

*The Creation Strategies, Participants' Satisfaction and Learning Experiences of
'Sure and Share's Fact Check Detective Club'*

Jessada Salathong, Chulalongkorn University, Thailand

The Asian Conference on Education & International Development 2023
Official Conference Proceedings

Abstract

'Sure and Share's Fact Check Detective Club' is a project initiated by the Sure and Share Center, Thailand's well-established fact-checking center under Thai News Agency. Due to the COVID-19 pandemic alarming situation during 2021-2022, the project with the main goal to enhance fact-checking knowledge and skills for 651 participants nationwide, aged 12-87 years old, had to be conducted in hybrid fashion under the concept of 'Innoactive Learning' virtual camp in November 2021. The objectives of this study are 1) to examine the creation strategies of the project and 2) to scrutinize participants' satisfaction and learning experiences. The study is mixed method research; it consists of semi-structured in-depth interview of six key informants who involved in the project creation and online questionnaires of 312 project participants with mixed demographic factors, from primary school students to retired civil servants, at the end of November 2021. Qualitative study showed that the project was designed to be adaptive with limitations during the pandemic under the concept of Innoactive Learning with the hybridization between a virtual camp and on-site activities. All activities were designed to give new learning experiences to the participants to ensure that they could gain fact-checking knowledge and skills with ease and fun. Quantitative study found that most of 312 informants were 'highly satisfied' with the activity's design and the learning experiences. Most of them would like to attend activities of the Sure and Share Center in the future. However, there are some problems of digital divide among the group of elderly participants.

Keywords: Innoactive Learning, Fact Check, Media Literacy and Virtual Camp

iafor

The International Academic Forum
www.iafor.org

1. Introduction

Thailand has been continually launching various dynamic initiatives to prevent and combat the fake news and information disorder. Still, when people want to get more information, such as during the COVID-19 pandemic or political protests, frequently the information shared between people is inaccurate. As the result, the society has to face with the ‘Infodemic’: a situation with a massive of information hardly to distinguish which is accurate or inaccurate same as the spread of COVID-19 pandemic. Due to this, it emphasizes the necessity to continue building an ‘immunity’ or ‘media literacy’ for people urgently and widely, in particular the youth and elderly. Those are the vulnerable groups who can be affected by an unawareness. To increase the media literacy by further developing from the successful previous project, the Sure and Share Center under Thai News Agency, a state-owned public broadcaster, therefore, launched the ‘Sure and Share’s Fact Check Detective Club’ project: a comprehensive workshop to build a fundamental for sustainable media literacy to people with a support of the Thai Media Fund.

The ‘Sure and Share’s Fact Check Detective Club’ project consists of five sub-elements as follows:

1. A workshop ‘Train-the Trainer’
2. Research on the workshop and evaluation after the workshop to study participants’ attitudes and user experience
3. Audio media produced by the participants to promote and provide knowledge on the media literacy for people
4. A design of the project for improving the training course to combat fake news and information disorder with the fact-checking skills for versions of youth or elderly
5. A group established for promoting the media literacy in communities and building the sub-network of student, teacher, elderly, media and local leader

In 2015, Thai News Agency launched the series of ‘Sure and Share’ and later established the ‘Fact-Checking Center under Thai News Agency’ in 2016 with aims of investigating the truth of information shared via online and reporting information through various channels. As the result, it surprisingly found that most of information was suspicious and inaccurate. Some caused negative impacts to both individual or social levels.

Producing a content in corresponding to people’s questions could only help solving the facing problems. However, if considering to the root of problem and individual, ‘media literacy’ is a vital factor needed to be established. Although it is difficult to increase people’s media literacy within a short period, the ‘Sure and Share’s Fact Check Detective Club for Youth’ project was launched with the objectives to build an awareness for high school students in 2021. The project was developed from the previous 2020 program but expanded to various groups: teachers and elderly. Unfortunately, due to the COVID-19 preventive and control measures, the project was adjusted to a hybrid form of virtual camp and Innoactive Learning conducted through online.

