Investigating EFL Teachers' Barriers of Using Internet Application at University Level

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This study examines perceived barriers of using internet application in higher education level. Quantitative data were collected by using questionnaires. A total of 16 participants assigned to teach English were randomly selected from 3 faculties using both simple random and purposive sampling procedures. Data were analyzed both descriptively and statistically and were presented in tables and percentages. Microsoft excel was used in the descriptive statistics. The study found several barriers of using internet application for teaching and learning which include: lack of personal's ICT competency, lack of consistent technical support, lack of training on how to use internet application for teaching and learning, and poor internet connectivity. This study recommends to the management of the institution to facilitate and support the teachers actively with many training activities to improve the academic performance of the teachers so that can fulfill the millennial students' learning needs.

Keywords: teachers' barriers, internet application, classroom

INTRODUCTION

We live now in the era of the industrial revolution 4.0. This era is indicated by the digitization in various sectors of life including education Robandi et al. (2019). The industrial revolution (IR) 4.0 in education expresses the use of internet in a classroom context. This phenomenon creates a new term as called education 4.0 (Fisk, 2017; Hussin, 2018). Education 4.0 is the replay of the needs in IR 4.0 in education sector. Moreover, it fulfills the needs of millennial students as digital natives in learning. It is explained as a new insight of learning which equips learners to gain not only skills and knowledge but also to identify the source to learn these skills and knowledge (Fisk, 2017). The learning promotes a wide experience and freely to explore students' competence by their own way. Peers become very prominent in their learning. They can share together and learn from each other, while the role of facilitators is played by the teachers in their learning. In addition, technology used in integration with traditional teaching impacted positively on the education experience of the learner. The use of technology ensured that learners could work independently, solve problems, increased communication and collaboration and have greater access to information (Joseph, 2012).

Education 4.0 creates nine trends of students in learning (Hussin, 2018). First, learning can be occurred anytime and anywhere. Students are able to access by using internet the materials even the lecturing at cafe, at mall, at home everywhere. Second, learning will be personalized to individual students. Giving feedback of students' work can be done individually as the boosting

to be better in academic. Third, students have a choice in determining how they want to learn. Although the institutions in charge of the curriculum have already assigned the learning outcomes of a course, students are still free to choose the learning tools or techniques that they prefer. Blended learning, flipped classroom Amiryousefi et al. (2018) and BYOD (Bring Your Own Device) approach Welsh et al. (2018) can be implied to enable students to be creative in their learning .

Fourth, students prefer to be exposed to more project-based learning. Learning by doing is suitable to students in completing their works. By involving in the projects, they are trained to have good organizational experience, collaborative and time management skills which are useful in their future academic careers. Fifth, students can be exposed to be more hands-on learning through field experience such as internships, mentoring projects and collaborative projects. The advancement of the technology enables the learning effectively, thus making more space and experience for acquiring skills that involve students' knowledge and face-to-face interaction. Sixth, students are able to interpret the issues or a phenomenon based on their major. Seventh, students can be assessed differently. Students' factual knowledge can be assessed during the learning process, while the application of the knowledge can be tested when they are working on their projects in the field. Eighth, students' needs can be considered in designing and updating the topic given. Their inputs can be implemented by the curriculum designers to evaluate and maintain curriculum up-to- date and usefulness. Lastly, students will become more independent in their own learning, thus facilitate students to have more time in autonomous learning by exploring lot on internet application. The nine trends of Education 4.0 give wide opportunities of learning to be independent learners and to explore what they want to be successful learners with ICT integration in teaching and learning.

The execution of ICT integration in teaching and learning is a complex process which sometimes encounters a number of difficulties. These difficulties are familiarized as barriers (Bingimlas, 2009). A barrier is defined as a condition which is hard to imply ICT integration in day-to-day teaching and learning process because of particular factors. In the current study the difficulties found in integrating internet application in daily EFL teaching and learning process in university level.

