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Students' perspective of Social Media Role in Technical and Vocational Education and Training (TVET)

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Abstract: In recent years, the smartphone ownership in developing country, for instance in Indonesia, is skyrocketing. However, there is an issue that the role of the smartphone was not in maximum use. Especially in the sophomore group, it is known that the majority of smartphone use was used, instead of learning, for social media. However, some researchers claim that such social media platform can be used for learning. This paper is to report the survey that is to capture the students' perspective on the role of social media in Technical and Vocational Education and Training (TVET). The set of questioners was constructed to collect data on two main aspects. The first aspect was to measure the participants' behaviours related to their social interactions through digital technology, and the second aspect was to gauge the participants' perspectives of social media in TVET, and how they should utilise it in TVET setting. The survey collected 209 responses from sophomore students of two different technical-vocational high schools (TVHS) fields and locations. The survey finding shows that the majority of participants agreed that social media could be used for learning in the TVET. Another outcome proves that conceptually students in the TVHS are ready to use social media platform for learning.

Keywords: Student perspective, social media, TVET, smartphone use

1. Introduction

Recently, the smartphone ownership in developing country, for instance in Indonesia, rises steeply. However, there is an argument that the occasion of the smartphone was not in maximum usage. Especially in the sophomore group, it is known that the majority of smartphone used, instead of learning, for social media like WhatsApp, Facebook, Instagram, and Twitter. However, it can be established as a suitable tool for teaching and learning purposes. There was some research that notably used social media to increase collaborations between teachers and students(Dyson, Vickers, Turtle, Cowan, & Tassone, 2014). Social media could also create innovative and effective learning and teaching tool and boost the students' learning performance. (Sobaih, Moustafa, Ghandforoush, & Khan, 2016), (Sung, Chang, & Liu, 2015).

Technical and Vocational Education and Training (TVET) plays a principal position in national socio-economic development in Southeast Asia, especially in Indonesia. TVET should be able to adjust the capacity more quickly as the pace of change regarding industry products and processes increases. According to the use of social media for learning, it is interesting to measure how such technology could be adopted in TVET. Some research revealed that social media was implemented in general higher education. For instance the awareness of how students leverage social technologies to enhance communication with their lecturers, among themselves, and the course content (Hamid, Waycott, Kurnia, & Chang, 2015). It is also implemeted in nursing and pharmacy (Sinclair, McLoughlin, & Warne, 2015; Ogaji, Okoyeukwu, Wanjiku, Osiro, & Ogutu, 2017).Therefore this state of the art of social media motivated us to do this study.

This paper reports of the survey to capture the perspective of sophomore students of two technical-vocational High schools (TVHS) to the role of social media in TVET. The survey result shows that the participants from both schools believed the social media platform could be used in

TVET setting if such social media could provide necessary features. Hence, it is possible to implement social media in learning in widespread of TVHS.

2. Method

2.1 Research Questions and Significance

The survey conducted in this study designed to gather initial information from participants to gauge the potential students for the adoption of social media in TVET. Therefore, there are two research questions defined as follows.

• What are the motivations of participants in using social media? This research question sought to gather data concerning participants' behaviours related to their social interactions through digital technology.

• Is it effective to use social media in TVET? This research question intended to collect data regarding participants' perspectives of social media in TVET based on the above research question, and how the participants' should utilise the social media in TVET setting.

2.2 Participants

The survey involved 225 sophomore students from two different TVHS. The first one was a TVHS focused on Electrical and Mechanical engineering (coded as TVHS-A), where the general assumption was that this school have limited access to modern infrastructure. The second one was a TVHS concerned on Computer and Software engineering (coded as TVHS-B) located in the industrial region. The total of participants completed the survey were 209 sophomore students.

2.3 Materials

The survey constructed a set of questionnaires. They consist of open-ended and straightforward close-ended questions to collect the following group of data.

Demographic data

It was to collect the required necessary information of participants including age, gender, and smartphone ownership.

