Teachers assistance of Google for education in supporting education 4.0

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ABSTRACT

Teachers in the education era 4.0 are asked to be able to do learning that is not limited to space and is full of learning resources electronically and connected to the internet. However, today it is no longer a secret that students who are young learners master technology more than adults who still apply traditional learning methods that are currently deemed less effective. This community service program is carried out with the aim of increasing the ability of teachers to use Google for Education in facing education 4.0 at MTs Muhammadiyah 1 Malang city partner schools where mastery of the use of educational applications can be implemented as a learning support medium. The implementation of this internal community service program uses workshop and mentoring methods. The place of program implementation is at MTs Muhammadiyah 1 Malang city. Meanwhile, the number of participants was six English teachers. The workshop was held for one day and was followed by mentoring for three months to produce a Google for Education based course material design. The result of this internal community service is the production of a mentoring module to improve teacher competence in utilizing the Google application as a medium for teaching English. Through this module teachers can apply their skills in optimally improving student learning outcomes. Based on the data and discussion it can be concluded that the community service has been successfully implemented.

Pendampingan guru terkait Google for education dalam mendukung pendidikan 4.0. Guru di era pendidikan 4.0 dituntut mampu melakukan pembelajaran yang tidak terbatas ruang dan sarat sumber belajar secara elektronik dan terkoneksi dengan internet. Namun, saat ini bukan rahasia lagi bahwa pelajar yang masih muda lebih menguasai teknologi daripada orang dewasa yang masih menerapkan metode pembelajaran tradisional yang saat ini dirasa kurang efektif. Program pengabdian masyarakat ini dilaksanakan dengan tujuan untuk meningkatkan kemampuan guru dalam menggunakan Google for Education dalam menghadapi pendidikan 4.0 di sekolah mitra MTs Muhammadiyah 1 Malang kota dimana penguasaan penggunaan aplikasi pendidikan dapat dilaksanakan sebagai media penunjang pembelajaran. Pelaksanaan program pengabdian masyarakat internal ini menggunakan metode workshop dan pendampingan. Tempat pelaksanaan program di MTs Muhammadiyah 1 kota Malang. Sementara itu, jumlah peserta enam guru bahasa Inggris. Workshop berlangsung selama satu hari dan dilanjutkan dengan pendampingan selama tiga bulan untuk menghasilkan desain materi kursus berbasis Google for Education. Hasil pengabdian masyarakat internal ini adalah dihasilkannya modul pendampingan untuk meningkatkan kompetensi guru dalam memanfaatkan aplikasi Google sebagai media pengajaran bahasa Inggris. Melalui modul ini guru dapat menerapkan keterampilannya dalam meningkatkan hasil belajar siswa secara optimal. Berdasarkan data dan pembahasan dapat disimpulkan bahwa pengabdian kepada masyarakat telah berhasil dilaksanakan.*

INTRODUCTION

In the era of education 4.0, it is hoped that all elements of learning will take place based on advances in information technology which are seen as providing convenience in administering modern and quality education (Haleem et al., 2022; Lase, 2019; Lawrence et al., 2019; Roro et al., 2021). The Ministry of Education and Culture in 2020 has developed a Merdeka Belajar-Kampus Merdeka (Learning Freedom- Campus Freedom) policy which aims to improve the competence of graduates' soft skills and hard skills, so that they are better prepared for the needs of the times. This program policy is implemented using a learning approach 4.0 that applies the digital era learning pattern and covers all aspects of learning activities which include eight main student activities, namely: Student Exchange, Internships/Work Practices, Teaching Assistance in schools, Research / Research, Humanitarian Projects, Activities Entrepreneurship, Independent Studies / Projects, Thematic Real Work Lectures (Sampelolo et al., 2022).

