Conference Paper

Training in Formative Assessment and Use of Mobile Applications for High School Teachers as a Community Service Activity of the Department of Medical Education, Faculty of Medicine, Universitas Hasanuddin

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ABSTRACT

The digital revolution had transformed human life in many ways, including the way people learn. It affected students who are very dependent on mobile devices, social media, and mobile applications. These transformations demanded teachers to also transform. Teachers needed to embrace the technology and integrate it into their learning strategies. The Department of Medical Education of the Faculty of Medicine of Universitas Hasanuddin (FMUH) received a grant for a community service project from the faculty. This study describes training aimed at equipping high school teachers with the capability of using several mobile applications, including Google Forms, Quizizz, and Anki flashcards. The FMUH yearly intake was almost 300 students per year which were mostly high school fresh graduates in Indonesia. As the teachers of our future students, we considered the need for technology use in promoting teachers' competence. Therefore, as our community service project, we held a one-day training for high school teachers which focused on the use of various mobile applications in formative assessment. At the end of our training, we elicited our participants' evaluation using a Likert-scale questionnaire and open-ended questions. The responses were analyzed using statistical and descriptive analysis. This training involved 79 teachers and the evaluation form was filled out by 55 participants. The analysis showed that all respondents agreed that the training was able to increase their competence in using mobile applications for formative assessment. They pointed out the importance of this training in increasing the quality of education. This training was considered very useful in increasing high school teachers' competence in formative assessment as well as in digital learning. This type of training was proposed to be frequently conducted.

Keywords: Digital learning, high-school teachers, community outreach

Introduction

The digital revolution has transformed human life in many ways (Sharma, 2017; Lonka, 2015). It also transformed the way people learn. In education, it affects students who nowadays are digital natives (Sharma, 2017; Mustapha & Kashefian-Naeeini, 2017). They are very dependent on mobile devices, social media, and mobile applications. They have very wide, if not unlimited, access to various learning resources (Sharma, 2017; Mustapha & Kashefian-Naeeini, 2017).

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These transformed students demand teachers to also transform (Sharma, 2017; Amin, 2016). Teachers, as a facilitator of learning, are the commanders of the learning process (Lonka, 2015; Amin, 2016). They are responsible to design and implement learning strategies that can facilitate students' learning (Mustapha & Kashefian-Naeeini, 2017; Amin, 2016). Therefore, teachers need to embrace the technology and integrate it into their learning strategies (Sharma, 2017; Mustapha & Kashefian-Naeeini, 2017). This then requires the teachers to have competence in the use of technology in facilitating students' learning (Amin, 2016; Kato et al., 2016).

In August 2019, the Department of Medical Education of the Faculty of Medicine of Universitas Hasanuddin (FMUH) received a grant for a community service project from the faculty. The FMUH is one of the medical education institutions in Indonesia with an average intake of 300 students per year. The inputs are mostly high school fresh graduates in Indonesia. Since 2018 the FMUH has been implementing blended learning with several mobile strategies involved, including the use of Google Forms, Quizizz, and Anki flashcards. These are free applications widely used in education for their ability to promote self-learning, provide immediate feedback, and increase motivation (Zhao, 2019; Altiner, 2019).

As the teachers of our future students, we considered the need for technology use in promoting teachers' competence. Therefore, as our community service project, we held a one-day training for high school teachers. This training focused on the use of various mobile applications in formative assessment. This article describes our training activities and our participants' evaluation of our training.

Material and Methods

The training was announced using electronic flyers that were spread through social media. The registration was done online using Google Forms. No registration fee was imposed on the participants. No more than 30 participants were eligible for each training session; the "first registered first served" system was applied. Given the number of participants registered in this training, the training was held in three seasons on December 18, 19, and 20, 2019.

Our training was aimed at equipping high school teachers with the capability of using several mobile applications, including Google Forms, Quizizz, and Anki flashcards.

