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# THE USE OF QUIZIZZ DAN KAHOOT! IN THE TRAINING FOR MILLENNIAL GENERATION

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**Abstract**
Digital transformation marked with internet and information technology use has entered into government apparatus learning, particularly the new employees constituting millennial generation inherent to gadget. Kahoot! and Quizizz are online quiz application that can be the choice to make the learning attractive and joyful. This research employed a quasi-experimental method only on the studied group, and the data was collected using questionnaire, observation, and documentation. Data was analyzed using logico-inductive method encompassing thee stages: coding, describing main characteristics and interpreting data. The result of research showed that Quizizz is more preferable to Kahoot! to the participants because in Quizizz question and answer appear on cell phone/laptop screen of individual participants so that they should not see the screen before the class just like that in Kahoot!; the answer in Kahoot! constitutes symbols while in Quizizz the real answer constitutes word, number, or figure; after the quiz has been completed, the questions answered can be checked in order to find out the ones answered incorrectly and mastered poorly by the participants.

**Keywords**: civil servant, Kahoot!, millennial, Quizizz

## Introduction

Technocratic design in National Medium-Term Development Plan published by Indonesian National Development Planning Agency during 2020-2024 mentions that digital transformation in this world has varying forms: Japan-Society 5.0, Europe-Industrial Revolution 4.0, China-Made in China 2025, America-Industrial Internet, and in Asia-Smart Cities. Digital Transformation will impact on innovation, acceleration, evidential, productivity, inclusivity, collaboration, and accountability in all development sectors (BAPPENAS, 2019). Digital transformation still makes many parties, including government apparatus, feeling anxious, but some of them have had enjoyed digital transformation in which technology is not considered as the threat facilitating human activity (Puspitasari D. , 2019). Industrial Revolution 4.0 has the characteristics of digitalization, optimization, and production customization, automation and adaptation, human machine interaction, value added services and businesses, automatic data exchange, and communication, and integrating internet technology

use. There have been 51 state universities (colleges) in Indonesia readily holding non-face-to-face lecturing, in dealing with information and communication technology disruptive era toward cyber university that has been applied widely in developed countries (Iswan & Herwina, 2018).

Society 5.0 can be defined as "intelligent society" referring to the innovation in science and technology aiming to balance social problem in physical space and cyberspace integrated (Salgues, 2018). Japan with Society 5.0 wants to balance economic advance and social problem solving through a system highly integrating cyber space and physical space with human beings as the center. Society 5.0 connects educational service from basic level to college, and will reach small villages in Sub-Saharan area (Prima, 2019). Society 5.0 is an idea of implementing technology in industrial revolution 4.0 also considering the humanities aspects by giving an opportunity of solving social problem that should be manifested into collective research with contribution from varying sectors (Faruqi, 2019).

The development of information technology increases the use of web to access varying types of information and material. The utilization in education field results in great advance in the learning process to both learner and instructor, despite the need for further research on its effectiveness (Livingstone, 2015). We should deal with the change of time anxiously or worriedly, take action immediately corresponding to our own ability. We enjoy the change by thinking critically and creatively, thereby we can participate in this progress (Ferreira & Serpa, 2018). The role of information technology should be synchronized with the preexisting educational ecosystem, to support the learning process more efficiently, not substituting the role of teacher, school, universities, and parents, because education concerns not only learning but also character building (Retnawati, 2019). Education in industry era 4.0 is expected to consider the following aspects: intellectuality development, social intelligence, novel and adaptive thinking, cross-cultural competency, computing thinking, new media literacy, trans-disciplinary, design thinking, cognitive content management and virtual collaboration (Sitepu, Rangkuti, & Fachrizal, 2020).