Teachers in the Education 4.0 era are asked to be able to do learning that is not limited to space and is full of learning resources electronically and connected to the internet, assisted by interactive and attractive media for millennial students (Haouas & Bouakaz, 2018). In this case, education also includes students where students are asked to be able to apply the Education 4.0 era learning method where the use of digital technology is the basis of the learning method itself (Barreiro, 2022; Himmetoglu et al., 2021; Idayatun, 2020). However, nowadays it is no longer a secret that students who are young learners master technology more than adults who still apply traditional learning methods that are currently deemed less effective.

In this Education 4.0 learning pattern, gadgets hold the key as the main media in all processes where now gadgets are no longer a luxury item, and are owned by almost everyone with uses that cover every time (Sudiran, 2019b, 2019a). However, gadgets have challenges separate in its use. The use of gadgets, which was previously seen as taboo in learning because it was seen as disrupting the learning process and cognitive processes, is now seen as the main medium in millennial era learning. Several educational services have used gadgets such as smart-phones as their main medium in providing paid and unpaid education services (Setiani, 2020; Siregar & Yaswinda, 2022; Surat et al., 2021; Zain et al., 2022). Even though it is considered cost-effective, paid applications are still an obstacle for the middle to lower class both in terms of financing and knowledge of banking transactions. Therefore, the choice of unpaid applications is an effective solution for learning 4.0.

Google as the largest website service has provided various free interactive online learning training services which have a product in the form of Google for Education which is a package of online application tools to support the learning process with two levels of training and certification (paid) as a form of completion of training. Google for education consists of 55 lessons carried out in an estimated time of 775 minutes (13 hours).

The teachers and MTs Muhammadiyah 1 Malang school as community service partners have various problems in the implementation of education 4.0 which urges the implementation of Google for Educator training, these problems can be formulated in two main problems i.e.: (1) The school is still experiencing difficulties in implementing education 4.0, in this case it is a technical problem in the form of a lack of technological facilities that can be used to support interactive learning based on sustainable and individual technology. (2) The school does not yet know about the Google for Education training and needs assistance in conducting the training.

The main target of this internal community service program is the achievement of education 4.0 at MTs Muhammadiyah 1 Malang City as a community service partner where mastery of the use of educational applications can be implemented as a learning support medium. Education 4.0 is a learning process where graduates are able to understand and provide solutions to challenges that arise in the current era which is the era of the industrial revolution 4.0. The industrial revolution 4.0 is marked by the birth of Digital Technology in all fields such as robotics, artificial intelligence (Artificial Intelligent), Big Data, Internet of Things (IoT), and 3D printing. The industrial revolution 4.0 as it is today, the learning process can be carried out by making use of various platforms easily. The industrial revolution 4.0 has advantages and challenges that are not the same as the previous industrial revolution. The emergence of the Industrial Revolution 4.0 was marked by the presence of technology and digital media that provided many benefits to human life. The Industrial Revolution 4.0 that is currently sweeping the world is formed from the Digital Revolution, which represents a new method in which technology becomes an important part of society.

There are several community service programs that have been carried out previously related to the theme of independent learning, for example assistance in the preparation and implementation of a prototype curriculum (Chamisijatin, Zaenab, et al., 2023), projects for strengthening the profile of Pancasila students in the implementation of the independent learning curriculum (Chamisijatin, Pantiwati, et al., 2023), improving the quality of education units through the preparation of three main instruments (Chamisijatin, Pantiwati, et al., 2022), strengthening character education by implementing literacy in learning as an effort to innovate learning in independent learning (Chamisijatin, Permana, et al., 2022), strengthening literacy-based character education through lesson study assistance (Chamisijatin & Zaenab, 2022), and independent learning as a necessity in the era of the industrial revolution 4.0 (Harpis et al., 2023). However, none has focused on learning English.

In Indonesia, many English teachers are able to use Google Classroom to facilitate summative and formative tests (Prasetya, 2022). Apart from helping teachers make assessments easy, Google Classroom can also be used by teachers to

teach online speaking ability, and it helps teachers make class activities more fun (Munandar et al., 2022). Other researchers reveal that Google Meet is a simple application used by teachers to teach their students in a teaching process (Putri et al., 2022). They have conducted community service program and proved that Google Services including Google Presentation, YouTube, Hangouts, Gmail, and Google Drive improve the effectiveness of the educational process in English language teaching. (Kosharna et al., 2022). For this reason, many English teachers have conducted community service program by using the application of Google. However, they focus on the use of Google Classroom, Google Meet, and Google Services.