Several studies classify the barriers of using ICT integration in a classroom context. Bingimlas (2009) asserts the barriers into two classifications: extrinsic and intrinsic barriers. The extrinsic barriers are difficulties in collaborating internet application include time, support, resources and training. While intrinsic barriers include attitudes, beliefs, practices, and resistance. Another category of barriers is teacher-level barriers and school-level barriers (Bingimlas, 2009). Teacher-level barriers related to the individual consist of lack of time, lack of confidence, and resistance to change. Meanwhile, school-level or institution barriers include lack of effective training in solving technical problems and lack of access to resources. However, this study focused on the teacher-level and school-level barriers

because the aim of this study is to investigate teachers' barriers in using internet application in classroom context. In addition, the data collected are used as the fundamental reason to conduct workshop for lecturers in improving professional skill in teaching and for institutions to support actively learning facilities on dealing with autonomous learning readiness.

A number of studies have found out the barriers of ICT integration included internet in classroom context. Fosu (2017) identified ICT Integration to day -to-day teaching of mathematics applicable. By using survey to 116 high school mathematics teachers in the former Transkei Homelands, the willingness and readiness of the teachers to integrate technology in their day-to-day teaching were affected by the lack of technological skills. In addition, the major reasons why the teachers are not using technology to engage the students although most students have access to internet are they are lacking the technology knowledge.

Mosha et al. (2014) studied on barriers of using Internet Resources in Mzumbe University in Morogoro Region in Tanzania. From 50 academic staff and students of Management, they discovered computer viruses limit access to e-resources is the higher problem faced (74%) instead of not up to date computer software (66%), bad experience in using e-resources (66%), problem of internet connectivity(60%), lack of adequate training on how to use e-resources (56%), limited access to PCs (56%), slowness of the internet (52%), lack of consistent technical support (48%), ease of using print resources compared to e-resources (48%).

Those studies show the barriers of using technology in secondary level of education were found. What about in higher education level which technology-supported learning environment well applied can we find out some barriers on the implementation of ICT in the classroom? Do English teachers well use ICT in teaching and learning process? This current study tempts to investigate the barriers of English teachers in using internet application as teaching media at university level.
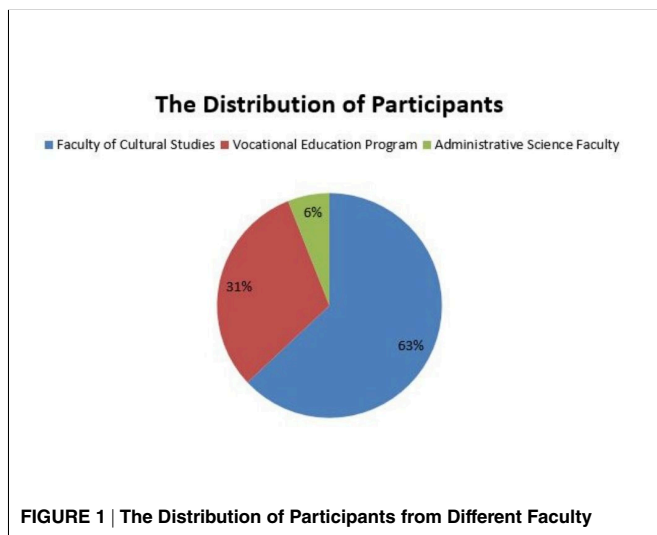
METHODS

A descriptive quantitative study was employed to obtain quantitative and qualitative data which to investigate the EFL teachers' barriers occurred on using internet application in classroom context. A validated questionnaire was developed to collect the data. The data were collected from 16 teachers of 3 faculties; Faculty of Cultural Studies, Vocational Education Program, and Administrative Science Faculty at Universitas Brawijaya who are assigned to teach English and categorizing as young teachers (30 years old – 40 years old) and mostly their teaching experience was more than 6 years.

