Technology Usage of Thai Dance Student

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Abstract—Passing intangible knowledge like Thai dance to the new generation is still remain challenge issue since it is difficult to transfer. Recently, learning technology platform on different devices is paying for the main role to in education area. This technology may support and improve student's knowledge and skill of Thai dance. However, there is a lack of empirical research on Thai dance student technology usage. The understanding of student's technology usage could help developer or instructor to transfer intangible knowledge to technology. The objective of this study is to identify technology usage among Thai dance student in Chiang Mai College of Dramatic Arts, Chiang Mai, Thailand. The total participants are 79. According to the result, instructor and software developer are recommended to distribute learning content of Thai dance via smartphone.

Keywords—Thai dance; technology usage; learning technology.

I. INTRODUCTION

One of the most famous traditional Asian cultural heritage is Thai dance. Like other traditional dance, Thai dance generally can be grouped into two major categories which are high art (Royal dance) and low art (folk dance) [1]. Globally, "Khon" is most well-known in royal dance. This performing art is a traditional most sophisticated form of Thai masked drama which combines gracefulness with masculinity on its dancing and singing. As mention, dances are intangible cultural assets which are opposite to tangible property like paints or archaeological site [2]. Therefore, the challenge of intangible heritage is how to process and pass it to the next generation.

However, the intangible knowledge like Thai dance is difficult to transfer. Basically, the knowledge of Thai dance has been taught to Thai dance student by observation and imitation of body movement. Unfortunately, the number of teachers is very low. Even they are trying to express knowledge of Thai dance in the textbook is also limited such as the rhythm cannot be expressed [3]. Consequently, Thai dance students do not have proper training hours with their teacher and lack of alternative tools for helping them to learn.

Previously, learning technology on different devices (ie. personal computer, tablet, and smartphone) are paying for a key role in incorporating with students to improve their learning skill. However, there is no conclusive on the factors which influence Thai dance student to adopt this technology as alternative tools for learning. Furthermore, it is a lack of empirical research on Thai dance student technology usage. The understanding of student's technology usage could help developer or instructor to transfer intangible knowledge to technology.

II. LITERATURE REVIEW

A. Thai dance and Learning Technology

Involving technology with learning device could provide the solution for teaching Thai dance. Previously, the scholars incorporate technology to improve the process of transferring intangible knowledge of Thai dance. For example, W. Choensawat et al. studies the adaption of a notation system to describe Thai dance. They also introduce a learning tool software for facilitating user to understand notation with 200 students in Thailand. The desirability is measured by survey after conducted their tool. The result showed that over 70% of subjects think that the software has usability, desirability, creativity, and fun [3]. However, some of the subjects think that the notation on software is complex and too technical.
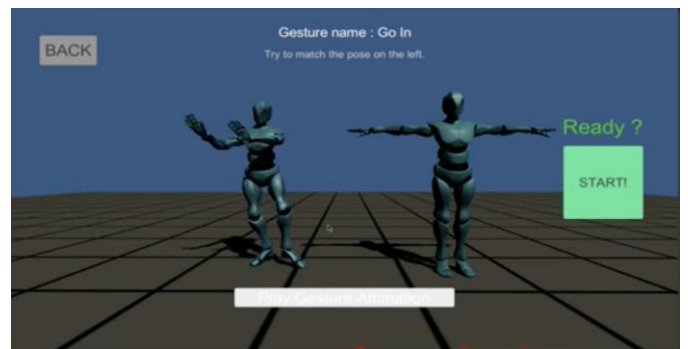

Fig. 1. *The exmaple of Thai dance training system*

P. Munoum proposes multimedia-based instruction package in a personal computer for training the creative dancing arts performance for the third key stage student. Her research focuses on the efficiency and satisfaction of student before and after implementing the system. The result indicates that learning achievement and satisfaction of students who learn with the instruction package was higher than before learning at significance level [4]. However, the reasons for satisfaction is not mentioned. Y. Tongpaeng et al (2017). studies on the process of archive the knowledge of traditional Thai dance by using dance notation known as "Labanotation". They also

propose the prototype of a tool for translate dance notation and demonstrate it as 3D animation [5]. Ob-orm et al. (2017) also propose a system prototype for Thai dance training (figure 1). The system is based on Kinect-based Skeleton tracking which able to provide evaluation feedback [6].

