

การพัฒนาการเรียนรู้อิเล็กทรอนิกส์ เรื่อง อาหารไทยผ่านอินเทอร์เน็ต

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การศึกษาความต้องการและความเหมาะสมของรูปแบบการใช้สื่อเพื่อการเรียนรู้ผ่านเครือข่ายอินเทอร์เน็ตเรื่องอาหารไทย และเพื่อผลิตบทเรียนผ่านอินเทอร์เน็ตเพื่อสนับสนุนการถ่ายทอดเทคโนโลยีงานวิจัยอาหารไทยให้เหมาะสมกับกลุ่มเป้าหมายต่างๆ กลุ่มตัวอย่างในการศึกษาค้นคว้าประกอบด้วยพ่อครัวแม่ครัว เจ้าของร้านอาหารไทยในต่างประเทศ และนักศึกษาที่เรียนในโรงเรียนสอนทำอาหาร และผู้สนใจอาหารไทย เครื่องมือที่ใช้ในการศึกษาค้นคว้า ได้แก่แบบสอบถามความต้องการและความพร้อมในการเรียนรู้ผ่านอินเทอร์เน็ต แบบสอบถามความคิดเห็นเกี่ยวกับการเรียนจากบทเรียนผ่านอินเทอร์เน็ตเรื่องอาหารไทย และแบบประเมินสื่อของผู้เชี่ยวชาญ ที่สร้างโดยผู้วิจัย การออกแบบบทเรียนผ่านอินเทอร์เน็ต www.thaifoodtolearn.com ประกอบด้วยขั้นตอนการศึกษารวบรวม ผลงานวิจัยเกี่ยวกับอาหารไทยเพื่อสังเคราะห์เนื้อหาที่จะใช้เป็นข้อมูลพื้นฐานในการจัดประชุมกลุ่มย่อย (Focus group) สำหรับผู้เชี่ยวชาญด้านอาหารและโภชนาการและการประชาสัมพันธ์ เพื่อระดมความคิดเห็นเกี่ยวกับเนื้อหาและรูปแบบการจัดการเรียนผ่านอินเทอร์เน็ตเรื่องอาหารไทยร่วมกับการสำรวจความพร้อมและความต้องการในการเรียนผ่านเครือข่ายอินเทอร์เน็ต แล้วจึงดำเนินการออกแบบบทเรียนเป็น 5 บทเรียน นำไปให้ผู้เชี่ยวชาญประเมินและปรับปรุงบทเรียน นำไปทดลองใช้บทเรียนผ่านอินเทอร์เน็ตเรื่อง อาหารไทย กับกลุ่มตัวอย่างในต่างประเทศจำนวน 26 คนที่สถาบัน TAFE NSW Northeast Sydney Institute เมืองซิดนีย์ ประเทศออสเตรเลีย โดยผู้วิจัยจัดกิจกรรมเรื่อง “E-Learning: Innovative Channel of Thai Cuisine and Health Benefit” เปิดให้ผู้ร่วมงานลงทะเบียนเรียนเข้าไปศึกษาบทเรียนด้วยตนเอง ในเว็บไซต์ www.thaifoodtolearn.com

ผลการวิจัยพบว่า การสังเคราะห์ผลการวิจัยเกี่ยวกับอาหารไทยมีประเด็นต่างๆที่สามารถนำไปเผยแพร่ได้ คือ เทคโนโลยีอาหารไทยเพื่อการส่งออก อาหารพร้อมบริโภคและอาหารพร้อมปรุง คุณค่าเชิงสุขภาพของอาหารไทย คุณค่าด้านสารอาหารที่ได้จากอาหารไทย ผลจากการตอบแบบสอบถามเกี่ยวกับความต้องการและความพร้อมในการเรียนรู้ผ่านอินเทอร์เน็ตของกลุ่มตัวอย่างพบว่า มีความพร้อมในการเรียนผ่านอินเทอร์เน็ตที่บ้านและที่ทำงาน ผู้ตอบแบบสอบถามส่วนใหญ่ใช้โปรแกรมคอมพิวเตอร์ที่เกี่ยวข้องได้ และมีความต้องการลงทะเบียนเรียนออนไลน์ ในหลักสูตรระยะสั้นๆ 1-2 สัปดาห์ เวลาที่เหมาะสมคือเวลาช่วงเช้าและช่วงกลางคืนตามเวลาในประเทศไทย ต้องการเรียนหัวข้อตามลำดับคือ วิถีอาหารไทย เทคนิคการปรุงอาหารไทย อาหารไทยเพื่อสุขภาพ ข้อมูลเกี่ยวกับอาหารไทยด้านโภชนาการ สมุนไพรไทย ผลไม้และผัก คุณลักษณะของอาหารไทย ประวัติวัฒนธรรมประเพณีเกี่ยวกับอาหารไทย อาหารไทยปลอดภัยและพื้นฐานความรู้อาหารไทย สำหรับความคิดเห็นของผู้เรียนเกี่ยวกับรูปแบบของเว็บไซต์ thaifoodtolearn.com พบว่า ผู้เรียนมีความพึงพอใจในภาพรวมอยู่ในระดับดี ความคิดเห็นเกี่ยวกับเนื้อหา การนำเสนอบทเรียน การนำเสนอด้วยวิธีทัศน์ ภาพนิ่ง กราฟิก และ การเชื่อมโยงส่วนประกอบในบทเรียน ประโยชน์ของบทเรียนและการนำไปใช้ ความเหมาะสมของส่วนสนับสนุนในโปรแกรมและความคิดเห็นที่มีต่อแต่ละบทเรียน ส่วนใหญ่อยู่ในระดับดีถึงดีมาก ผู้เรียนเสนอแนะให้มีการพัฒนาโปรแกรมเป็นภาษาอื่นๆ โดยเฉพาะภาษาไทยต่อไป อาจารย์สอนในวิทยาลัยด้านอาหารมีความต้องการร่วมดำเนินการนำบทเรียนไปใช้กับนักศึกษาในสถาบันการศึกษาของตนเองอีกด้วย