Under the abovementioned circumstances, the study thus focuses on the creation strategies of the project and participants’ satisfaction as well as learning experiences on the virtual camp and Innoactive Learning for further improvement of online activities in providing knowledge and skills as well as new experiences to participants in future.



Figure1. The closing ceremony of ‘Sure and Share’s Fact Check Detective Club’

2. Objectives of the study

- 2.1 To examine the creation strategies of the project
- 2.2 To scrutinize participants’ satisfaction and learning experiences

3. Scope of the study

- 3.1 Persons involving in the project creation: a head of the project and speakers
- 3.2 Project participants: students, teachers and persons over the age of 50 who participated in the whole project

4. Definitions

- 4.1 **Satisfaction** in a context of teaching means the satisfaction on arrangement of learning and teaching elements. For this study, it refers to the satisfaction on organizing elements for learning, teaching and activities on the ‘Sure and Share’s Fact Check Detective Club’ project. The satisfaction on learning environment reflects the satisfaction on arrangement of teaching elements.
- 4.2 **User Experience** means an experience of user occurring when the user interacts with the system (Burmistrov, 2017). For this study, it implies to experiences of participants on activities in the ‘Sure and Share’s Fact Check Detective Club’ project.
- 4.3 **Innoactive Learning is a term initiated by the organizers of ‘Sure and Share’s Fact Check Detective Club’.** It’s a combination between Innovative + Interactive. This project was designed to be the hybridization between a virtual camp and on-site activities to ensure that the participants will gain new knowledge and skills through integrated and innovative learning experience.

5. Literature review

5.1 Digital and media Literacy

Digital and media literacy is a vital skill for the 21st century. Definitions, however, evolve over time. It encompasses the full range of cognitive, emotional and social competencies that includes the use of texts, tools and technologies; the skills of critical thinking and analysis; the practice of message composition and creativity; the ability to engage in reflection and ethical thinking; as well as active participation through teamwork and collaboration (Hobbs, Renee, 2010). It includes these competencies:

Essential Competencies of Digital and Media Literacy	
1. ACCESS	Finding and using media and technology tools skillfully and sharing appropriate and relevant information with others
2. ANALYZE & EVALUATE	Comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages
3. CREATE	Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques
4. REFLECT	Applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct
5. ACT	Working individually and collaboratively to share knowledge and solve problems in the family, the workplace and the community, and participating as a member of a community at local, regional, national and international levels

Figure 2. Digital and Media Literacy Competencies (Hobbs, Renee, 2010)

In conclusion, it provides a framework to access, analyze, evaluate and create messages in a variety of forms.

5.2 Fake news

The European Commission (2017) defines the fake news as information created with an intention to distort and attack an individual, group of people or organization. The fake news also means the negative news, political propaganda or propaganda which makes people to misunderstand from their perception. Further, it includes a news report in a sarcastic form or giving misinformation for a cyber-attack.

To sum up, the fake news means information providing a fact without correctly researching or made-up information for propaganda, attacking the individual, the group of people or organization, creating the situation leading people to misunderstand. The fake news occurs either with and without an intention. It then circulates through broadcasting and social media.

However, there is a concern on using the term 'fake news' or 'misinformation' as it can be used as a discourse to distort or discredit those who think differently. Consequently, it must be careful or some media avoid to use this term.

Beside the fake news, there is a similar perception called 'information disorder.' Clair Wardle, a founder of First Draft', distinguished the information disorder into three groups by considering two parts: false information and cause harm (cited Anutarasoat and Salathong, 2019).

1. **MIS**information means false information spreading from a sender who believes it is true without any harmful intention.
2. **DIS**information means false information spreading from a sender who knows it is false and intent to cause harm: intent to lie.
(As a result, the status of MIS and DIS can be changeable depending on the sender.)
3. **MAL**information means genuine information shared with an intention to cause harm. This information is likely to be a privacy but it is shown in the public. For examples, leaked clips, privacy violation clips or contents causing harm such as hatred quotes.

