



# ENGAGING HIGHSCHOOL STUDENTS TO HOSPITALITY TECHNOLOGY INNOVATION PROGRAM WITH TECHNOLOGY IN HOSPITALITY INDUSTRY ONLINE TRAINING

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## Abstract

Online training in “Technology in hospitality industry” is one of strategy to engage prospect students to Hospitality technology innovation (International program), Suranaree University of Technology, Thailand. This training provided content related to background in technology which is implemented for hospitality industry together with its innovation that academic students learnt. The objectives of this study were to engage high school students and to study the achievement in the training for high school students through online training “Technology in hospitality industry”. Data was collected from questionnaires and pretest/posttest from 100 high school students who are interested in this major field of study. The result found that participants did not only obtained more knowledge, but also abilities to utilize in their daily life. They were understanding and interesting in the curriculum program. Prospect students were highly satisfied for this training. Furthermore, they preferred more activities related to this training which would fulfil their knowledge. Higher educational institute could apply this strategy to engage them to the curriculum program. This was one of the best practices for higher educational institutes to engage prospect students which will be qualified into academic students for the future.

**Keywords:** Online Training, Highschool Student, Hospitality Technology Innovation

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## Introduction

To achieve the ultimate goals for the National Strategy 2018-2037 and to make Thailand prosperity, security, and sustainability with innovative and value-based industry, technology improvement and innovation-based development are the key success factors to shift Thai economics and social development into Thailand 4.0. This strategic plan includes upgrading Thailand's service sectors with technology and innovation for higher value adjustment (Office of the National Economic and Social Development Council, 2019). This is very important for hospitality industry to aware for the new changes and technology.

Rapidly technology changing and replacing of technology effect through the business in daily life. This reflexes one of six important development principles in Thailand's sustainable tourism development. Innovation and technology are the key dimensions stated in Thailand's Tourism Strategy for tourism business development (Srisorn, Chayanon & Punluekdej, 2020). These make the higher educational institutes instructors monitor the updated content and methodology to prepare knowledge transferring to students and stakeholders. Suranaree University of Technology, one of the educational institutes that focusing on the multi-disciplinary education in science and technology. It is conducting the bachelor program in Management (Hospitality technology innovation). The management of this program is required to translate the national strategies and upcoming trends to provide the quality for this curriculum. The curriculum program's context must be related to the international standard. It would be included transferring and developing modern technology to all key stakeholders.

Regarding the upcoming innovation and technology in hospitality industry, the training in "Technology in hospitality industry" had setting up to provide briefly of technology and basic knowledge for future academic student. The content of this training included background, concept, and implementation of innovation and technology for hospitality industry. It would be one of the best practices to engage potential target students through the reputation of modernise technology that taught in the university for them. Moreover, this training was also supporting the core university mission which is the strategies for development in "Strengthening capabilities of adapting, transferring, and developing technology; academic service for the benefits of society". The objectives of this study were (1) to engage high school students which are the target group of academic students, and (2) to study the achievement in the training for high school students through online training "Technology in Hospitality Industry". This paper briefly presents the related work in next section following by demonstrating the method of research and assessment, results related in this training with its evaluation and conclusion together with discussion about further study in the last section.

## Literature Review

Hospitality technology innovation program is one of the international bachelor's degrees in Institute of Social Technology, Suranaree University. This program focuses on technology adaptation for 4 main hospitality business. It includes tourism, hotel, aviation, and MICE. This program comes with the minor in entrepreneur which will support the global mindset to the students who apply for this program (Suranaree University of Technology, 2019).

There are many factors that can make students joining to the undergraduate program in hospitality industry. Regarding to the expectations for choosing hospitality and tourism degree, target students concerned about

future career prospects and providing them with valuable work experience (Dodds & Muchnick, 2008). To encourage students to the Hospitality Technology Innovation program is to make the engagement with prospect students about the future. So, the method is to do the public relation by making prospect students involved in program details via any kinds of media and channels. One of channels is to set up the related training session about the content which provide for academic students in the program.

Regarding to the academic services, higher educational institute always provides training session or workshop for public including high school students. Many students were influenced by workshop held by the university. Hammack, Ivey, Utley & High (2015) mentioned that the potential of this activity is not only get a positive impact to participants on what technology and what is the roles of engineer, and engineering and technology field, but also the additional information providing, and significantly impacted toward their attitudes. This activity can gain more attraction of the university faculty through high school students.

Focusing on the method of participants' attaining the activity during outbreaking of COVID 19 pandemic, online training is one of the best practices. Training based on the online platform can engage them to join virtually. Virtual training includes features and characteristics which are similar to the physical training. This also satisfies and engages participants as an in-person option. Moreover, the study of the Academic Dream Camp Activity Form Senior to Junior with Geo-informatics from Avanawang, Tanasiratam & Intirak (2018) found that students satisfied the camp and get the high demand of prospect student to the faculty. This result related to the study of the online AI workshop to attract high school students from Wechtaisong, Chumpoonta, Teerasujaritpong & Ngakoh, (2021). Students increasingly interest in undergraduate program through the workshop.

