

A Comparison of High School Students' Knowledge and Satisfactions Regarding Halal Startups for Health Care Online Training Course

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Abstract

This study was a component of a self-assessment of high school students' understanding and satisfactions regarding the Halal Startup for Health Care online training course, organized under the Startup Entrepreneurship Promotion Program to support the development of Thailand's Halal Medical Center. The objectives of the study is to 1) research and compare the self-assessment of high school students' knowledge levels between before and after the training course, 2) examine the satisfaction of 213 high school students who participated in the training program as a sample of how satisfied they were with the training course. The main research instruments used in this study were questionnaires with statistical analysis using percentage, mean, standard deviation and a paired sample t-test. The study found that, according to the students' self-assessments, their pre-training knowledge levels were moderate ($\bar{x} = 3.25$) and their post-training knowledge levels were high ($\bar{x} = 4.26$), both of which were significantly different at the p-value level > 0.05 . Moreover, the satisfaction of students towards the training course were ranked and classified in descending order as follows: content, process and service, and speaker ($\bar{x} = 4.38, 4.25, 4.18$, respectively).

Keywords: *Halal, Halal startups, Health Care, Online Training, Halal Health Care*



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INTRODUCTION

Today's technology is undergoing rapid change, and as a result, there is a large discrepancy in the quality of life among the population. The United Nations (UN) has established Sustainable Development Goals (SDGs) for the period of 2015 to 2030, aiming to build up the standard of living for all people in the world, a goal that everyone will work together to achieve. As a consequence, several nations have released visions for their policies that promote these objectives. Thailand has also established the Thailand 4.0 vision, which intends to move the nation into a "Value-Based Economy" that derives innovation from knowledge, technology, and creativity to overcome the trap of middle-income country into the new engines of economic growth country. (Tanprasertkul et.al, 2022).

The progress of the nation depends on innovative thinking, which is crucial in the twenty-first century, and that the teacher would be able to control learning and cultivate strong creative thinking abilities, to cultivate them, they should begin with the young people. (Pakjira, 2022) Nevertheless, the value of creative problem-solving abilities is in developing new ideas or reinventing existing ideas as new ones in order to address issues or advance society. This could occur as a process or as a product. (Wisetsat, 2019) It is necessary to develop innovative citizens

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in order to enter the innovation era. Therefore, an innovative citizen or an innovator is someone who has the ability to learn, adapt to changes, connect ideas, question, observe, experiment and create interactive networks. (Dyerc et.al, 2011) In leading organizations, innovators are crucial and the industry is in great demand. (World Economic Forum, 2018) Thailand has made an effort to raise innovators in the realm of production, as indicated by the National Education Development Plan 2017–2031. The concept of the innovative learning ecosystem is presented as a strategy to improve the educational system required to build a learning universe called the innovative learning ecosystem. (Office of the Education Council, 2560).

The manner of life has been affected by the COVID 19 epidemic, especially in the sphere of education where on-site instruction and learning must give way to online instruction. Halal Science Center Chulalongkorn University has implemented an online training project, “Halal Startup for Health Care” which is a curriculum that incorporates a body of knowledge to develop and propel the development of a teaching and innovative science research environment and atmosphere for high school students. Furthermore, it serves as a forum for the expression of creative ideas that will aid the school in managing learning and fostering innovator students. It is advantageous for agencies that assist schools in establishing an innovation ecosystem to foster the development of innovator abilities in high school students since it advances Thailand's transition to an innovation-based economy in line with the Thailand 4.0 vision.

LITERATURE REVIEW

The Latin term innovate, which meaning "to make something new," is where the word “innovation” originates. The dynamics of the economy, society, politics, and culture are all tied to and affected by innovation. (Pratt, 2008) The capacity to develop competitive advantage is now widely acknowledged to be enhanced by innovation. This may be accomplished by encouraging fresh ideas and luring innovative thinkers, researchers, scientists, and engineers to the nation's innovation system, which would only achieve by creating an environment that values innovation. (Florida and Irene, 2004) Pre- and post-training ratings were compared in several earlier research that measured training satisfaction. For instance, a study on the development of a training program to improve student teachers' capacities in the field of industrial technician for innovative thinking skills. The study's findings showed that, the assessment score after training was greater than it was before training at a statistical significance level of 0.01, and that student satisfaction with the training was high. (Tribunnithi, 2021) From the study of the development of a training program to help science and technology teachers strengthen their skills in employing technology and educational innovation in the twenty-first century found that teachers had significantly higher levels of knowledge and understanding than they had before training, as well as very high levels of overall satisfaction. (Prarom et.al, 2022) The success of the work is greatly influenced by the level of satisfaction. Therefore, it is highly recommended for a wise executive to thoroughly research the numerous elements and factors that will result in satisfaction in order to apply this information as a project management guideline for maximum effectiveness and advantage. If the person is satisfied, it will influence the agency's development and inspire confidence in it. The following objectives of this study, which heighten the researcher's interest are:

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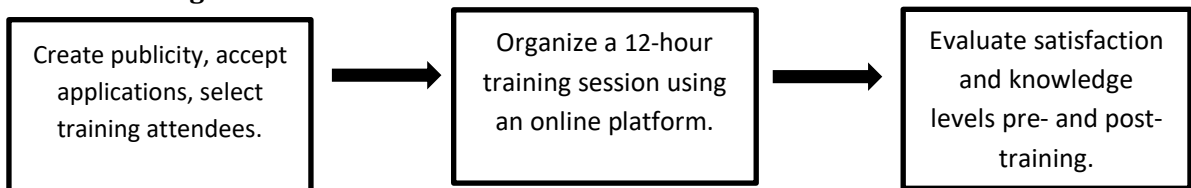
1. To study and compare high school students' assessments of their pre- and post-training knowledge in the Halal Startup for Health Care online training course.

2. The degree of satisfaction among high school students participating in the online training course for Halal Startup for Health Care.

RESEARCH METHOD

In order to support the growth of Thailand's Halal Medical Center, a comparative study on self-assessment, knowledge level pre- and post-training, and satisfaction were conducted on high school students who participated in the Halal Startup for Health Care online training course as part of the Startup Entrepreneur Promotion Program. The following is how the research was conducted.

Research Design



The research's sample group consisted of 213 high school students who attended the Halal Startup for Health Care online training course during June 25 and June 26, 2022.

Research Instrument and Validity and Reliability of the Instrument

The researcher assessed the participants' knowledge using a self-assessment questionnaire on pre- and post-training knowledge level, and assessed the participants' satisfactions to gather data that will be used to determine the questionnaire's scope and content, by evaluating the effectiveness of research instrument and the validity of content. The researcher presented three experts a draft of the questionnaire to review for suitability, clarity of the language, alignment of the content with the objectives, and determine the index of item objective congruence (IOC), which the content validity was 1.0. By applying Cronbach's alpha, the content's reliability was 0.95. To be utilized in research, the questionnaire was designed using Google Form in its completeness. The questionnaire was divided into two parts: Part 1 asked for general information about the students, such as their sex, age, education level, and type of school. The questionnaire will be a form for students to answer by multiple choice question.

Part 2 provides detailed information on the training's participants' satisfaction, which covers the following 4 areas: 1) Instructor satisfaction, 2) Content satisfaction, 3) Training satisfaction, and 4) Self-assessment of knowledge level before and after the training, which is designed as rating scales with 5 levels according to the Likert Scales method as follows: A rating scale level of 5 indicates very satisfied, a rating scale level of 4 indicates satisfied, a rating scale level of 3 indicates

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neutral, a rating scale level of 2 indicates dissatisfied, a rating scale level of 1 indicates very dissatisfied.

Data Collection

Immediately following the training's conclusion on the last day, the researcher gathered data from the students who participated in the training course by completing a survey in a Google Form and sending a QR code link to the Line group that the participants were a member of.

Data and Statistical Analysis in Research

The researcher used descriptive statistics, such as frequency and percentage, to assess general data, and to use a paired sample t-test to examine the variation in the students' self-assessed knowledge levels before and after training. And analyze satisfaction by using mean and standard deviation, which the mean score of satisfaction can be interpreted as follows: 1.00-1.49 = very unsatisfied, 1.50-2.49 = unsatisfied, 2.50-3.49 = neutral, 3.50-4.49 = satisfied, and 4.50-5.00 = very satisfied. (Naruemon and Manit, 2021).

FINDINGS AND DISCUSSION

According to the finding, the majority of participants (72.8%) were female, 86.4% were Muslims, and 74.6% attended private Islamic schools.