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Development of E- learning on Thai Food Through Internet

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Abstract

The objectives of this research were 1) to investigate the need and readiness of the respondents 2) to develop e-Learning on Thai food through Internet in order to support technology transfer from the research results that was compatible with the target group and 3) to study the opinion of the learners toward the lessons. The research sample were chefs, Thai restaurant owners, and the students who were studying at the culinary school. The research instruments constructed by the researchers were a questionnaire of needs and readiness in Internet studying, and a questionnaire for the opinion of the learners. E-learning system was designed and developed on website www.thaifoodtolearn.com by 5 steps: 1) the synthesis of the research results done by the researcher team, 2) organizing focus group of the experts in food and nutrition and public relation field discussion on the essential contents and e-Learning format which would be used to develop the lessons 3) the survey of needs and readiness of the respondents, 4) designing the lessons for e-Learning, and 5) testing the media to 26 participants at TAFE Northern Sydney College, Sydney, Australia under a topic “e-Learning: Innovative Channel of Thai Cuisine and Health Benefits”. The participants registered and studied the online lesson on thaifoodtolearn.com website as well as the set of media “Thai food good health” was distributed to the participants.

The research result found that the Thai food research outputs from 2005-2008 were significant issues that we could be distributed by online learning. The main contents were Thai food for exporting, ready to eat and ready to cook research products, Thai food for health, and Thai food functional substantial. The result of survey showed that the respondents were readiness to study Thai food through internet at their home and office. Most of them could use the related computer program in Internet using. They needed to learn as 1-2 weeks short course in the morning and evening. The topics they needed to learn were Thai food ways, Thai food cooking techniques, Thai healthy food such as Thai herb, fruit and vegetable, the characteristics of Thai food, safety Thai food, and basics knowledge of Thai food respectively.

After learning the lessons on www.thaifoodtolearn.com, the learners’ opinion mostly showed that the lessons were totally in good level. In case of the contents and presentation of video, image, graphics, hyper media links in each pages, the usefulness and benefit of the lessons mostly showed in good to very good level. Moreover, they suggested that the researcher should continue to develop the program for the other language, especially in Thai version. This might be benefit to Thai learners who might not have enough English proficiency to learn English version. Some instructors in culinary institute needed to collaborate in using the lesson to supplement course in their institutes.

Keywords: e-Learning, Thai food technology transfer, multimedia.

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Introduction

Thai government launched the new policy called "Thai Kitchen to the World Project" in 2004 upon 2008 with the aim of increasing the number of Thai restaurants aboard and to make Thailand the largest food exporter in the world. In this regard, Kasetsart University, under the support of National Research Council of Thailand was given a research grant to study the "Development of Thai Food Products and Proactive Promotion of Thai Food to the World". The researchers studied about the standards and characteristics of Thai food, the product status and taste of foreigners, production process for export and extending the reach of Thai food restaurants to the owners and consumers abroad. [1] The research was also found the significant of Thai food promotion to the government sectors. The research project investigated the model of multimedia integration. This study concluded that the next step of technology transfer could be implemented under an online study for target audiences in any part of the world, so Thais and foreigners would be able to access this information anywhere and anytime. Moreover, an online study would be cost effective because there would be no need for researchers or learner to travel.[2] For these reasons, the researcher then continuingly study furthermore on the development and testing the e-Learning through internet on Thai food to the target audiences aboard. who were the Thai restaurant owners, Thai and foreigner chefs and the instructors and students who were involved Thai cuisine.