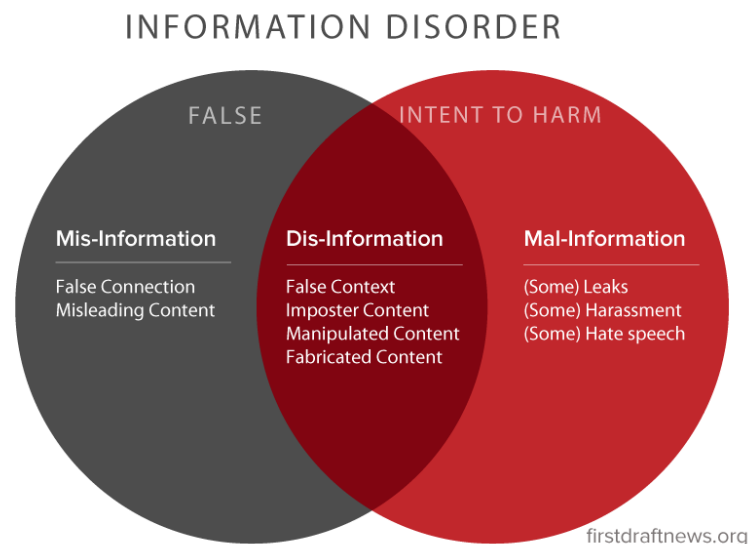


Figure 3. Information disorder (Wardle, Claire and Hossein Derakhshan, 2017)

5.3 Prospection on media creation

UGC: User Generated content

UGC is content contributed. It's includes personal contents produced by end-users in multiple social media platforms, such as Facebook, YouTube, MySpace, Twitter, blogs, and online forums. This content is unrelated to ones' professional work. UGC on the internet is not merely used for entertainment or passing time, but may also lead to citizen journalism (Gillmor, 2004) and social movements (Birdsall, 2007).

In this project, however, audio media was used as a tool to reflect participant's enhanced knowledge and skills on the basis of UGC as well as digital and media literacy. The audio is significant for circulating on the online platform when the users create their own User-Generated Content.

Prospection on User Experience

User Experience means an experience occurs from having an interaction with a system (Burmistrov, 2017).

The study on user experience is a study on experiences in terms of behavior, emotion and impression of user toward a product to understand and explore in improving approach and tool for further development of the product and new designs for the utmost benefit of the user. Each person has different need, capacity and potential. Therefore, those have

experiences in using the product differently. The user experience research (UX research), in this regard, refers to the study aiming to examine an understanding on user's behavior, need and intention for using the product and impact toward the design by collecting data from a process of research (Wongwanich, 2017).

However, to interpret user experience is required both abstract and quality resulting in the user experience questionnaire (UEQ) designed to be a quick use under prospections on subjectivity and quantity. The UEQ consists of six main elements as follows (S. Martin, Andreas, & Jörg, 2017):

1. Attractiveness is an emotional response resulting from evaluating user's satisfaction whether he/she likes it after use it.
2. Perspicuity refers to a system whether is easy for a user to quick use and learn.
3. Efficiency refers to a user can use a system successfully without putting more efforts and how quick the system can respond to user's needs.
4. Dependability is whether the user can control an interactive situation and be confident on using.
5. Stimulation is related to how exciting and enjoyable for using the system.
6. Novelty is whether the system has an attractiveness to the user.

For the attractiveness, this element is quite wide. Hassenzahl (2003), therefore, divided into two prospectives: first, pragmatic quality focuses on achievement of utilization consisting of perspicuity, efficiency and dependability. Second, hedonic quality focuses on the action to entertainment and enjoyment consisting of stimulation and novelty. Both are equally vital as the attractiveness of user (Hassenzahl, 2001). This can be described as the following chart.

