Abstract—The development of information technology is currently experiencing a very significant increase. Based on the results of a survey by the Association of Indonesian Internet Service Providers (APJII) in 2018 internet users in Indonesia every year continues to increase, in total internet users reached 171.17 million users from a population of 264.16 million people. The generation born at the time of this technological development is called the Z generation. This generation is very sensitive to technology and communication. This requires the world of education to always adjust to technological developments. The implementation of blended learning through google classroom is considered appropriate to address this. Blended learning is a combination of conventional and online learning processes. The use of google classroom can make it easy for teachers and students to do online learning. The research method used is the ADDIE (Analysis-Design-Develop-Implement-Evaluation) model. This model is one of the learning design models that shows simple design stages. The results of this study are blended learning through google classroom has a very important role in achieving the success of the learning process that can be seen from the achievement of learning objectives effectively and efficiently.

Keywords: blended learning, google classroom, Z generation

I. INTRODUCTION

The use of technology has always existed along with the ongoing human culture. One form of information technology that has experienced rapid development in the last decade is computers, telephones and the internet. Based on the results of a survey by the Association of Indonesian Internet Service Providers (APJII) in 2018 internet users in Indonesia every year continues to increase, in total internet users reached 171.17 million users from a population of 264.16 million people. This is inseparable from human needs for access to information. The generation born at the time of this technological development is called the Z generation. This generation is very sensitive to technology and communication.

Generation z or commonly referred to as net generation is the generation that was born together with advances in information technology. Generation is a social construction in which there is a group of people who have the same age and the same historical experience. Individuals who are part of a generation, are those who have the same year of birth in a span of 20 years and are in the same social and historical dimensions [1]. The theory of generational difference was popularized by Neil Howe and William Strauss in 1991. They divided generations based on the similarity of birth spans and the similarity of historical events [2,3]

Some studies compare different generations based on birth years from the 1900s to the 2000s into several groups of generations. The grouping of generations based on research by Bencsik, Csikos, and Juhez can be seen in the following table [4, 5]:

<table>
<thead>
<tr>
<th>Year of Birth</th>
<th>Name of Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925 – 1946</td>
<td>Veteran generation</td>
</tr>
<tr>
<td>1946 – 1960</td>
<td>Baby boomer generation</td>
</tr>
<tr>
<td>1960 – 1980</td>
<td>X Generation</td>
</tr>
<tr>
<td>1980 – 1995</td>
<td>Y Generation</td>
</tr>
<tr>
<td>1995 – 2010</td>
<td>Z Generation</td>
</tr>
<tr>
<td>2010 +</td>
<td>Alfa generation</td>
</tr>
</tbody>
</table>

The study divides generation differences into six groups from 1925 to 2010. That research shows the inclusion of Generation Z in the generation group. The six groups of generations have different characteristics. The veterans generation to generation Z has different characteristics both in terms of life outlook, goals, social relations, values to the mastery of information technology. The results of research show differences in the characteristics of generation Z with previous generations, these results can be seen in the following table [4, 5]:

Advances in Social Science, Education and Humanities Research, volume 410
1st International Multidisciplinary Conference on Education, Technology, and Engineering (IMCETE 2019)

Copyright © 2020 The Authors. Published by Atlantis Press SARL.
This is an open access article distributed under the CC BY-NC 4.0 license -http://creativecommons.org/licenses/by-nc/4.0/.
<table>
<thead>
<tr>
<th>Factors</th>
<th>Baby boomer</th>
<th>X Generation</th>
<th>Y Generation</th>
<th>Z generation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View</strong></td>
<td>Communal, unified thinking</td>
<td>Self-centred and medium-term</td>
<td>Egotistical, short term</td>
<td>No sense of commitment, be happy with what you have and live for the present</td>
</tr>
<tr>
<td><strong>Relationship</strong></td>
<td>First and foremost personal</td>
<td>Personal and virtual networks</td>
<td>Principally virtual, network</td>
<td>Virtual and superficial</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td>Solid existence</td>
<td>Multi-environment, secure position</td>
<td>Rivalry for leader position</td>
<td>Live for the present</td>
</tr>
<tr>
<td><strong>Self realization</strong></td>
<td>Conscious career building</td>
<td>Rapid promotion</td>
<td>Immediate</td>
<td>Questions the need for it at all</td>
</tr>
<tr>
<td><strong>IT</strong></td>
<td>It is based on self-instruction and incomplete</td>
<td>Uses with confidence</td>
<td>Part of its everyday life</td>
<td>Intuitive</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td>Patience, soft skills, respect for traditions, EQ, hard work</td>
<td>Hard work, openness, respect for diversity, curiosity, practicality</td>
<td>Flexibility, mobility, broad but superficial knowledge, success orientation, creativity, freedom of information takes priority</td>
<td>Live for the present, rapid reaction to everything, initiator, brave, rapid information access and content search</td>
</tr>
<tr>
<td><strong>Other possible characteristics</strong></td>
<td>Respect for hierarchy, exaggerated modesty or arrogant inflexibility, passivity, cynicism, disapproval</td>
<td>Rule abiding, materialistic, fair play, less respect for hierarchy, has a sense of relativity, need to prove themselves</td>
<td>Desire for independence, no respect for tradition, quest for new forms of knowledge, inverse socialization, arrogant, home office and part-time work, interim management, undervalue soft skills and EQ</td>
<td>Differing view points, lack of thinking, happiness, pleasure, divided attention, lack of consequential thinking, no desire to make sense of things, the boundaries of work and entertainment overlap, feel at home anywhere</td>
</tr>
</tbody>
</table>