Participants' behaviour in using smartphone and Internet

It was to gather the participants' behavour using smartphone and Internet including the most use of the smartphone of social media to communicate with relatives, how many internet quotas spent in a month, and what is social media platform and how many hours spent in a day to uses such social media.

Participants' perspective on the role of social media in TVET

This set of simple open-ended questions was to collect participants experience using social media in education. They asked to give an outlook whether social media can be used in TVET or no, the opinion of kind social media appropriated to be used as learning approach in TVET, and the view of the social media features that can be utilised for learning purposes.

3. Findings

3.1 Demographic data

The first survey question was with regards to collect the smartphone ownership. The result shows that 84% (n=99) of participants in TVHS-A and 98% (n=102) participants of TVHS-B owned a smartphone. Regarding demographic data, the total participants involved in the survey were 31.1%

(65) females and 68.9% (140) males student. With regards to the age of participants, the age range was between 15 and 17 years old.

3.2 Smartphone and Internet use

The further question was to measure the participant's behaviour using a smartphone in their daily activity. As shown in Table 1, the first rank of regular use of smartphone among TVHS-A participants was for communication (M=8.42, SD=2.38) as well as in TVHS-B participants (M=7.76, SD=2.46). Smartphone use for socialisation was the second rank in the TVHS-A participants (M=7.76, SD=2.42). In contrast, participants of TVHS-B utilised smartphone or "Social" (M=6.91, SD=2.47) was the third rank. There was more interesting evidence that TVHS-A participants used a smartphone for "Learning" (SM=7.26, SD=2.54), and it was seated in the third rank. Whereas TVHS-B participants chose smartphone for "Social" (M=7.02, SD=2.72) was in the second rank. In summary, the Mann-Whitney U test results for the use of smartphone and participants daily activity shows a tendency that there were no significant differences on the use of social media for most observed aspects except for the statement of "Communication" (z=-1.0448, p=0.1481), and "Social" (z=-3.2357, p=0.0006).

Table 1

The use of smartphone

	TVHS-A		TVHS-B		Mann-Whitney	
	M	SD	M	SD	z	p
Communication	8.42	2.38	7.76	2.46	-2.5316	0.0057*
Social	7.76	2.42	6.91	2.47	-3.2357	0.0006*
Learning	7.26	2.54	7.02	2.72	-0.7774	0.2185
Audio	5.79	3.06	5.48	2.69	-0.7062	0.2400
Gaming	5.64	2.45	5.67	2.95	-0.1986	0.4213
Video	5.30	2.94	4.95	2.64	-0.8748	0.1908

M=Mean, SD=Standard of Deviation, *p=0.01

With regards to the question of popular social media platform, Table 2 shows the participants response. WhatsApp was a popular application among participants of TVHS-A (M=7.86, SD=3.41) It is seated in the first rank followed by Line (M=7.39, SD=3.27) in the second position. In contrast, the first rank of popular social media platform among participants of TVHS-B was Line (M=7.04, SD=3.64) followed by WhatsApp (M=6.54, SD=3.92) in the second place. For the third and fourth ranks, participants TVHS-A and TVHS-B selected same social media application. Mann-Whitney U test for Line, and Facebook options gave the evidence that there was no significant difference between both groups to rate these social media. In contrast, the similar statistical test gave the result that there was a significant difference between two groups using WhatsApp, Instagram, Twitter, and BBM.

Table 2

Most popular social media platform among participants

	TVHS-A		TVHS-B		Mann-Whitney U	
	M	SD	M	SD	z	p
WhatsApp	7.86	3.41	6.54	3.92	-2.3087	0.0105*
Line	7.39	3.27	7.04	3.64	-0.1373	0.4454
Instagram	6.30	3.63	5.56	3.34	-1.7494	0.0401*
FB	5.31	2.98	4.77	2.94	-1.2878	0.0989
Twitter	2.91	2.68	1.86	1.49	-4.3851	0.0081*
BBM	2.65	3.36	1.27	1.41	-3.8306	0.0001*

M=Mean, SD=Standard of Deviation, *p=0.05

The next set of questions were to measure the monthly internet quota in smartphone expended by participants as shown in Table 3. Most of the participants of TVHS-A (n=71, 67.6 %), as well as participants of TVHS-B (n=67, 64.4 %), consumed 2-5 Giga Bytes (GB) of internet quota for one month. There was surprising data that participants of TVHS-B spent more than 25 GB in one month (n=7, SD=6.7) whereas 4 participants (3.8 %) of TVHS-A selected this option.