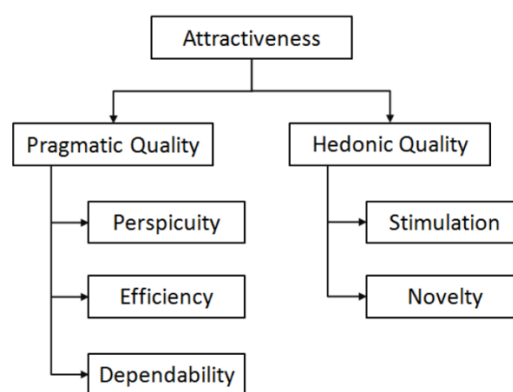


Figure 4. Attractiveness (Hassenzahl, 2001)

5.4 Concepts on development of virtual camp and Innoactive Learning

The main reason for changing the on-site to the virtual camp came from a concern on a widespread of COVID-19. The pandemic not only affected people's livelihood, but it also stimulated the fake news directly causing impacts to people. In this regard, although the COVID-19 situation had not yet ended, the project should not be postponed. As the problem on the fake news became increasingly severe, the project was thus designed by using a creation, innovation as well as technology to handle with the said problem.

The virtual camp aimed to create an experience on an online camping with designing the innovation to encourage the participant to gain the same experience with the on-site camp, such as meeting new friends, creating a group, arranging specific time to learn and participate on the activities for fun and enhancing relationship, and having a competition, such as base activities or rallies.

Meanwhile, Innoactive Learning was a new form of learning experience through the virtual learning materials. It combined the study clips and interactive online platform. The learner could learn by selecting the end-result and continue learning via a “content” or a “storyline” which would make the learner to enjoy during the study and lead to the new experience.

6. Methodology of the study

The mixed method research is applied for this study. An in-depth interview determines the process of project creation while a qualitative study by online questionnaire is utilized for evaluating participants’ satisfaction and learning experiences.

6.1 Qualitative research

Key informants

Key informants of this study consist of a head of the project and speakers in total of six persons. The semi-structured in-depth interview was applied as it helped the interview to have a clear direction. Still, it allowed the researcher to find out new issues while interviewing. (Jamshed, 2014). The study selected a purposive sample involving the project: the head of project and speakers. The interview was carried out through an online via Zoom from 14 May 2021 to 5 November 2021.

6.2 Quantitative research

Research samples

The population was a group 312 participants (out of the total participants of 650) to answer the questionnaires composing students, teachers and persons over the age of 50 who participated in the whole project. Informants would evaluate themselves through open-ended questions for all parts: general information (personal data of informants), satisfaction, and attitude after the workshop. The questionnaires were under a supervision of three experts to ensure clearly comprehensive contexts in accordance with the objectives and evaluated for Index of Item Objective Congruence (IOC).

7. Result of the study and discussion

7.1 Objective 1: Result of quality research by interviewing

7.1.1 Background of Sure and Share’s Fact Check Detective Club

Background on the virtual camp

Due to the severe widespread of COVID-19 in Thailand, the difficulty with unpredictable pandemic situation caused impacts not only to people’s livelihood but also numerous the fake

news causing the situation became worse. In this regard, the ‘Sure and Share’s Fact Check Detective Club’ project must continue by changing from the on-site to virtual camp to strengthen knowledge and awareness to the youths and elderly in handling with the fake news with using a creation, innovation and technology in supporting the project implementation.

The virtual camp is an activity aiming to organize the virtual camp in providing a camping experience via online system. It was designed for utilizing an innovation to support a creation of experience for the participants resulting in the participants could gain a similar experience with the on-site camp. They could be able to meet new friends, have a group, arrange specific time for learning to have fun and interaction as well as have a competition through base activities or rally.

We try to maintain the learning experience for not to be unchanged. Considering all parts of our works, this (learning experience) is the most interesting.

(Peerapon Anutarasoot, head of ‘Sure and Share’s Fact Check Detective Club’ project, interview 18 September 2021)

Background of Innoactive Learning

As all activities and learning were switched from on-site to virtual one with the aims of ensuring the participants would still get the same experience of on-site camp resulting in the learning materials were produced in a form of video. The audience could learn by selecting the final result of the study and continuing their learning through ‘contents’ or ‘storylines’ which allowed them to enjoy with the learnings. The contents would be pre-recorded; it could reply answers in correspondent to questions.