As an opening, we encouraged the participants to re-think formative assessment, especially regarding its benefits and how it can be used to foster learning. After that, we performed handson learning with those three mobile applications. The training was mostly interactive, and practice based. We provided the participants with step-by-step videos of how to use Google Forms and Quizizz.

At the end of our training, we asked the participant's consent to be our respondent in evaluating our training. We elicited our participants' evaluation of using Google Forms. The evaluation tool consists of a Likert-scale questionnaire and open-ended questions.

The responses to the Likert-scale questionnaire were analyzed using descriptive analysis. We performed thematic analysis on the qualitative responses.

Results and Discussion

This training involved 79 teachers from various regions in South Sulawesi. The evaluation form was filled out by 55 participants. The results for each statement are presented in Table 1.

The analysis of the Likert-scale questionnaire showed that all respondents agreed that the training was able to increase their competence in using mobile applications for formative assessment. They also agreed that the instructors were motivated and helpful and that the presentations were clear and organized. Only 1.82% of the respondents stated disagreement with the time management and the arrangement of the training materials.

Table 1. Responses of Elkert Scale evaluation form	T. (. 1)	Δ	D'	T 11
Statements	lotally	Agree	Disagree	lotally
	agree (%)	(%)	(%)	disagree
				(%)
The training was able to increase my com-	63,64	36,36	0	0
petence in formative assessment and digital learning				
The instructor presented the topic very well	72,73	27,27	0	0
The presentation and the explanation were	50,91	49,09	0	0
cleared and well organized				
The instructor increased participant's inter-	78,18	21,82	0	0
est				
The instructor used the time effectively	45,45	52,73	1,82	0
The instructors were able to facilitate par- ticipants difficulties	76,36	23,64	0	0
The objectives of the training were well explained	78,18	21,82	0	0
The training materials were well organized	69,09	29,09	1,82	0
The participants could keep up with the training topics	58,18	41,82	0	0

Table 1. Responses of Likert-scale evaluation form

The qualitative responses showed that the participants appreciated the training, and they considered the training as able to increase their competence in formative assessment as well as in using mobile applications. They pointed out the importance of this training in increasing the quality of education and valued the instructors who they considered as energetic, inspiring, and friendly. They proposed that this type of training should be conducted frequently. They also suggested that this training should be given over more than one day with more facilitators to help in the practice session. Examples of some qualitative statements are presented in Table 2.

	Table 2	. Samples	s of qua	litative	responses
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Samples of qualitative responses
Overall was very good, unfortunately, it was too short
Very inspiring and very much accommodated our need as teachers
This training was good for 21st-century teachers, by knowing various free learning applica-
tions, especially assessment
Very interesting, Innovated
This training enlightened us in the use of IT in the learning process

In December 2019, we conducted a one-day training for high school teachers in mobile applications that can be used in formative assessment in three sessions. After all the sessions, we elicited the participants' evaluation of our training.

The results showed that this type of training is necessary for high school teachers (Lonka, 2015). By providing this type of training, we can provide future medical students with a highquality learning process that implements formative assessment and facilitates students' preferences in digital learning. Ultimately, this process can help high schools produce students who are highly motivated and aware of the use of mobile applications in learning.

Most of the respondents, in the qualitative analysis, requested that more time be allocated for the training and more facilitators be involved in the practice sessions. This is because not all of the participants had the same skills in using mobile applications. The need for a good-quality network for the training was also addressed by the respondents (Kato et al., 2016).

Our participants' evaluation revealed the need for training to enhance teacher competence in accommodating the digital natives. Hence, we will incorporate this type of training into our training programs in the next few years. We will follow up on the use of mobile apps by our participants and try to explore their experience using the apps.

Conclusion

Training in the use of mobile applications for high school teachers was found by the participants as very useful in increasing their competence in formative assessment as well as in digital learning. This type of training is proposed to be frequently conducted.

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