Table 4 shows daily hours spent on social media. Most of the participants of TVHS-A (n=49, 46.7 %), as well as participants of TVHS-B (n=46, 44.2 %), spent 2-4 hours a day on social media. However, there were participants of TVHS-A (n=3, 2.9 %) and TVHS-B (n=7, 6.7 %) selected option of More than 6 hours spent on social media a day. It was strange to see the data that there were some participants chose such option. Especially in TVET, more than half of curriculum was practical work in the laboratories. As a student, they should concern in the learning processes.

Table 3

Internet quota spent in a month

	TVHS-A			TVHS-B		
	F	M	Total	F	M	Total
Less Than 2 GB	7	13	20 (19%)	1	10	11 (10.6%)
2-5 GB	34	37	71 (67.6%)	8	59	67 (64.4%)
6-10GB	2	5	7 (6.7%)	0	0	0
11-15GB	1	2	3 (2.9%)	5	9	14 (13.5%)
16-25GB	0	0	0	2	3	5 (4,8%)
More Than 25 GB	1	3	4 (3,8%)	4	3	7 (6,7%)
Total	45	60	105 (100,0%)	20	84	104 (100,0%)

Table 4

Daily hours spent on social media

	TVHS-A			TVHS-B		
	F	M	Total	F	M	Total
Less than 2 Hours	7	10	17 (16.2%)	1	11	12 (11.5%)
2-4 Hours	22	27	49 (46.7%)	13	33	46 (44.2%)
5-6 Hours	15	21	36 (34.3%)	6	33	39 (37.5%)
More than 6 Hours	1	2	3 (2.9%)	0	7	7 (6.7%)
Total	45	60	105 (100.0%)	20	84	104 (100.0%)

3.3 Social media role in TVET

This sub-section described the results of the research question about the participants' perspective on the role of the social media in TVET. The first question was to collect the participants' opinion, can social media be used in TVET?

The result shows that almost all participants of TVHS-A (n=104, 99 %), as well as participants of TVHS-B (n=102, 98.1 %), believed that social media could be maximised its function for delivering vocational learning purposes. The simple open-ended responses were also collected the participants' thought in some positive and negative reasons that can be explained as follows.

> "Social media is a way to communicate with friends or relatives. It is more powerful for daily social interaction than for learning, especially in TVET that learning of engineering should be used the appropriate approach as well as more practice using the real practical work facilities." (Female, TVHS-A).

> "Social media provides a teacher freedom of how to deliver learning content. For example, in a mechanical engineering subject, while in the school teachers should focus to guide students on practical work process, such as producing a mechanical tool by Computer Numerical Code (CNC) machine. One day before, the teacher can give students mechanical drawing, CNC program, and some practical instruction by social media followed by a comprehensive discussion of some unclear instructions. So, wasting time for such purpose in traditional learning could be omitted." (Male, TVHS-B).

After gave the opinion of using social media in TVET, both groups of participants asked their outlook about kind of social media appropriate in TVET. For the TVHS-A, the first rank of social media application that possible in TVET was WhatsApp (M=7.99, SD=3.37). In contrast, WhatsApp ranked in the second option selected by participants of TVHS-B (M=4.06, SD=3.77). However, the participants of TVHS-B chose "Others Social Media" (M=7.81, SD=3.16) as the most suitable applications for learning in TVET. From the responses of the simple open-ended question, there was the fact that participants of TVHS-B have experience using social media in their learning, such as using Edmodo, Slack, and Basecamp.