Civil Servants today are the generation born in 1981-2003 (Puspitasari S. S., 2018) or are under 37 years during this article writing. In late 2017, there are 4,374,349 civil servants in Indonesia, and 1,512,932 or 35% of them are under 37 years (BPS, 2017). It means that the composition of millennial generation-Civil Servants increases over times, thereby its education and training method should be compatible to them and utilize information and communication technology. There are 4,870 Civil Servants in Ministry of Finance, according to Ministry of Finance's Secretary General, consisting of: 2,997 graduates of D1 program of PKN; 1,873 graduates of D3 program, 2,880 civil servants recruited publicly consisting of: 2,146 from D3 program, 733 from S1, and 1 from S2 programs (Hadiyanto, 2017). Both Industrial Revolution 4.0 and Society 5.0 inevitably will impact Indonesia, and will affect education and training for millennial generation-Civil Servants, by utilizing information and communication technology.

The revival of millennial generation will also generate new challenge to management practice in organization, particularly to the practice of human

resource management (Putra, 2016), including the learning. The older generation calls millennial generation the Generation.com (Trokska, 2016). There is a significant difference of characteristics between millennial generation and other generations, particularly in information and technology mastery (Trokska, 2016). An independent millennial-generation learner, just like the previous generation, need more structure, guidance, and feedback. Millennial generation likes working collaboratively more, does not like lecturing, communicates less effectively, needs information as needed, and needs technology (Berge, 2008). Millennial generation is inherent to digital gadget, thereby can be utilized in the learning (Wibawanto, 2019).

The development of information and communication technology brings out a great change in education field helping the learning process innovation, improving performance, and managing the process effectively and efficiently (Wanda, 2017). Clayton M. Christensen introduces disruption theory replacing Schumpeter's destruction theory in 1997. Disruption moves along with the emergence and the development of information technology applications disrupting industry, rejuvenating, and deconstructing the old approach with new method in marketing, bureaucracy, mindset, and government. Disruption in education field includes: 1) on demand education service and skill, including lecturing and test; 2) open source education service and skill; 3) mobile and responsive education application; 4) curriculum that is more personal and tailor made; 5) borderless content service; 6) collaborative education platform; and 7) online course and material for free (Kasali, 2019). Education field is also affected by information and communication technology and brings out a great change in education realm functioning to help the learning process innovation and to improve the performance by preparing, using, and managing an effective and efficient process (Wanda, 2017).

For that reason, a learning method utilizing information and internet technology development should be developed. The learning method affects the students' learning motivation, so that their choice should make the students contented and vigorous (Mujiman, 2007). There is no single learning method better than others because the learning method is dependent on the objective to be achieved, the characteristics of students, and the society values (Arends, 2013). The participants' understanding can be improved using learning media that can improve interaction between instructors and between participants (Mashoedah, 2015). Compared with offline learning, the online learning improves significantly today (Damien Mac Namara, 2017). The instructor should explore what makes the learners attending the learning joyfully and education gamification evidently makes the learning attractive and motivating the learner to focus on attending the learning (Abu-Dawood, 2017).

One of learning method developments utilizing information and internet technology is the automatic online quiz application that can be used to measure the improvement of the training participants' understanding, including: QMP; TodaysMeet; Padlet; Mentimeter; Kahoot!; Quizizz; ThatQuiz; GoConqr; ClassMarker; Edmodo; Scorative, or Google-Flubaroo (Jamro, 2017). The learning for millennial generation using quizizz evidently improves the learning

competency attractively and collaboratively corresponding to the learner-centered learning (Balasubramanian, 2017). Quizizz is a joyful, formative, multiplayer, free assessment instrument functioning on the computer, tablet, and smartphone. Each of participants or student groups needs one set, but it is unnecessary for them to make account in quizizz, because they can join by entering game code only (quizizz, 2019). Quizizz can transfer many assignments, repeat, and entertain, and accommodate many participants (Eser Çeker, 2017). Quizizz question and answer appear on computer or cellular phone screen of each participant; thus it tends to be individual but can give answer analysis. The use of quizizz makes the learners active and concentrating on the learning material (Suo Yan Mei, 2018). For formative evaluation, quizizz informs and identifies both incorrect and correct answer for each of learners and thereby is more effective because the material needing correction can be found out (Huisman, 2018).