The questionnaire was developed and validated by the expert of education technology. It composed of two parts. The first part collects information related to demographic questions which are digging personal identity and teaching experience. The second part gathers data about the use of internet applica-
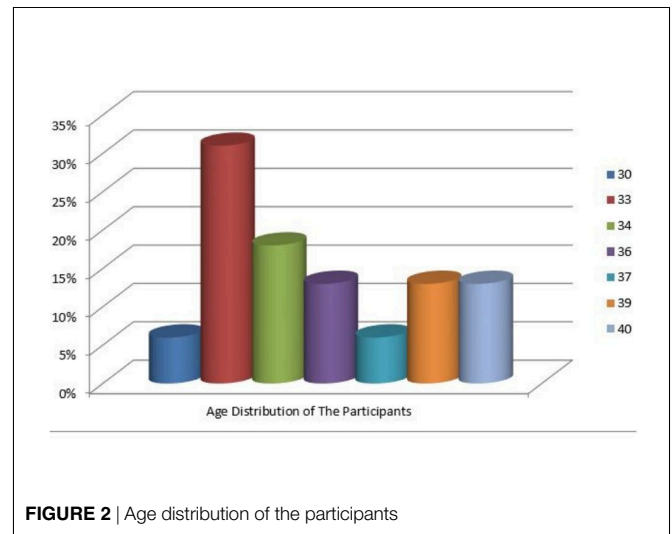
tion and the barriers occurred in teaching and learning process. The instrument consists of 12 items comprises into two kinds of questions. The first type was 5 closed-ended questions using a four-Likert scale (never, sometimes, usually, and always) and the second was open-ended questions to figure out the internet application use and problem occurred. The instrument was distributed into every representative of faculty through internet application (Whatsapp) and email. The data taken from the questionnaire was statistically computed to find out the percentage of each statement and then was interpreted descriptively.
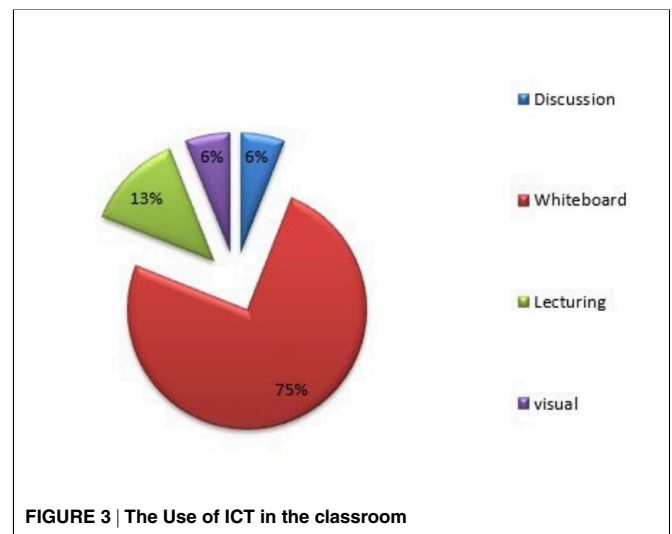
RESULTS AND DISCUSSION

As the research objective, this study was aimed to categorize teachers' problems in using internet application in higher education level. Quantitative data were gained from 16 participants representing 3 faculties in the university. The distribution of the participants by faculty was 63% of Faculty of Cultural Studies, 31% Vocational Education Program, and 6% of Administrative Science faculty (See **Figure 1**).

FIGURE 2 | Age distribution of the participants

Figure 3 shows the use of conventional media and teaching strategies by the EFL teachers in teaching experience. Most of the participants (75%) use a whiteboard actively as a teaching aid in teaching process instead of using visual (6%). While the teaching strategies applied, the data show that conventional strategies still exist in teaching experience.

FIGURE 1 | The Distribution of Participants from Different Faculty

FIGURE 3 | The Use of ICT in the classroom

The data were collected using questionnaires comprised work experience of the teachers, teaching experience of the teachers, and ICT use experience of the teachers. The most participants are 33-year-old teachers (31%). It is proven by the graph that 6% of the participants were 30 years of age, 19% of the participants were 33, 13% of the participants were 36, 6% of 37, 13% of 39, and lastly 13% of 40 years of age. This implies that the majority of the participants were 33 (see **Figure 2**).

Figure 4 indicates the lack of ICT use experience among the teachers. The data show that most of the participants (94%) use slide to deliver the teaching materials rather than combining with other internet applications like Youtube, Web-based application, and internet application (mostly 6%). This indicates that the EFL teachers have been familiar with Power Point (PPT), so they preferred to have PPT instead internet-based media of as the media to use. Regarding the barriers, the data revealed that 8 participants stated that the lack of supporting facilities and infrastructure was the highest problem of the use of internet-based media. Then the second highest problem is the lack of training in the use of ICT in teaching and learning process (4 participants).