Objectives

The objectives of this research were to: 1) investigate the needs and readiness of the respondents in e-Learning through internet on Thai food, 2) develop the e-Learning on Thai food to be compatible with the target group. 3) study the opinion of learners toward the online lessons.

Review of Related Literature

E-learning is the process of instruction that apply the new digital technology regarding technology of computer, and tele-communication. E-learning may require to learn through computer both online learning with network and offline learning by single computer or non-network linkages. Clark and Myer [3] defined e-Learning as instruction delivered on a computer by way of CD-

ROM, Internet, or intranet with the following features: includes content relevant to the learning objective, uses instructional methods such as examples and practice to help learning, uses media elements such as words and pictures to deliver the content and methods, may be instructor-led (synchronous e-learning) or designed for self-paced individual study (asynchronous e-learning) and build new knowledge and skills linked to individual learning goals or to improved organizational performance. E-learning is essentially the computer and network-enabled transfer of skills and knowledge. Its applications and processes include Web-based learning, computer-based learning, virtual classroom opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led media. includes media in the form of text, image, animation, streaming video and audio.[5]

In case of Web page design for e-Learning, Sanders [4] mentions that it must be envisioned in a learning context. The student will learn from the Web page, but it can be a central locus of learning such as it may be a side bar-a review session, extra help, or adjunct to the book or classroom presentation and virtual simulation interface in the first page. In the fundamental design considerations, Siegal [6] emphasize that the third generation Web site is one that invites the viewer into the site with lure and metaphors. They are none linear and alluring. They should be attractive and interesting to get the viewer's attention. Siegal also notify that "no matter how important and content rich your message, if no one is going to look at it, they're not going to get the message". His basic model showed an entry page at the beginning tells the student what the lesson is about from the syllabus. Following a core page, shows the student the title of all of the pages so that they know where the lesson is headed, then present the concept example interaction and applied example. The exit tunnel is finally end up with the lesson by reviewing of key concepts and a quiz prior to the exit page.

From the literature review, it showed that an e-Learning through internet become the effective way of learning but it should be in well design and development to match with the target audiences or learners.

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This study focused to the development and testing e-Learning lesson through internet on Thai food by using purposive sampling of Thais and foreigners who were the owners of Thai restaurant, chefs, instructors and students of culinary institute abroad. The site of this study was purposive sampling at TAFE Northern Sidney Institute in Australia. The contents composed of 5 topics which were synthesized from the result of Thai food research under the project of Thai government on "Thai Kitchen to the World" Project. The lessons composed of 5 chapters: 1) Thai cuisine overview, 2) basic knowledge about Thai cuisine, 3) Thai food for health, 4) food safety and 5) the way of Thai cuisine.

Materials and Methods

Sample of the Study

The sample of this study was the learners in Thai food through internet. They came from 2 groups. The first group is Thais and foreigners abroad who voluntarily fill out the questionnaire on the readiness and need for online study on Thai food. The second group was Thai restaurant owners, Thai and foreigner chefs, instructors and students of culinary institute. TAFE Northern Sidney Institute in Sydney, Australia was purposive selected for studying.

Research Instruments

Web-based instruction was designed and developed for e-Learning on Thai food in 5 steps as this follows:

1) Study and synthesize the results in Thai food researches from 2005-2008 for 4 years study. The researcher team identified the research into 5 issues. There were technology in Thai food products for exports, Thai food ready to eat and ready to cook, Thai healthy food, anti-oxidant and prevention cancer substantial in Thai food and strategies for Thai food promotion abroad.

2) A survey on the readiness and needs of Thai and foreigner respondents who were involved in e-learning through internet was administered. There were 13 respondents voluntarily fill out the data in a questionnaire though the research project website thaifoodtoworld.com.

3) Twelve experts focus group in food and nutrition was organized and determine the manuscript of the contents to prepared for the Web-based instruction.

4) Design the Web-based Instruction on Thai food with the course content through **Moodle** Learning Management System (LMS) open source program. The components of contents was mainly presented by Flash images, video clips, exercises,

achievement tests at the end.

5) The lessons were tested and tryout with 20 learners who were undergraduate program students in home economics in Kasetsart University. The contents and program errors were corrected and revised before using with the sample in Australia.

Questionnaires were developed into two sets for collecting data from the respondents. The first questionnaire aimed to explore the readiness and needs in e-Learning through internet of the target group. The second questionnaire explored the opinions of the learners about the quality of Web-based Instruction systems and media uses for learning. It focused on personal information, the development of instructional media on the Web such as format, contents, presentations, video clips, web linkages, benefits and usefulness of e-Learning, and the appropriate issues in each chapter.