Based on the results of these studies indicate that there are differences in characteristics between generation Z with other generations.

The main factor that is the difference between generation z with other generations is the mastery of information and technology. Based on the year of his birth, generation Z was born along with advances in information technology, so information technology has become a part of their lives so that it gives an influence on the values, views, and life goals of generation Z.

In this case, the rise of generation Z certainly provides new challenges for the world of education. Blended learning is a learning approach that integrates traditional face-to-face learning and distance learning using online learning resources and a variety of communication options that can be used by teachers and students. The implementation of this model allows the use of online learning resources, especially web-based ones, without leaving face-to-face activities.

One of the software that can be used as a means of online-based learning is google classroom. Google Classroom is an internet-based service provided by Google as an e-learning...
system. This service is designed to help teachers create and share assignments with students paperless [6].

The benefits of Google Classroom are: a). Easy setup, lecturers can add students directly or share codes with their classes to join b). Time-saving, simple and paperless task flow enables teachers to create, check and grade assignments quickly in one place c). Improve organization, students can see all their assignments in the assignment page and all material is automatically stored in a folder in Google Drive d). Improve communication, class allows lecturers to send announcements and start discussions directly e). Affordable secure funds, Google Classroom does not contain advertisements, never uses user content or student data for advertising and is free [7].

The benefits and advantages provided by google classroom certainly can attract students’ interest in learning, especially students belonging to generation Z who have the ability to master technology. Indicators of interest in learning are like / happy, statements prefer, there is a sense of interest in the awareness to learn without being told, participate in learning activities, give attention [8]. Several indicators of interest in learning are: feelings of pleasure, interest, acceptance, and student involvement [9]. The indicators of interest in learning used in this study are feelings of pleasure, attention, interest, and student involvement.

II. METHOD

This study uses a quantitative descriptive research approach that was carried out at the University of Banten Jaya in the Citizenship Education Study Program Faculty of Teacher Training and Education which is located at Jalan Syekh Nawawi Al-Bantani KM. 3, Behavior, Kec. Curug, Serang City, Banten 42171. Researchers determined the population in this study were Pancasila and Citizenship Education students for the 2018 class of 23 students. The researchers used the entire population as a sample in the study, also known as total sampling. The number of samples used in this study were 23 people by taking the entire population or total sample.

The instrument used in this study is a closed questionnaire consisting of several questions that represent aspects of research as a translation of the indicators. The indicators used to measure the effectiveness of using google classroom in blended learning are student acceptance of the ease of Google Classroom and the performance of Google Classroom for learning. Performance expectancy is the degree to which individuals (users) expect that using the system can help obtain benefits or ease in working [10]. While the indicators to measure student interest in learning as Generation Z are feelings of pleasure, interest, acceptance, and student involvement.

III. RESULTS AND DISCUSSION

The implementation of blended learning through google classroom is carried out in several stages namely the analysis, design, development, implementation, and evaluation stages. In the analysis phase, researchers analyze the needs and characteristics of students in learning, determine teaching material, determine learning objectives, and determine learning media. The second stage is design, at this stage the researcher makes a syllabus and RPS that are adjusted to the results of the analysis at an early stage. The third stage is the development stage which is the production stage including making text documents, images, videos and other supporting documents.

The fourth stage is the implementation or application of blended learning through google classroom learning. In the initial implementation phase, the lecturer gives an explanation regarding the application of blended learning to students and makes an agreement so that learning is in accordance with what has been planned. This learning is implemented by conducting face-to-face learning every two weeks, then continuing online learning every next two weeks. Lecturers upload material every week and upload assignments and information at certain times. Students check and download material every week, and check and download assignments and information. Students can use Google classroom to ask questions, discuss, access material, and access information provided by lecturers. This learning lasts for up to one semester. The next stage is the evaluation stage. At this stage the lecturer and students conduct an evaluation related to blended learning through google classroom by looking at the strengths and weaknesses of the learning process. The blended learning implementation design can be described in the following scheme:

![Fig.1. Design of Blended Learning Learning Application](image)

Based on the results of research in measuring the effectiveness of using google classroom showed good results. This can be seen from the results of data analysis on the indicators of the ease of use of google classroom and the performance of google classroom in supporting learning. The results of statistical testing on the ease of use of google classroom indicators mean students answered agree with 83.7% and disagree with 16.3%. while on the Google classroom performance indicators the average student answered agreed 86.4% and 13.6% disagreed.