Table 1. Demographic characteristics

Factor	Frequency	Percent
Gender		
Female	155	72.8
Male	58	27.2
Age in years		
< 17 Years	90	42.3
17 and over	123	57.7
Religion		
Muslim	184	86.4
Buddhist and other	29	13.6
School type		
Islamic private school	159	74.6
Public school	54	25.4

Comparison of the knowledge self-assessment conducted before and after the training. According to the study, knowledge ratings before training were moderate (\bar{x} =3.25) and high (\bar{x} =4.26) after training, which was significantly different at the P-value > 0.05 (Table 2). This is consistent with a study of online teaching techniques and self-learning in the Maternal-Fetal Nursing and Midwifery

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No.2 Course. The average score of self-learning of the students after the experiment was at a high level, which was significantly higher compared to before the experiment. (Choolert et.al, 2022).

Table 2. Self-assessment of knowledge level scores pre-training and post-training.

Self-assessment	N	mean	S.D	t-value	P-value
Pre-training	213	3.25	1.078	-15.02	< 2.2e-16
Post-training	213	4.26	0.619		

According to Table 3, high school students had a very high degree of satisfaction with the Halal Startup for Health Care online training course as a whole ($\bar{x} = 4.27$). It was shown that all aspects of satisfaction were at a high level when each one was considered separately. From most to least satisfied, the list goes as follows. Content, process and service, and speaker ($\bar{x} = 4.38, 4.25, 4.18$ respectively). This is consistent with research on young farmers' satisfaction with the training they received to become the new generations of agricultural entrepreneurs. In Bangkok, they were very satisfied with the quality of the training materials and media used in the training. (Prawut and Duangkamol, 2019) And a good and effective speaker must have a sense of humor and should set a positive atmosphere of the training used for a study of the development of a training curriculum model of an internal quality assurance system for the Office of the Vocational Education Commission. (Phongpan et. al, 2013).

Table 3. Satisfaction of the trainees on the training course Halal Startup for Health Care.

Satisfaction Assessment Topics	Average	SD.	Level
Process and Service			
1. The duration of the training is appropriate.	3.87	0.92	satisfied
2. The registration process of the training is appropriate.	4.31	0.81	satisfied
3. The approaches and training format are appropriate for the current situation.	4.29	0.73	satisfied
4. The training objectives and content are matched.	4.38	0.82	satisfied
5. The quality of the training document.	4.21	0.79	satisfied
6. The ability to apply knowledge and understanding from the training in practice.	4.41	0.68	satisfied
Average	4.25	0.79	satisfied
Speaker			
1. The ability to convey/communicate/understand.	4.14	0.76	satisfied

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Satisfaction Assessment Topics	Average	SD.	Level
2. The arrangement of the content delivered in its entirety.	4.16	0.72	satisfied
3. Giving opportunity for the attendees to ask questions and express opinions.	4.26	0.79	satisfied
4. Providing answers to questions on point and clear.	4.28	0.70	satisfied
5. The duration of time for the lecture is appropriate.	4.06	0.90	satisfied
Average	4.18	0.77	satisfied
Content			
1. Basic Science & Halal Science literacy	4.32	0.73	satisfied
2. Science and Innovation in the Islamic World	4.35	0.77	satisfied
3. Application Halal Innovations and Science for Health Project Development	4.37	0.76	satisfied
4. Scientific Method	4.40	0.74	satisfied
5. How to Innovation for Healthcare	4.38	0.73	satisfied
6. Halal medical and health technology innovations	4.41	0.73	satisfied
7. Design Thinking	4.34	0.75	satisfied
8. Lean canvas	4.35	0.73	satisfied
9. Techniques for Project Presentation "Pitching"	4.44	0.72	satisfied
10. Coaching Process	4.40	0.76	satisfied
Average	4.38	0.74	satisfied
Grand average	4.27	0.76	satisfied

CONCLUSION AND FURTHER RESEARCH

The course on Halal Startup for Health Care is being taken by high school students, 72.8% of whom were female, 86.4% were Muslims, and 74.6% attended private Islamic school. Participants reported high levels of satisfaction with the training course's overall quality as well as with the course's content, process and services, and speakers. The knowledge self-assessment revealed that following the training, the participants' knowledge had grown. After the training, it was discovered that the score was high. To more accurately and effectively assess the knowledge gained from the training, the next study will examine participants' knowledge both before and after by conducting a test or exam.

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