Data collection

The Web-based instruction contents was uploaded to website www.thaifoodtolearn.com for testing and using with the samples at TAFE Northern Institute Campus in Sydney, Australia. The samples attended the training program namely "E-Learning: Innovative Channel of Thai Cuisine and Health Benefit" during 23-25 November 2003. Thirty eight participants were given instruction on how to use the LMS program for registration, log-in, studying, doing pretest and posttest. The participants were requested to fill out a questionnaire at the final study.

Data analysis

Data were analyzed by SPSS for windows. Statistical uses were mean, standard deviation, and percentage.

Discussion and Conclusion

The readiness and needs in e-Learning through internet

The result showed that the respondents were readiness for e-Learning Thai cuisine through internet by using computer at their home 84.6 % and their office 76.9 %. They almost uses e-mail 100% following by MSN 61.5%, Skype 53.8%, blog 23.1% and web board 15.4%. They expected the usefulness of e-Learning on Thai food mostly for their business, healthcare, occupation and food consumption respectively. They needed to learn by following contents in the highest level: Thai food ways, Thai food cooking tips, Thai food for health, Nutritional and functional information of Thai food. However, they also needed to learn the uniqueness of Thai food, history and culture of traditional Thai food and hygiene and sanitation in high level respectively. In case of range and time to learn, they

well as 7-14 days mediate course 30.8%, mostly in the morning and evening time.

The output of the experts' focus group

The experts suggested that the content presentation should use multimedia for drawing attention and gave the highest effective learning. For instants, video clips showed demonstration and sound, the online management systems should be controlling and checking the learners. The e-Learning course should be the pilot projects which could be cooperated with the Thai Hotel and Thai Chef Association.

E-Learning systems and feedback from the respondents

The participants who registered to e-Learning through internet at TAFE Northern Sydney Institute gave the response about the format of e-Learning on website www.thaifoodtolearn.com in good and very good level. Their opinions were almost in good level in terms of its contents, however, there were in very good level only on the presentation items such as the color contrast of text and background, and the clarity of images. The others items mostly in good level such as format and method of presentation, leading into lessons, text format, graphics design and communication. For video presentation in case of size, corresponded and clarity of narrative, and easy to control as well as the linking of lesson components were in good level.

The available supported program as chat room, web board and help is almost in good level. They accepted that e-Learning on Thai food could be used for learning resources and promoted in the international contexts in very good level. Nevertheless, they realized that gaining knowledge could be used after taking lessons in good level.

Finally, e-Learning lessons in five chapters were totally in good level for 5 items. There were the clarity of images, appropriateness of the text size, colors, and background, the idea of using images for a better understanding in contents and the charity of images and narrating sound in video for understanding in contents.

The learners gave the additional suggestion that the program would be easy to learn with the Thai learners aboard, particularly Thai chef, if it is translated into Thai language version. They suggested that the lessons should be bi-lingual program, then Thai chefs and Thai restaurants owners could learn conveniently and fastly. For instructors and students in TAFE Northern Sydney Institute, they were interested to collaborate the research and development project to testing the online lessons within an Asian food course in the future.

Conclusions

E-Learning on Thai food was really the new innovative channel of Thai cuisine and health benefit learning aboard. The methods and techniques deal with the new technologies for online learning. This could be proved that it was workable and compatible for the strategies of "Thai Kitchen to the World Project" of Thailand. Because this learning systems was highly benefits to the learners under the international context. The learners can learn from anywhere, at anytime with the long distance media. They can communicate with the Instructors and experts in Thailand via the available tools on the web. In doing so, the learners can achieve their knowledge and apply to their business improvements with high performances in Thai food promotion aboard. However, the achievement of learning may depend on the readiness and needs of the target audiences if they can access the resources and the facilities of Internet in their houses and offices, they are ready to participate the program and learn with their self-pace.

In terms of the development of e-Learning through internet, it requires the format and knowledge of pedagogy science to design the program matching with the various learners. The learning management program is one of the choice to select the efficiency platform in web designing. For this study, Moodle could be confirmed that it is one of the LMS open source program which is the very useful and convenience to manage e-learning through internet systems. Under this frequently updated program, the media presentation could be applied in any new formats.

In conclusion, the learners who use e-Learning through internet accepted all the lessons as the good program and consensus opinion was showed that all components in the designed program was in good and very good level. However, according to the participants suggestion if the project had a chance to continue studying, the lessons should be produced the bi-lingual program in Thai and English version. This program should produce more lessons and extensive use for the learners worldwide.

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