7.1.2 Structure and process of the virtual camp

7.1.2.1 Before starting the virtual camp

The process included to call for participants, registration, system testing for learning and submission and introduction of participants inside their group.

Concept on creation before starting the virtual camp

The project was switched from the on-site to the virtual camp. Still, the organizer wished to providing similar experiences of the on-site to those participants. Therefore, many activities such as the interaction among the participants, introduction and preparedness on the system, were conducted.

Objectives of the creation before starting the virtual camp

1. To set up a preparedness and understanding of participants to avoid having a difficulty on using the system once starting the camp (such as system on submission of works or setting up the picture background on Zoom)
2. To create an excitement to participants before joining the camp
3. To encourage the participants to have a close acquaintance to each other

7.1.2.2 During the virtual camp

Concept on creation during the virtual camp

Since the project had been adjusted from on-site to virtual camp, the issue on building experience toward the participants was considerably designed and inclusive. For the on-site camp, the speaker could see the interaction of participants by their faces. If they were bored, then the speaker could add more games or give a break. In contrast, there was no interaction between the speaker and participants for the virtual camp. The project, therefore, had to carefully consider, design and prepare the activities to make sure that, from a total of eight-hour on-site camp divided into small online classes, the participants would still enjoy the learning and have the same experiences with the on-site.

Objectives of the creation during the virtual camp

1. To provide the on-site-alike experiences learned from the virtual camp
2. To create participants' excitement and enthusiasm for the whole project learning

7.1.2.3 'Clinic' Activity

Concept on 'Clinic' activity

It was an activity which the speakers and participants meet each other. The interaction between them occurred via live; system. The activity was conducted by collecting ideas inside the groups of participants. It allowed not only the participants to discuss among their groups but also could bring the issues to the speakers who went live online.

Objectives 'Clinic'

1. To have an interaction between the participants and speakers
2. To build relationship among the participants

Subjects learned during the virtual camp

1. FACT-CHECK Detective
2. Cyber security by the ETDA
3. Case study with the cyber police and Thailand Internet Crimes Against Children (TICAC)
4. Audio Production

7.1.2.4 'Virtual Campfire' Activity

Concept of creation of the 'Virtual Campfire'

It was a live online focusing to creating an atmosphere and relationship through an entertainment and building inspiration. It also helped to enhance relationship, unity and inspiration to support each other. It is aimed to replace all on-site activities by ensuring that the participants would gain experience as much as the on-site and exciting to study with other participants.

Objectives of ‘Virtual Campfire’

To create a good atmosphere for participants to endeavor to accomplish the project
To build relationship and inspiration among the participants.

7.1.2.5 After the virtual camp

It consisted of 1. handover of kits to the participants 2. closing ceremony 3. expansion of network.

Concept on creation after the virtual camp

It was a period to handover kits to the participants so they could wear the same cloths on the ceremonial closing day to show the unity and expand knowledge and activities to other network at the school and community levels.

Objectives

To pass and share the knowledge and experience from participating in the project to neighbors, schools, friends or communities in strengthening knowledge and understanding at the society level.