Meanwhile, this community service program is undertaken by implementing Google for Education. This community service program is very important to be conducted because little attention has been given to the Google for Education. The implementation of the Google for Education helps English teachers at MTs Muhammadiyah 1 Malang city as a school partner improve their skills in language teaching. The improvement of the teachers' skills at teaching English enables students to enhance their learning outcome.

This community service program is carried out with the aim of increasing the ability of teachers to use Google for Education in facing education 4.0 at MTs Muhammadiyah 1 Malang city partner schools where mastery of the use of educational applications can be implemented as a learning support medium. This community service program is in line with the Sustainable Development Goals point 4 which reads "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and includes a series of related targets. The importance of promoting education for sustainable development and actively integrating sustainable development into education is also emphasized in paragraph 233 of Future We Want, outcome of the United Nations Conference on Sustainable Development, Rio + 20, in 2012 (Situmeang et al., 2021).

In line with that, this community service program provides a real and theoretical contribution that using the system of classification described above, global education has entered into its Education 4.0 (circa 2015 to present). As a result of the massive and ubiquitous changes occurring in the political, economic, social, technological and environmental spheres, the fourth wave of development is characterised by several intertwined factors, including diversity, equity, inclusion, complexity, uncertainty, risk and hyper-connectivity. As such, creative learning, lifelong learning, inter- or transdisciplinary learning and personalised student-centred learning based on humanistic values lie at the heart of Education 4.0. Because these spheres are interconnected and interdependent due to globalisation, what happens in one sphere usually impacts on the other spheres. As such, education at all levels, as with anything else, must be contextualised and adapted to the environment in which it operates. Education 4.0 cannot be isolated from changes occurring around the world. In its fourth wave, education, at all levels, needs to be more flexible and dynamic to respond to emergencies (for example, the COVID-19 pandemic), where distance education has been a "forced choice" rather than a pedagogical option (Blessinger et al., 2022).

METHOD

This community service program was carried out in MTs Muhammadiyah 1 Malang city, Jl. Baiduri Sepah No.27, Tlogomas, Lowokwaru, Malang, East Java 65144 (Figure 1).

Figure 1. The location of MTs Muhammadiyah 1 Malang city

In carrying out this internal community service program, the service provider carries out several activities as an effort to identify how to participant learn which consists of teachers who teach English at MTs Muhammadiyah 1 Malang city. The identification activity was carried out through the process of interviewing the participants about how they carried out the teaching and learning process.

After identifying how the participants learn, the service implementer carries out the internal community service process with two main activities, namely: (1). Introduction to Google for Education. Introduction to Google for education to the accompaniment participants. The introduction was carried out by direct counselling to the school and testing the material. The introduction activity was carried out for one day. In the introduction activity, participants are given a module which is the material to be studied. (2). Google for Education training for teachers. One-day online mentoring is carried out as the first step in the training carried out by community service partners until all levels of training are completed. This activity was carried out through mentoring for two times to understand the ongoing needs of community service partners.

The success of this Community Service program is measured qualitatively and quantitatively. Activities are considered successful if the product has been produced, the percentage of involvement and activity reaches ≥75%(Hindun et al., 2019; Hudha & Husamah, 2019; Husamah et al., 2018, 2022) and measured using pretest-posttest (Nurwidodo et al., 2022).