The official page of Kahoot! Use for the learning makes the learning joyful, attractive, and impacting on all learners. We can make our quiz or use million preexisting quiz and can conduct formative assessment all at once (Kahoot, 2020). The use of Kahoot! is easy, applicative, effective, joyful, and can improve the learning, but a better internet connection is required (Budiati, 2017). The use of Kahoot!, which is multiplayer in nature, enables the child to collaborate and to compete interactively, thereby can be the facility of social interaction (Rofiyarti1 & Sari, 2017). The use of Kahoot! creates a joyful, attractive learning potentially improving the academic performance (Iwamoto, Hargis, Taitano, & Vuong, 2017).

Some studies conducted in some countries showed that the learners welcome positively the use of Kahoot! and Quizizz in the learning. In Malaysia, it enables the class to attract the learning because it is done online in which question and answer appear on the screen before the class (Ishak, Nor, & Ahmad, 2017). Kahoot! is a feasible and practical formative assessment making the learning joyful and motivating the learner. However, Kahoot! is not the best means of simplifying the complex lesson (course) as perceived by medical students (Ismail & Mohammad, 2017). In South Korea, the use of Kahoot! is amazing because it can be used for game-based learning constituting a good learning method that can integrate the competitive game encouraging the learner to discuss teaching material online joyfully in the class (Dellos, 2015). Compared with traditional learning the use of Kahoot! improves the learners' understanding, motivates and involves them in Indiana, United States of America (Bawa, 2017). In Norway, the use of Kahoot! in the lecturer about software reengineering in four parallel classes can substitute the use of slide and traditional teaching instrument shows that Kahoot! can improve concentration, participation, enjoyment, and motivation. In addition, because the value can be recognized online, it will contribute to improving the dynamic of classroom (Wang & Lieberoth, 2016). In Poland, there is strong evidence showing the relationship between the games playing using Kahoot! and the improved learning motivation (Zarzycka-Piskorz, 2016). In Thailand the learners argued that Kahoot! and Quizizz support the learning and improve concentration, participation, enjoyment, and motivation. In addition, these applications help the learners realize the knowledge level, facilitate the

perception of concept, improve learning process, and feel that the answer is assessed by instructor. The instructor checks the learners' answer easily as it is available automatically and online (Chaiyo & Nokham, 2017).

## Method

This study was a full experimental education research comparing the group studied and the control that can disrupt the learning. Therefore, the appropriate research method is the quasi-experimental one in the group studied (Creswell, 2015). The primary data of qualitative research, according to Lofland & Lofland, constitutes words and action, and the rest is additional data such as document (Moleong, 2015). The research instrument was the author himself (Sugiyono, 2015), but to obtain data as much as possible and to facilitate the data collection, other instruments were used: questionnaire, observation, and documentation. The data collected was analyzed using logico-inductive method, the process of thinking using logic to understand pattern and tendency in the data in three stages: coding, describing main characteristic, and interpreting data (Mertler, 2011). The result of research is presented descriptively. The research was conducted in Technical Training Class for 2nd Generation Integrated Service Center Officer in Fiscal Year of 2018 in Yogyakarta Financial Training and Education Agency consisting of 30 students belonging to millennial category, but only 28 filled in the questionnaire, conducted in 5 (five) workdays. Quizizz was used in the course of Stipulation, Work Procedure, and Document Completeness of Integrated Service Center, while Kahoot! was used in the course of Communication and Appearance of Integrated Service Center Office on different days.

## Findings and Discussion

The participants' answer to the question "You prefer the learning using quizizz or Kahoot!!" is presented in Table 1.

Table 1 Participants' Preference of Using Quizizz or Kahoot!

| No | Information | Number | % |
|---|---|---|---|
| 1 | Quizizz | 27 | 96% |
| 2 | Kahoot!! | 1 | 4% |
| | Total | 28 | 100% |

From Table 1, it can be seen that 27 (twenty seven) or 96% participants prefer using Quizizz, while 1 or 4% participant prefer using Kahoot!. The Strength of Quizizz compared with Kahoot!, according to participants, is shown in Table 2.