## Research Methodology

Data used in this research was collected from 100 students who are interested in this field of study. The participants joined the online session on September 9<sup>th</sup>, 2021 (06.00-09.00 p.m.) broadcasting from Streamyard application via Facebook live. Table 1 demonstrated agenda regarding to the training session.

**Table 1** Training Agenda

Time	Topics
05.45-06.00 p.m.	Registration
06.00-06.45 p.m.	Introduction to hospitality industry (tourism, hotel, aviation, and MICE) and current situation.
06.45-07.30 p.m.	Important of technology adaptation in hospitality industry
07.30-07.45 p.m.	Break 15 minutes
07.45-08.30 p.m.	Technology in hospitality industry
08.30-08.45 p.m.	Introduction to Hospitality Technology Innovation program
08.45-09.00 p.m.	Q & A

Details of pretest and posttest are as following.

1) Individual pretest and posttest were divided into 2 parts as following.

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1.1) Hospitality industry included basic knowledge in tourism, hotel, aviation, MICE, and the important of service industry. (5 points of score)

1.2) Technology in hospitality industry included Artificial Intelligence (AI), Customer Data Platform (CDP), Internet of Things (IOTs), Information Systems, and Sustainable Development. (5 points of score)

2) Questionnaires in academic program (including program recognition, program interest and expectation) and training satisfaction.

Data analysis involved an analysis in comparison of learning achievement by using statistical computation of averages and standard deviations. T-tests can be conducted on testing of an assumption applicable to a population in terms of degrees of freedom to determine the statistical significance. This testing effected demographic background to the learning achievement and program by using f-test. Furthermore, to make sure that this training could be one of the best practices, studying training satisfaction was needed by using the descriptive statistic.

## Research Results

### General Information

There were 100 students join this session of training with almost study in government public school (89), private school (10), and international institutes (1). Most of participants are highly grade point which have averages 3.44 of 4.00 with standard deviation 0.455 (maximum 4.00, minimum 1.62).

### Training Achievement

Regarding to online training with the content in hospitality industry and related technology, participants did not familiar with hospitality before which can be shown as pretest score of hospitality industry and technology in hospitality industry. After they learnt from training both sessions, they obtained higher score in posttest. The result showed that participants achieve the training content at statistically significant ( $<0.001$ ). Table 2 is illustrated the improvement of participants' background in hospitality industry and technology in hospitality industry.

**Table 2** T-test analysis comparison of knowledge in hospitality industry

	Pretest		Posttest		T	sig	Mean difference	SE difference
	Mean	SD	Mean	SD				
Hospitality Industry	2.05	0.74	4.50	0.61	26.5	<0.001	2.45	0.0925
Technology in Hospitality Industry	2.02	0.79	4.59	0.49	25.5	<0.001	2.57	0.101

Furthermore, data was shown that level of learning achievement which related to background of technology in hospitality knowledge at statistically significant (0.00). Detail is illustrated in table 3. Students with excellent grade (3.50 and higher) had familiar with this content much more than the good grade. Details is illustrated in table 4.

**Table 3** The effect of learning achievement level in background of technology in hospitality industry knowledge.

	<b>F</b>	<b>Sig</b>
Hospitality Industry Background Knowledge	0.5968	0.620
Technology in Hospitality industry Background Knowledge	7.7910	<0.001

**Table 4** Details in effect of learning achievement level in background of technology in hospitality industry knowledge.

<b>Technology in Hospitality industry Background Knowledge</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>
Perfect (3.75 and higher)	29	2.17	0.658	0.1223
Excellent (3.50-3.74)	22	2.45	0.671	0.1431
Good (3.00-3.49)	30	1.53	0.730	0.1333
Average (Lower than 3.00)	19	2.05	0.848	0.1946

### Program Perception

When accomplish the training, this best practice could make participants more understanding in the curriculum details. Table 5 is illustrated that students improved the perception of the program at statistically significant (0.00).

**Table 5** T-test analysis comparison the perception in Hospitality Technology Innovation program, Suranaree University of Technology

	<b>Before</b>		<b>After</b>		<b>T</b>	<b>sig</b>	<b>Mean difference</b>	<b>SE difference</b>
	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>				
Perception of Program	1.92	0.72	4.41	0.68	22.2	<0.001	2.49	0.112

Since participants understood more about academic program, the result shown in table 6. It reflects that the expectation to study in this program was less than interesting to the program at statistically significant (<0.001). There were some factors that make students who interesting in the program had gap of expectation about the program design. Suggestions about their preferred program (details in table 7) can fulfill their requirements. This program suggestion which provided for students were the needs of variety learning activities, practical based learning, and focusing on case study from professional expertise. Students preferred Thai program rather than international program.