B. Technology Usage

Previously, an individual computer has played a key role in education technology over past ten years. The researcher found that in mobile phone or smartphone has recently taken a new role for technology device. Meanwhile, Thailand has distributed tablet devices more than 800,000 tablets across the country for primary school student [7]. Thus, some schools in Thailand has been replaced personal computer with tablet and mobile or "phablet". In northern of Thailand, the most used technology usage is the smartphone and followed by the personal computer. However, Tablets are the least used technology by the children [8].

Previous studies have mentioned on how technology is being used by a student inside and outside the classroom. For example, the main activities for European student who use the internet are social networking, followed by listening to music, watching a video clip, and using instant messaging [9]. Meanwhile, digital games are the regular feature of classrooms with over 30% of classrooms using digital games with their personal computer or tablet at least once per week [10]. In Thailand, a student is likely to use a tablet for gaming and personal computer for studying. The smartphone is only used for contacting friend [8]. However, a smartphone a dominant role in the area of adult learning [11].

Meanwhile, Technology devices are currently developed to engage and foster learning performance. For example, Sureephong et al. report that implementing game-elements (leaderboard and badges) in the personal computer for education can a positive outcome for student performance in Thailand [12]. Moreover, Chernbumroong et al. implemented leaderboard as gamification element in a tablet for fostering motivation and performance of Thai student. Their result indicated that different kind of leaderboard will provide a different kind of outcome [13].

III. METHODOLOGY

In our study, a quantitative method was employed since this method is based on gathering data on a large scale to identify the trends of That dance student's technology usage. The participants in this study are Thai dance students in Chiang Mai College of Dramatic Arts, Chiang Mai, Thailand. The total number of participants was 79. The mean age was 18 years old and there were 65 women and 14 men. The education level of participants, 53.2% hold a secondary school, 45.6% hold an undergraduate, and 1.3% hold primary school (table 1).

TABLE I.   INFORMATION OF PARTICIPANTS

Men	14
Women	65
Age	18 years old (average)

Secondary school	53.2%
Primary school	45.6%
Undergraduate	1.3%

The instrument for collecting data is set of questionnaire. The set of questionnaire was divided into 3 parts; the first part refers to participants bibliography, a second part is technology usage and tried part is an open-end question (suggestion and commendation). The students were asked questions about their use of technology. All content in a questionnaire is multiple choice with That languages. The survey duration is one week and took place in Chiang Mai College of Dramatic Arts, Chiang Mai, Thailand.
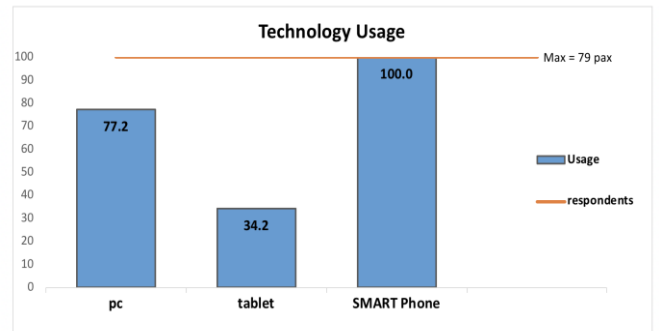
IV. RESULT

Fig. 2. Technology Usage

The result from the survey (table 2) indicated that smartphone (100%) is the most common use of technology devices for Thai dance student, followed by PC (77.2%) and tablet is the least used device with only 34.2% among Thai Dance student in Chiang Mai College of Dramatic Arts, Chiang Mai, Thailand.

