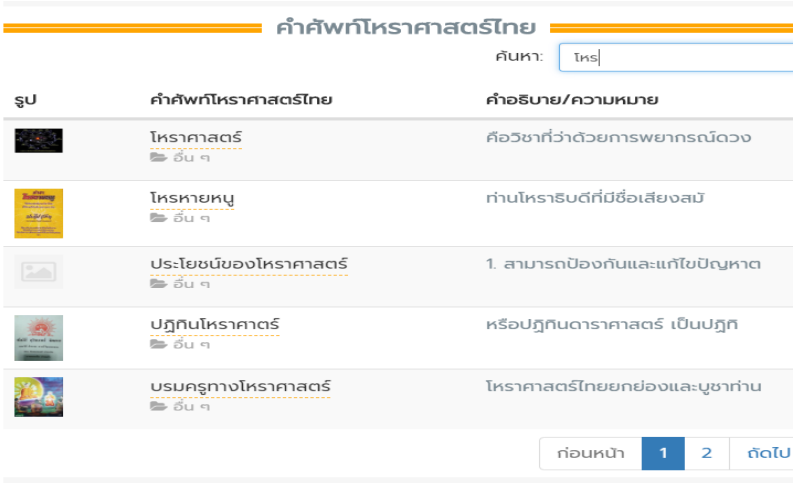


Fig. 4 Enter search for the desired vocabulary



Fig. 5 The testing form about 21 categories, such as zodiac, houses, planet, Thaksa, Mahathaksa, Triwai, Galayok, Type of zodiac, Plannet quality, Forecasting model, Horoscope, etc

CONCLUSION

From the result, It can be concluded that applied the online encyclopedias for Thai astrology can be beneficial to the learner.

Using a search menu for vocabulary can increase understanding of terminology and the meaning of Thai Astrological vocabulary. Meanwhile, It increases the interest in learning and learning achievement for learners as can be seen from the achievement of learning by using the encyclopedia.

In addition, it is also applied the web technology and data technology for raising Thai astrology education in another way.

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