**Table 6** T-test analysis comparison the interest and expectation to study in Hospitality Technology Innovation program, Suranaree University of Technology

	<b>Interest</b>		<b>Expect</b>		<b>T</b>	<b>sig</b>	<b>Mean difference</b>	<b>SE difference</b>
	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>				
Interest and expectation to study	4.03	0.86	3.83	0.97	11.4	0.005	0.200	0.0696

**Table 7** Program suggestion

<b>Suggestion from Student</b>	<b>N</b>	<b>Rank</b>
International program	38	7
Thai program	50	5
Focusing on each sector of hospitality business	28	8
Focusing on practical based learning	54	2
Technology adaptation	45	6
Online learning	24	9
Learning from electronic educational media	19	10
Focusing on case study from professional expertise	52	3
Learning on demand	18	11
Variety of learning material	51	4
Variety of learning activity	59	1
Partly fund support	54	2

### Training Satisfaction

Regarding to the training, participants had very high rate of satisfaction in all items (average satisfaction rate over 4.5 of the highest satisfaction; 5). They really satisfied in knowledge utilization that they could apply knowledge to use in their daily life. Speaker transferred knowledge and information with understanding. Public relation for this training was launched through them by using the social media both Line and Facebook. These would engage students to this training. The result also showed that participants were satisfied in technical issues including visual signal, sound, and internet signal.

**Table 8** Satisfaction level from the training

<b>Preparation</b>	<b>Mean</b>	<b>SD</b>	<b>Result</b>
Knowledge transferring, language, and understanding	4.70	0.46	Very High
Relevant and appropriate content	4.68	0.47	Very High
Answering questions from key speaker	4.69	0.51	Very High
Technical readiness: Visual signal	4.68	0.47	Very High
Technical readiness: Sound signal	4.62	0.55	Very High
Technical readiness: Internet signal	4.70	0.54	Very High
Public relations of the training	4.80	0.40	Very High
Knowledge utilization	4.85	0.36	Very High

### Conclusion & Discussion

Training "Technology in hospitality industry" made participants gain background knowledge in hospitality industry. It was related to technologies which have been provide in detail for academic students in Hospitality Technology Innovation program, Institute of Social Technology, Suranaree University of Technology. Participants with difference from learning achievement level (grading system of 4.00) had various background

in technology for hospitality industry before joining the training. This training can fulfil the gap of the knowledge that shown in the average posttest result.

Reference to the result in program perception, this program was launched from 2019 but students had not known the program before. After finishing training session, participants knew more about the program in details that providing in the training. More information they knew during the training or workshop, more confidence they had (Robinson, Kirn, Amos & Chatterjee, 2019). This best practice reflexed that it is one of the public relations strategies which higher educational institute can be applied to promote the curriculum program. The potential of this training can engage students in the field of study (Hsu & Dyke, 2021).

Although this training is one of the best practices which providing information through the prospect students together with obtaining the high rate of interesting to study the program, participants have a lower level of expecting to study in this program. Student were not familiar and inspired with hospitality technology. The solution is providing details and inspiration during they study in high school (Scott-Parker & Barone-Nugent, 2019).

To gain more expectation in studying this program, more information about program for class operation should be provided for them. Most of the suggestions from participants also focused on the class operation such as variety of learning activity, experiences from professional expertise by guest instructors or guest speakers, practical based learning for major hospitality courses and information science and related technology course. With the limited time, these cannot provide more details about curriculum program for them. In addition, to fulfil the perfect program related to student's specific requirements, curriculum program educators should bring these suggestions to the committee to adjust and develop to the academics.

Evaluation of this training, training satisfaction need to be used in this matter. Participants had very high rate of satisfaction in content, key speaker, and technical issues (Avanawang, Tanasiratam & Intirak, 2018). Additional suggestion from participants who join this training were satisfy with knowledge and content that suitable for them. They were understanding more about the curriculum program. Also, they need more time for the training session and come back to join the training, workshop, or related activity again.

In conclusion, setting up training in Technology in Hospitality Industry is one of the best practices to engage high school students for prospect student studying in the program. It is not only the method to provide details and knowledge to participants for utilizing in daily life, but this also provide the program information through this channel to make them interesting in the program. To earn more expecting to study in the program, information from their suggestions need to apply to develop the curriculum program in the future. This could be fulfilled the gap for some missing points from the management team. However, this training made participants satisfied and engage them to join this kind of training, and related activity again.

For further study, the longer period and setting up the workshop such as related training, camp, sub-session, or academic class observation should be considered due to the suggestions from participants. This can provide prospect students more details about curriculum at the same time. Furthermore, study about factors that make engaging students is one of the interesting studies that can make the management to know more about the prospect students.

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