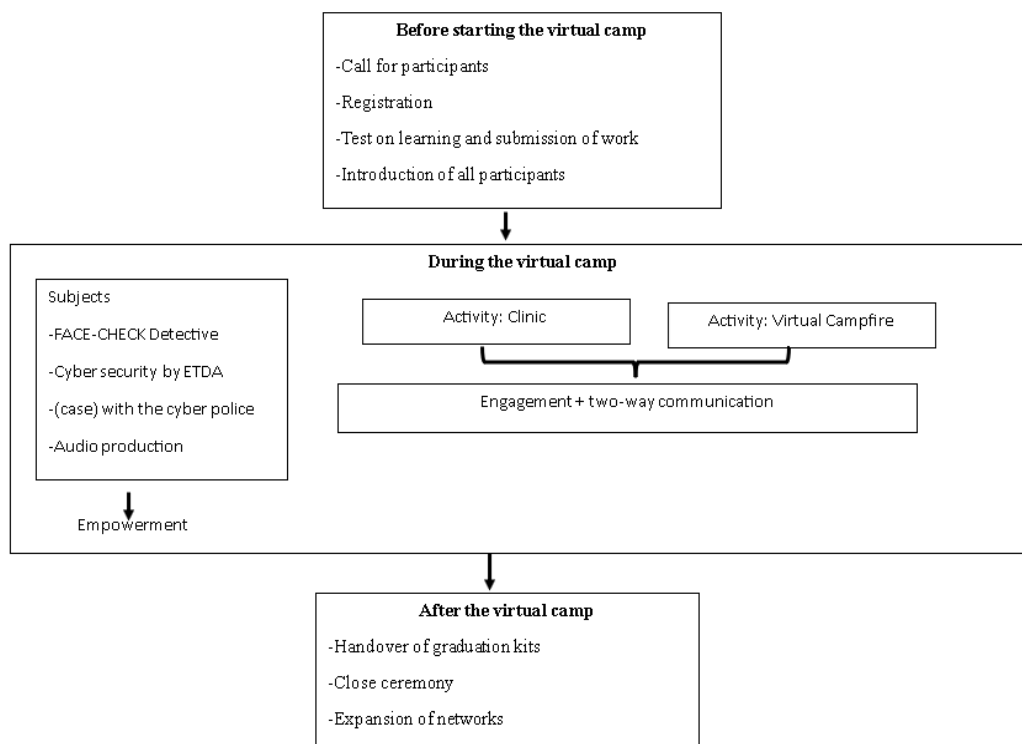


Figure 5. Overall project

7.2 Objectives 2: Result of quantitative research

The quantitative research aims to scrutinize a satisfaction on learning experiences of participants: teachers, students and people in general from various regions in Thailand during

14-30 November 2021 via online. The criteria of informants were initially set as a person was required to attend the opening ceremony, take every course, participant activities as attend the closing ceremony. The survey was conducted through an online questionnaire and opened for the participants to voluntarily answer. The researcher collected the data and evaluated as well as analyzed by using the computer.

There were 312 persons as a sample group from 41 provinces. Most of the informants were from Bangkok: 99 persons or 27.05 percent.

Meanwhile, students were considered as the most informants, 205 persons or 56.01 percent, following by people in general 93 persons or 25.41 percent and teachers 68 persons or 18.58 respectively.

Table 1. shows number, percent, average, standard deviation of participants' experiences and satisfaction on the overall project.

Question	Level					\bar{X}	S.D.	level
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree			
1. You tend to share knowledge and experience to others.	205 (65.71)	95 (30.45)	11 (3.53)	1 (0.32)	-	1.38	0.572	Strongly agree
2. You satisfied with a learning form of 'Virtual Camp'.	206 (66.03)	89 (28.53)	17 (5.45)	-	-	1.39	0.591	Strongly agree
3. You satisfied with a learning form of Innoactive Learning (Learning Video which a learner can select the final result	221 (70.83)	81 (25.96)	9 (2.88)	1 (0.32)	-	1.33	0.546	Strongly agree

and a learning video with the storylines.								
4.Overall, you satisfied with participating the ‘Sure and Share’s Fact Check Detective Club’ project	223 (71.47)	80 (25.64)	9 (2.88)	-	-	1.31	0.523	Strongly agree
Total						1.35	0.48	Strongly agree
Experiences and satisfaction with the overall project						1.35	0.48	Strongly agree

n = 312

From **Table 1**, it illustrates that the sample group was highly satisfied on the overall project. There were 312 persons for a sample group from 41 provinces nationwide. Top six of provinces having the most informant included Bangkok (86 persons or 27.56 percent), followed by Samut Sakhon (36 persons or 11.54 percent), Nonthaburi (35 persons or 11.22 percent), Nakhon Phanom (25 persons or 8.01 percent), Chiang Rai (23 persons or 7.37 persons) and Pathum Thani (12 persons or 3.85 percent) respectively.