The results of this study indicate that google classroom can be used and well received by students. Google classroom makes it easy for students to carry out the learning process in class. The convenience provided by google classroom includes the ease of accessing material, assignments, information, and ease of storing documents. In addition, google classroom can also be used via a PC or Smartphone owned by students so that students are able to access Google classroom anytime and anywhere. This makes the interest in student learning increases so that it can improve student
understanding of the material delivered by the lecturer. The use of Google classroom in the learning process also makes it easy for students to get feedback faster, so students are able to know the extent of their mastery of the material that has been learned so that it can be used as a corrective tool for student learning progress.

Based on the results of data analysis on Google classroom performance indicators, the average student answered agreed at 86.4%. This figure shows that students agree with questions relating to the performance of Google classroom. A good performance of Google classroom can be seen from: 1) the process of setting up a fast and easy way both from accessing the Google classroom application or website, joining the Google classroom class, to working on assignments and obtaining grades for students; 2) the availability of features in Google classroom that facilitate the learning process, such as the single view feature for student assignments. This feature provides a page to display all the tasks, whether they are assigned, graded, or returned, and 3) Google classroom display is very clear and easy to understand.

The results of the analysis of data collection on student interest in questionnaire related to learning blended learning through Google is 78.9%. This figure shows that the average student has a high enough interest in learning blended learning through Google classroom. Indicators of interest in learning used in this study are: feelings of pleasure, attention, active involvement in learning, and human interest.

Based on the results of data analysis on the feeling of pleasure indicator is 91.7% these results indicate that students feel happy with blended learning through Google classroom. Students are excited and enthusiastic by learning by applying blended learning because this learning model does not saturate them. The combination of conventional learning (face to face) with online learning (e-learning) makes learning more varied so that learning is more fun and interactive.

Based on the results of interviews and observations, students feel happy when implementing blended learning through Google classroom. Students feel happy by implementing this learning because the learning process is more interesting by utilizing the sophistication of technology. They claim that learning like this is more interesting and not monotonous. Google classroom can be used easily by all students, they are easier to access material, questions, and information quickly. Google classroom also facilitates students to be able to ask lecturers directly outside face to face in class.

The results of data analysis on the indicators of student attention using blended learning through Google classroom on average obtained results of 78.6%, this shows that students pay attention to learning done in class by using blended learning through Google classroom. The use of a smartphone or PC to access Google classroom makes students pay more attention to the learning provided. Based on the results of the interview, the attention of students is not only when giving materials, but also when completing assignments and conducting examinations through Google classroom which is limited by a grace period.

Furthermore, the results of the analysis of indicators of student interest in learning blended learning through Google classroom is 89.4%, this shows that students are interested in participating in the learning process of blended learning through Google classroom. Student interest is shown by their curiosity when participating in learning and acceptance of students when given assignments by lecturers. Students actively discuss and ask lecturers when learning, students do not delay the assignments given by the lecturer, and there is an interest in assignments that are given without paper and are limited by time.

The results of the analysis on the indicator of student learning engagement is 56%, this shows that students are actively involved in learning blended learning through Google classroom. This active involvement can be seen from the enthusiasm of students when asking lecturers when face-to-face learning and online learning. Online learning (e-learning) provides facilities for students who do not have the courage in the classroom to ask questions or discuss with lecturers directly. In addition, the involvement of students can also be seen from the awareness of students to study outside the campus ie they study the material independently and utilize the material available online to be studied.

IV. CONCLUSION

Blended learning through Google classroom has a high impact on students' interest in learning that belongs to generation Z. The ease and performance of Google classroom can attract students' interest in learning in class. This can be seen from students' happy feelings, attention, interest, and student involvement in learning blended learning through Google classroom.

Based on the results of research in measuring the effectiveness of using Google classroom showed good results. This can be seen from the results of data analysis on the indicators of the ease of use of Google classroom and the performance of Google classroom in supporting learning. The results of statistical testing on the ease to use of Google classroom indicators on average students answered agree with 83.7% and 16.3% disagree. While on the Google classroom performance indicators the average student answers agree 86.4% and disagree 13.6%.

Based on the results of data analysis on the feeling of pleasure indicator is equal 91.7%. The results of data analysis on the indicators of student attention by using blended learning through Google classroom on average obtained results of 78.6%. Furthermore, the results of the analysis on the indicators of student interest in learning blended learning through Google classroom are equal 89.4%. The results of the analysis of the indicators of student learning involvement is equal to 56%.

ACKNOWLEDGMENTS

Researchers realized that during the process of this research found many difficulties. These difficulties will not be resolved by researchers without the help and encouragement of various parties.

REFERENCES


164