In the last question, the participants were asked to rate the fourth-scale Likert statements with regards view of social media features that can be utilised in a TVET setting. The results present a tendency that there were significant differences between two group of participants rate to all typical features of social media, i.e., for discussion, evaluation, and direct chatting. It can be assumed that the participants had a similar argument that learning TVET can use social media. They expected to be able to discuss some topics, direct chatting with friend and teacher, and comprehensive discussion about some problem faced by the majority of students.

4. Discussion

This survey aims to examine the students' perspective with regards to the role of social media in TVET by measured the participants' social media experiences, opinions and thoughts regarding educational purposes. The learning option placed in the third rank in the opinion of daily smartphone use. It can be assumed that smartphone as has enormous potency for the learning environment. It is related to some research findings that smartphone was useful for ubiquitous learning. However, the two-last position of smartphone use among respondents was gaming and video. There are two possibilities; the first one is that most of the smartphone owned by participants are not flagship category. Hence, it could not use for gaming in maximum performance. And the second reason why video option was in the last rank is that playing video needs sizeable internal storage or if the video plays from video service like YouTube, and Daily Motion. It needs a good internet speed and ideally with unlimited bandwidth.

For popular social media application, it is a bit different from the data of most popular social media in Indonesia released by some survey agencies. As of April 2017, the first rank of popular social networks is Facebook followed by Instagram in the second place, and Twitter in the third place. The evidence of survey can be analysed that the need for social media in Sophomore is dissimilar with an adult. Adult use Facebook, Instagram, and Twitter for spreading they're taught, such as personal daily life diary, and social and political speaks, etc. Whereas, teenager utilised such media for chatting with friends, sending greeting image and graphical card and also sharing others content like music and video. Hence, social media application like WhatsApp and Line more popular. Especially for Line, the user can share much graphical content and game, while WhatsApp is more common for chatting.

Related to the internet quota spent for a month, it is common that most of the participants selected option "2-5 GB". This scheme of internet quota provided by the cellular operator in a basic reasonable price. A cellular operator dominates in this segment will exist longer in competition. Regarding participants chose "More than 25 GB", there is some cellular operator offer some data packet with the reasonable price especially for a user who can use the service after midnight, with the assumption that data traffic from 24:00 to 6:00 are not used in maximum usage. Hence cellular provider sells a new subscriber identification module (SIM) card bundled with data packet more than 25 GB cheaper than usual.

The last analysis regarding the feature of social media suitable for learning in TVET. Among

participants of TVHS-A and TVHS-B have a similar opinion. For TVET, besides social media can provide a way of discussion, the feature of video sharing is also essential. Therefore, the teacher can distribute their thought in a recorded media. In face to face discussion, students should concern how to understand teacher talk, and sometimes they need to take note. Furthermore, there are some barriers especially because of the environment is intended for practical work. Hence, students could not fully understand the learning instruction without repetition. By adopting the social media, some learning material and preparation of practical work could be recorded. Therefore, students would have the opportunity to watch the recorded learning material before or practical works recurrently. Besides, social media provide a no limit text-based discussion. Therefore students could arrange a question and answer session anytime. In summary, the survey to gauge social media in TVET gave the conclusion that even though most of the learning subjects should be done in practical work facility, it is also possible to spread the learning content through social media platform if they can provide necessary features.

5. Conclusion and Future Work

Social media platform like WhatsApp, Line, Instagram, and Facebook are typical applications used on a smartphone nowadays. However, while it can be used just for texting, such media also give a benefit that the user can share a picture, photograph or even location on the map. After analysing the survey finding, some necessary results indicated that such social media is appropriate to be used as learning approach in TVET which most subjects need the particular practice using practical work facilities. Participants argued that with some rich features of social media like instant sharing message and graphical content, chat and discussion, and also video sharing, the social media can support TVET system in delivering learning material more advanced than the traditional way.

Nonetheless, while achieving the critical point of participants' perspective to the advantage of social media for educational purposes, there are some boundaries considering the survey procedure and scope. A drawback of the study was the practically small sample size. Hence, these survey results could not be generalised to the larger society and perhaps have different conclusion encountered with the finding of related study approach.

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