Furthermore, 2 participants stated that lack of ICT competency made them difficult in the use of internet-based media. The remains argued that lack of motivation and the overload of demanded task make them hard to improve the ICT skills. As an effort to help participants resolve these barriers, 100 % of the participants (16) agreed that training on the use of internet application needs to be held as an effort to improve the professionalism of teachers. The training to improve their abilities related to the use of internet application was an expected activity to resolve the barriers in using internet application in classroom context.
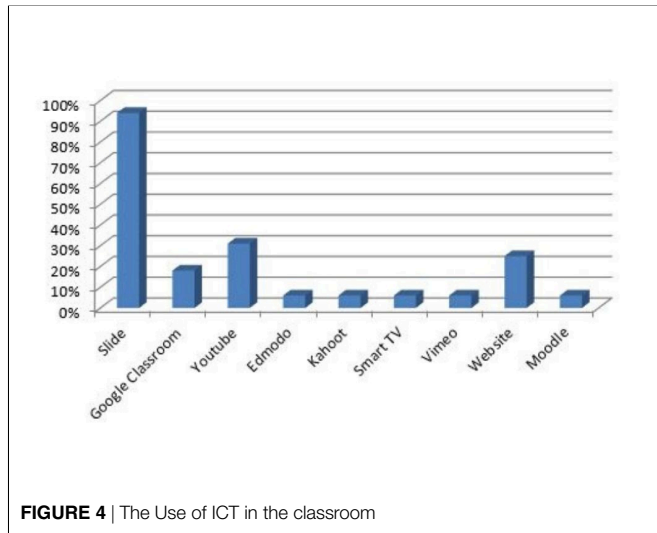

FIGURE 4 | The Use of ICT in the classroom

The data figure out the barriers of English teachers are the lack of supporting and infrastructure, the lack of training in the use of ICT in teaching and learning process, the lack of ICT competency, the lack of motivation, and the overload of demanded task. These barriers can be categorized as shown in **Table 1**. The data indicate that the teachers have good competency in using internet, but they still find barriers of integrating internet application in their classroom because of lack of infrastructure, lack of training, and time constraint.

TABLE 1 | The Category of Barriers

No	The Barriers of current study	Barriers Categories
1.	The lack of supporting facilities and infrastructure	School-level
2.	The lack of training in the use of ICT in teaching and learning process	School-level
3.	The lack of ICT competency	Teacher-level
4.	The lack of motivation	Teacher-level
5.	The overload of demanded task	School-level

The result reveals that the teachers' barriers of using internet application in this current study are the lack of supporting facilities and infrastructure, the lack of training in the use of

ICT in teaching and learning process, the lack of ICT competency, the lack of motivation, and the overload of demanded task. Regarding barrier related to facilities, this study is similar to Coyne et al. (2015) who find in their research that the first main area of perceived barrier covers internet access and broadband speed.

The data show the majority barriers found in this study are school-level barriers. These findings are opposite with two previous studies, Fosu (2017) and Özdemir (2017). They found the biggest barriers of ICT integration in the classroom context was the lack of ICT knowledge or skill which belongs to teacher-level barriers, while the recent study investigated the school-level barriers occurred in university teachers. In this productive age (30-40), the use of internet application by teachers is one of prominent needs of teaching and learning like adapting the English materials, downloading the video, uploading some tasks especially in this digital era. Indeed, using internet application has already become daily needs of the teachers, but the less accessibility cause a complex barrier that discourages teachers from integrating internet application as new technology into education.

The second barrier investigated in the current study is the lack of training in using internet application in classroom environment. This finding is line with Mosha et al. (2014) that the need of training of the use of internet resources. According to Bingimlas (2009), the issue of training is certainly complex as a consideration to enhance the professionalism of teacher in teaching especially using ICT integration. As the result, the teachers prefer to have training on the use of internet application needs to be held as an effort to improve the ICT integration knowledge and skills. In addition, many teachers are eager to have new experience in their teaching, but they have limitation of time because of the overload duties make them hard to integrate the internet into day-to-day teaching.

CONCLUSION

The result of this study indicates that English teachers have a strong desire for the integration of ICT into classroom context as shown in their suggestion to have training in using internet application in classroom context, but they encountered many barriers to do it. The major barriers were lack of facilities or infrastructure, training and time constraint. Since school-level barriers have been found to be critical components for ICT integration in higher level education, ICT competency need to be enhanced by teachers. The presence of all teacher competencies increases the perceived of excellent integration of ICT in learning and teaching opportunities. In addition, it is recommended to the institution to provide sufficient hardware of ICT use to reach high quality of education. This result cannot be overgeneralized to English lecturers since it just took a few participants, so for further researchers who have the same interest can conduct the research to flesh out the present data.

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