TABLE II.   THE FREQUENCY OF TECHNOLOGY USAGE

Devices	Per week (%)			Time per day (%)		
	Every day	3-4 times	1-2 times	Over 7 hours	4-6 hours	1-3 hours
Smartphone	98.7	1.3	0	65.8	32.9	1.3
PC	16.5	51.9	31.6	20.2	30.4	49.4
Tablet	11.4	74.7	13.9	72.2	13.9	13.9

TABLE III. THE FREQUENCY OF TECHNOLOGY USAGE

Devices	Period (%)			Location (%)		
	9.00 - 12.00	12.00 - 17.00	17.00- 21.00	School	Home	School/ Home
Smartphone	13.9	12.7	73.4	35.6	44.0	20.4
PC	11.5	24.2	64.3	13.8	69.6	16.6
Tablet	2.5	12.7	84.8	22.5	41.6	35.9

Table 3 and 4 illustrate the information on usage frequency and usage location of technology devices among Thai Dance student in Chiang Mai College of Dramatic Arts, Chiang Mai, Thailand. The result indicated that most participants use their smartphone almost every day with (98.7%), meanwhile, only 1.3% of participants use their smartphone 3-4 times per week. As regards tablet (74.7%) and PC (51.9%), the participants use these devices average 3-4 times a week. The average time of device usage for smartphones (65.8%) and tablet (72.2%) is over 7 hours per day, whereas the personal computer (49.4%) is used only 1-3 hours per day of the respondents. The most period of usage devices for all participants is between 17.00 - 21.00 (smartphone = 73.4, tablet = 84.8, PC = 64.3). Moreover, the information on location issue showed that all of our participants prefer to use their devices in their home (smartphone = 44%, tablet = 41.6%, PC = 69.6).
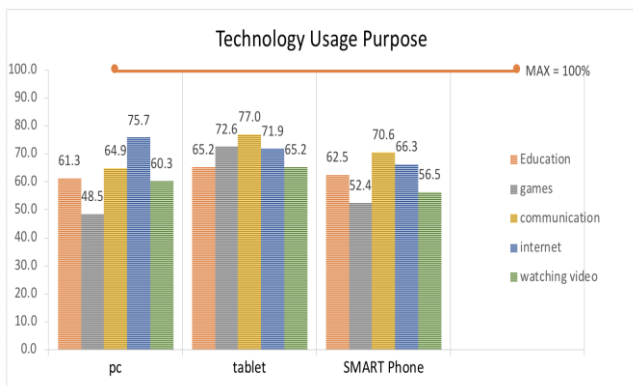

Fig. 3. Technology usage purpose

Figure 3 demonstrated the overall purpose of technology usage in five different domains, namely education, game, browsing the internet, communication, and watching the video. The most common purpose of a personal computer is browsing the internet (75.7%), followed by communication (64.9%), education (61.3), watching a video (60.3%), and the lowest purpose is games (48.5%). The highest purpose for tablet usage is communication (77%), followed by games, internet (71.9%), education (65.2%) and watching a video (65.2%). The most common purpose of a smartphone is communication (70.6%), followed by internet (66.3%), education (62.5%), watching a video (56.5%) and games (52.4%)

V. DISCUSSION

The result clearly showed that smartphone is dominant technology device for Thai dance student since every student uses it. This research is agreed with the previous study from [8]. Since student uses a smartphone over 7 hours every day in their home, course designer and software developer should more pay attention to distributing instructional content via a smartphone platform. There also is a good opportunity for Thai dance student that they can able to access their online course with their smartphone in their own place. Furthermore, teacher and course instructor able to control and facilitate the student inside and outside of the class.

The smartphone could be a new trend of a learning device for Thai dance student in school. However, a personal computer is still necessary since high usage purpose for browsing the internet. The personal computer can be a benefit for those students who are searching information from internet and self-study. Although, the number of tablet usage is low, most of the student who used this device for a game and watching video purpose. The software developer could have selected tablet as a device which distributed learning content in-game or video for a student. However, the tablet could be provided by the school since the number of students who used a tablet is low.

VI. CONCLUSION

Overall, this paper presents the result of technology usage of Thai dance student in Chiang Mai College of Dramatic Arts, Chiang Mai, Thailand. Smartphone takes main role technology device for Thai dance student in Chiang Mai. Consequently, Course designer and software developer in the area of Thai Dance are encouraged to distribute learning content on a smartphone. Therefore, the student is able to access their content during and after their classes. Furthermore, the teacher also able to assign homework and added the learning material in online. This new trend of technology could be used as a guideline for developer and instructor to transfer intangible knowledge to Thai dance student.

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