Table 2 the Strength of Quizizz compared with Kahoot!

| No | Answer | Number | % |
|---|---|---|---|
| 1 | Question and answer appear on cellular phone/laptop screen so that participants unnecessarily watch the screen before the class | 20 | 71.4% |
| 2 | Equally joyful | 3 | 10.7% |
| 3 | Kahoot! answer is symbol, while Quizizz answer is real in the form of words, numbers, and figures | 1 | 3.6% |
| 4 | When the quiz has been completed, the questions answered can be checked | 1 | 3.6% |
| 5 | The questions mastered poorly by the participants can be recognized | 1 | 3.6% |
| 6 | Time calculation is more reasonable | 1 | 3.6% |
| 7 | Not logged out easily | 1 | 3.6% |
| | **Total** | **28** | **100.0%** |

From Table 2, it can be seen that the most possible reason of why the participants prefer using Quizizz is because question and answer appear on cellular phone/laptop screen of each participants, so that it is unnecessary for them to look at the screen before the class; this reason is given by 20 participants (71.4%). Meanwhile, in Kahoot! question and answer appear on the screen before the class, so that some participants see the screen difficultly as their position is far away from or diagonal to the screen direction. Three (3) or 10.7% participants stated that using Quizizz or Kahoot! are equally joyful. Another strength suggested by one participant respectively is that Kahoot! answer is symbol while Quizizz answer is real in the form of words, numbers, or figures; when the quiz has been completed, the questions answered can be checked so that the question answered incorrectly and mastered poorly by the participants can be recognized. Technically, some participants answering the question cannot log out easily when entering the answer option. Meanwhile the answer stating that in the Quizz the time calculation of working is more reasonable is actually less relevant because in both Kahoot! and Quizizz, time to answer the question can be set or adjusted. However, this argument can be input in preparing the Quizizz, so that the time can be adjusted with the question's difficulty level. The comparison between Kahoot! and Quizizz appearances is illustrated in Figure 1.

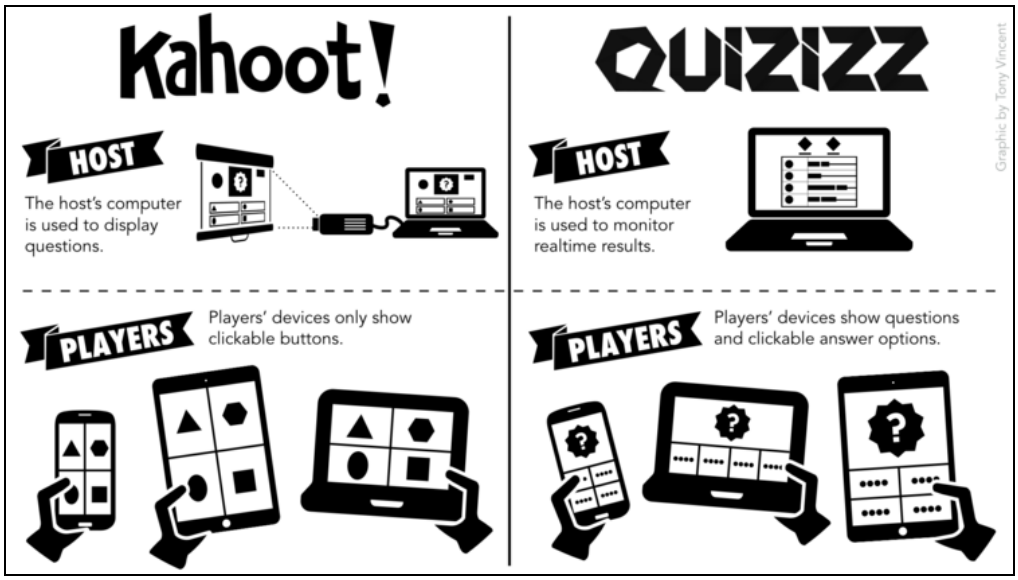



Figure 1 The Comparison between Kahoot! and Quizizz appearances

Source: https://medium.com

To find out further the comparison between Kahoot! and Quizizz, a question is posed to the participation about the weakness of Quizizz compared with Kahoot!, and the answer is presented in Table 3.