RESULTS AND DISCUSSION

The result of this Community Service is the achievement of education 4.0 at MTs Muhammadiyah 1 Malang city as a community service partner where mastery of the use of educational applications can be used as a learning support medium. As a result, a community service module has been created on Google for Education training procedures that has been distributed to participants as a form of independent training that promotes health during the Covid-19 pandemic (Figure 2).
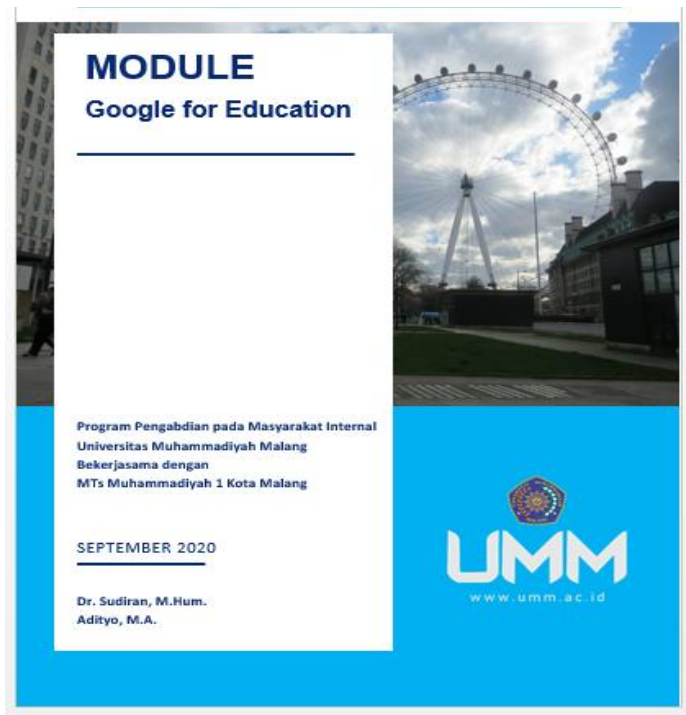

Figure 2. Module: Google for Education

Figure 2 explains module of Google for Education. It describes the importance of Google for education. It is an educational medium that integrates technology in the teaching and learning process. The use of Google for education eases the task of teachers as educators in delivering subject matter to students. Learning through Google for education improves students' learning skills, using media technology and life skills. Therefore, the use of Google for education in the teaching and learning process is very important and useful.

In this 4.0 learning pattern, gadgets play an important role in education as a learning medium where currently gadgets have been used by many people. However, gadgets have their own challenges in their use. The use of gadgets is currently seen as the main medium of learning in millennial era. Several educational services have utilized gadgets such as smart-phones as the main tool in providing paid or unpaid educational services. Paid applications are still an obstacle to the middle to lower class both in terms of financing and transaction knowledge. Therefore, the choice of unpaid applications is an effective solution for learning 4.0.

The product in the form of a module has been successfully created and used. The module mentioned above has been used as learning material during the process of the internal community service program. The module contains content

which is the training material. The training material consists of the introduction of the Google for education program, the use of Google for education as a learning medium, the application of Google for education as a problem solver.

The implementation of the internal community service program has resulted in several points that can be reported as follows: (1) MTs Muhammadiyah 1 Malang City internet laboratory (Figure 3). Internal community service program activities in 2020 were held at MTS Muhammadiyah 1 Malang City, East Java. The service activities at MTs Muhammadiyah 1 Malang City are equipped with computer laboratory facilities. In the computer laboratory there are a number of 40 computers that are ready to be used for the implementation of learning. Each computer has an internet connection with a bandwidth that matches the number of users in the lab. Besides being used for training, computer laboratories are also used for computer-based written exams. (2) Number of Teachers / Participants (Figure 4). Participants in internal community service activities in 2020 were attended by seven teachers with educational backgrounds as follows: four teachers are English teachers, two teachers are Indonesian language teachers, and one teacher is Arabic language teacher. The percentage of participant participation is 100%. (3) Participant's Educational Background. Participants in internal community service activities have different educational backgrounds. They consist of four English teachers with undergraduate academic qualifications of English education, two Indonesian language teachers with undergraduate academic qualifications of Indonesian language education, and one Arabic teacher with undergraduate academic qualifications of Arabic. Of the seven teachers, there is one teacher who has an academic qualification of a master of education. Meanwhile, six other teachers have undergraduate academic qualifications.