The most informants answering questionnaires was students (162 persons or 51.92 percent), followed by people in general (89 persons or 28.53 percent) and teachers (61 persons or 19.55 percent respectively). The average age of the sample considered as people in general was 58 (mean = 58.07). While the youngest age of informants in general was 19, the eldest was 85. A number of females answering the questionnaire than males as 173 persons or 55.45 percent comparing with 135 persons or 43.27 percent. Meanwhile, four persons or 1.28 percent did not identify the gender.

The sample group gained experiences and had the most satisfaction with an overall process of calling the participation the most. The highest level of satisfaction also shown for the Starter kit which consisted of project’s organizational charge and manual. Likewise, those informants had the most experiences and satisfaction with activity on ‘Online Clinic with speakers.’ They also gave the most satisfaction toward the Campfire and audio production as well as overall project.

8. Expectation on transfer and adaptation of the participants

For a group of students, it was expected that the students could have wider ideas in producing contents and utilizing in various dimensions. Also, they could know how to adapt a use of the application which is more convenience in media production. This knowledge could be passed

via a month-to-month communication among the students. (Yet, it could have less impacts comparing with the teaching by a group of teachers).

For a group of teachers, it was expected to use for their teaching in compliance with the online class amid a spread of COVID-19. The audio could become a tool or an option helping the students to access retrospective lessons (such as podcast).

For a group of elderly, it was expected that the elderly could have an experience in using tools for audio production and learning how to use their own tools in creating works rather than only communication use.

9. Discussion and Conclusion

According to the abovementioned study, the creation of the project was designed by considering contexts and conditions of unanticipated situation caused by COVID-19 as well as learners' participation and experiences. The project, therefore, proceeded into the virtual camp focusing on Innoactive Learning concept and participation. The most effective result under the prospection of media literacy and UGC is an ability to produce a creative media in compliance with prospection of experiences and media literacy. The content complies with providing knowledge, investing truths, cybercrime and media creation. The participants not only highly satisfied with new learning experiences but also could produce the creative media. This outcome illustrates in accordance with the result of the quantitative research. The sample group expressed their highest satisfaction and could provide the utmost experience to the participants. Most of them showed their intention to share the knowledge and experience from the project to other and have a willingness to attend the project organized by the partner network of this project again in the future.

As the result reflected high "attractiveness" from the participants, the 'virtual camp' focusing on Innoactive Learning could become a model for adapting to other workshops in providing knowledge and empowerment in various issues. However, it is required a determination of limitation for contents and activities which may not allow the project to conduct in a form of online. Besides, the capabilities of participants in technology and accessing to the technology may also become a limitation and lead to a digital gap which can affect the quality and atmosphere of learning class and activities. Therefore, the nature of demography and readiness of learners needs to be considered in order to proceed the project successfully.