Table 3 he weakness of Quizizz compared with Kahoot!

| No | Answer | Number | % |
|---|---|---|---|
| 1 | None | 21 | 75.0% |
| 2 | Almost equal | 3 | 10.7% |
| 3 | Time taken to answer the question is different between one participant and another | 2 | 7.1% |
| 4 | The movement of question needs some steps | 1 | 3.6% |
| 5 | Too fast time | 1 | 3.6% |
| | **Total** | **28** | **100.0%** |

From Table 1, it can be seen that 21 (twenty one) or 75% participants state that there is no weakness of Quizizz compared with Kahoot!, 3 (three) or 10.7% state that the two are nearly the same. Two (2) or 7.1% participants argue that the time taken to answer the question is different between one participant and another. Quizizz makes the time taken to answer the question appearing on cellular phone/Laptop screen different between one participant and another, because when the question appearing is the same, the order will not be the same. Participants answering the question more quickly will complete the quiz more quickly but they should wait for other participants who have not completed it yet, but the time cannot be beyond the time limit set in each of questions. For example, some questions are set to be answered within twenty second; therefore, if there is a participant answering it within ten second, the next question will appear on the

cellular phone or laptop screen randomly and differently from the participant beside. It likely becomes the weakness of Quizizz the participants answering quickly should wait for other participants completing the quiz. However, it can also be the strength of Quizizz because the speed of answering the question will increase the score obtained. In Kahoot!, because the questions appear simultaneously on the screen before the class, and the answer on the cellular phone/laptop screen, so that the quiz will be complete at the same time, but it can also be Kahoot!'s weakness because some participants are likely affected with the answer of participant adjacent.

Although some participants prefer Quizizz to Kahoot! need input for the improvement as shown in Table 4.

Table 4 Proposal of Improvement in the use of Quizizz

| No | Answer | Number | % |
|---|---|---|---|
| 1 | Joyful activity distraction should be added | 7 | 25% |
| 2 | In addition to using quizizz, there is a group discussion | 5 | 18% |
| 3 | Good | 5 | 18% |
| 4 | Material explained, then quiz is conducted using quizizz | 4 | 14% |
| 5 | Answer option in quizizz consists of more than two choices | 3 | 11% |
| 6 | Using quizizz and repeated | 1 | 4% |
| 7 | Outdoor learning | 1 | 4% |
| 8 | Not answering | 2 | 7% |
| | **Total** | 28 | 100% |

From Table 4, it can be found that 7 or 25% participants propose the use of Quizizz plus joyful distraction activity; the alternative activity the participants want is group discussion or outdoor learning. This input can be taken into account in using Quizizz in order not to use too many questions to make the participants not bored; group discussion can be an alternative, but the question made should trigger the discussion. The use of Quiziiz outdoor is possible as long as there is an internet network because Quizizz should not be used in one room and it even can be attended by participants outside the city as long as they are informed with the game code. The participants recommend the material to be explained first, and then quiz can be an alternative, if blended learning or pre-post test is not used to measure the improvement of participants' competency. The recommendation that the multiple-choice answer should be provided can be implemented, recalling that the higher the objective of learning, the more complex is the choice of answer. However, if the objective of learning is to enable the participants to find out or to understand the choice of answer, it can be simpler. Meanwhile the recommendation that Quizizz should be used repeatedly should be adjusted with the objective of use and the time available.

## Conclusion

Digital transformation characterized with the utilization of internet and information technology has penetrated into the government apparatus learning, particularly the new servants (employees) constituting the millennial generation inherent to gadget. Kahoot! and Quizizz is an online quiz application that can be a choice to make the learning attractive and joyful. The result of research showed that Quizizz is more preferable to Kahoot! to the participants because in Quizizz question and answer appear on cell phone/laptop screen of individual participants so that they should not see the screen before the class just like that in Kahoot!; the answer in Kahoot! constitutes symbol while in Quizizz the real answer constitutes word, number, or figure; after the quiz has been completed, the questions answered can be checked in order to find out the ones answered incorrectly and mastered poorly by the participants.

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