Figure 3. Workshop on the Google for Education

Figure 4. Opening Ceremony of The Workshop on the Google for Education

Participants in community service activities generally have diverse teaching experiences, namely more than five years. Among them there is one person who already has an educator certificate. To ensure the success of the community service program, the team conducted a pretest and posttest, the results of which are presented in Table 1.

Table 1. Pretest and posttest of the workshop on Google for education

No.	Participants	Pretest	Treatment	Posttest
1.	AW	58		75
2.	Lis	60		73
3.	H I	56		77
4.	S H	55	Google for Education	69
5.	U H	57		71
6.	A W	53		70
7.	A N A	59		74
Average		56,9		72,7

Based on Table 1, it can be seen that the material related to Google for Education can be understood by all participants. There was an increase of 15.8 points or an average of 2.3 per person, from 56.9 to 72.7.

This Community Service Program was carried out at MTs Muhammadiyah 1 Malang City. Google for Education training was held on Saturday, April 25, 2020 and lasted for one day. Activities start from 08.00 to 13.00. The event was started with an opening remarks in which there was a speech from the Principal, then continued with the introduction of the Community Service team, namely Dr. Sudiran, M.Hum as Team Leader, and Adityo, MA.

At the end of the training, the Head of MTs Muhammadiyah 1 Malang City gave a speech at the official closing ceremony. After completing the training, the next activity is assistance from the Community Service team to the participants for two months. This activity aims to provide hands-on experience for participants to practice the material they received during the training.

The advancement of information technology is a challenge for educators in the learning process (Crossley & McNamara, 2016; Kaminskienė et al., 2022; Manongga et al., 2021). If a teacher only explains about knowledge, it is not uncommon for our explanations to be incomplete with Google's all-in-one explanation (Carroll et al., 2022; de Jong et al., 2019; Lapitan et al., 2021; Mupa & Chinooneka, 2015). In addition, teachers need to ensure that their students do not only get aspects of knowledge but also attitudes and skills that can become provisions for facing a future that may be different from the current era. For this reason, teachers are required to be more creative and innovative in the learning process (Coman et al., 2020; Haleem et al., 2022; Stehle & Peters-Burton, 2019).

The industrial era 4.0 provides all facilities and conveniences for today's generation. An era marked by technological sophistication, the internet of things, or an integrated system makes it easier for humans to interact and be creative for a better life, although that doesn't mean there are no challenges to be faced (Arifah et al., 2021; Oke & Fernandes, 2020). Therefore, in the learning process in schools, this development needs to be realized by educators so that they can equip their students to be able to live and face all the challenges of their era. Because of this background, our service team took the theme of how creative learning must be prepared by teachers in the industrial era 4.0 (Keiler, 2018; Malik, 2018; Singh et al., 2021).

CONCLUSION

Based on the data and discussion it can be concluded that the community service has been successfully implemented, based on three indicators, namely the product is successfully made and used, the attendance and involvement of participants reaches 100% (minimum target of 75%), and there is an increase in test results by 15.8 points or an average 2.3 per person, from 56.9 to 72.7. The result of this community service is the achievement of a learning process that is in accordance with the Industrial Revolution Era 4.0 at MTs Muhammadiyah 1 Malang City as a community service partner. Mastery of the use of social media platforms such as Google in education can improve teacher performance in improving learning outcomes. This is because social media like Google can be used as a learning medium. The results of this internal community service have been made in the form of a community service module on Google for Education training procedures which has been provided to training participants as independent training materials that prioritize health during the Covid 19 pandemic.

The implementation of this Internal Community Service Program has been running smoothly according to schedule. The implementation of this activity was carried out at MTs Muhammadiyah 1 Malang City with 7 teachers as training participants. Of course, from the number of training participants it can be considered that this activity is still inadequate. Therefore, it is hoped that further training and mentoring activities are needed so that the number of participants and the results achieved is maximized. This is so that the Community Service program can be felt by the wider community.

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