References

English

- Birdsall, W. (2007). Web 2.0 as a social movement. *Webology*, 4(2), Article 40.
- Burmistrov, A. (2017). Difference Between UI & UX – A Practical Example. Retrieved from <https://icons8.com/articles/difference-between-ui-ux-a-practicaexample/>
- Gillmor, D. (2004). *We the media: Grassroots journalism by the people, for the people*. Sebastopol, CA: O' Reilly Media.
- Hassenzahl, M. (2001). The Effect of Perceived Hedonic Quality on Product Appealingness. *13*, 481–499. doi:10.1207/S15327590IJHC1304_07
- Hassenzahl, M. (2003). *The Thing and I: Understanding the Relationship Between User and Product*.
- Hobbs, Renee. (2010). *Digital and Media Literacy: A Plan of Action*. US: Aspen Institute.
- Jamshed, Shazia (2014) 'Qualitative research method-interviewing and observation,' *Journal of basic and clinical pharmacy*, 5(4), 87–88, at: <https://doi.org/10.4103/0976-0105.141942>
- Martin, S., Andreas, H., & Jörg, T. (2017). Design and Evaluation of a Short Version of the User Experience Questionnaire (UEQ-S). *International Journal of Interactive Multimedia and Artificial Intelligence, Vol 4, Iss 6, Pp 103-108 (2017)* (6), 103. doi:10.9781/ijimai.2017.4615
- Shatto, B., & Erwin, K. (2016). Moving on From Millennial: Preparing for Generation Z. *Journal of Continuing Education in Nursing*, 47(6), 253-254.DOI: 10.3928/00220124-20160518-05.
- Wallerstein, H.A. (1971). *Dictionary of Psychology*. New York: Penguin Books, Inc.
- Wardle, Claire and Hossein Derakhshan. (2017). “One year on, we’re still not recognizing the complexity of information disorder online,” in *First Draft*, October 31. Retrieved from https://firstdraftnews.org/articles/coe_infodisorder/
- Wolman, Thomas E. (1973). *Education and Organizational Leadership in Elementary School*. Englewood Cliffs: New Jersey: Prentice Hall.

Thai

- Anutarasoat, Peerapon and Jessada Salathong. (2019). *khūmūr patibat nak trūat sōp khōthetching (FACT-CHECK in ACTION)*. Bangkok: Trusted Media Thailand.

- Kamolsupachinda, Kwanchanok. (2015). *phruttikam kānchai sū sangkhom 'ōnlai læ kān sadēng tūa ton khōng chēnērēchan : kōranī suksā khwām tēktāng rawāng chēnērēchan bēbī būm ma 'ēt læ chēnērēchanwāi (Social Media Use and Generational Identity: The Differentiation between Baby Boomers Generation vs. Y Generation)*. Independent Study. Master Degree of Communication Arts (Strategic Communication), Graduate School, Bangkok University.
- Mek, Suthep. (1988). *khwamphungphōchhai nai banyākāt kān rīan kānsōn khōng nakrīan læ khrū rōngrīan 'āchīwasuksā 'ēkkachon praphēt phānitchayakam nai khēt kānsuksā sipsōng (The Satisfaction of students and teachers on the learning and teaching environments in private vocational colleges (commence) in the Educational Service Area 12)*. [Thesis, Srinakharinwirot University].
- Pasurapan, Kanchana. (1988). *khwāmphungphōchhai khōng nakrīan thī mī tō saphāpwētōm nai wittayālai 'āchīwasuksā sangkat krom 'āchīwasuksā khēt phūnthī kānsuksā pēt (The Satisfaction of students on the environment in vocational colleges under the Office Of Vocational Education Commission, Educational Service Area 8)*. [Thesis, Srinakharinwirot University].
- Royal Society of Thailand. (2020). *photchanānukrom sap nithēsāt (Dictionary on Communication Arts)*. Bangkok: Academy of Moral and Political Sciences.
- Runnares, Suthathep. (2018). *patchai thī mī phon tō kān tranak thung phai khukkhām thāng sai bē khōng phūchai 'inthānet nai Krung Thēp Mahā Nakhōn (Factors Affecting Awareness of Cyber-Threats by Internet Users in Bangkok)*. Independent Study. Degree of Master of Science Information Technology Policy and Management, College of Innovation, Thammasat University.
- Satawedīn, Parama. (1990). *lak nithēsāt (Principles of Communication Arts)*. Bangkok, Chulalongkorn University.
- Surasonthi, Kitima. (1990). *khwāmru thāngkān sūsān (Knowledge on communication)*. Bangkok: Thammasat University.
- Wongwanich, Suwimon. (2017). *'ēkkasān prakōp kānsōn rāiwichā kānwičhai kō rūp læ kānwičhai 'ing kān 'ōkbēp (Teaching publication on informative research and design-based Research)*. Faculty of Education, Chulalongkorn University.