Blog Implications as Learning Media in Improving Learning Achievement of Students

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Abstract. The purpose of this study was to improve the learning achievement of students of SMAN 1 Gedangan Sidoarjo through the use of blogs as a learning medium. This research is a classroom action research (CAR). The study was conducted in two cycles in eight meetings, each meeting 2 x 45 minutes, and each cycle consisted of planning, action, observation, and reflection. The research subjects were students of class XI MIPA 4 of SMA Negeri 1 Gedangan Sidoarjo in the academic year of 2017/2018 with a total of 33 students. Data collection techniques are observation, tests, field notes, interviews, and documentation. Data analysis techniques use quantitative analysis, qualitative analysis, comparative analysis. The results showed that the use of blogs was proven to improve learning achievement. This can be proven from the increase in student learning outcomes in the first cycle with the percentage of completeness of the learning value of 88.85% and the average grade value of 84.85, resulting in an increase in the average grade of 12.45 (pre-value 72.40 cycle and the value of the first cycle 84.85) and the completeness of the results of the learning value of 41.30% (in the pre cycle 47.55% and cycle I 88.85%). Whereas for the results of learning cycle II the average grade value increased by 2.51 (the value of cycle I was 84.85 and cycle II 87.36) and completeness was 6.15% (in cycle I 88.85% and cycle II 95.00%). It was concluded that the use of blogs as learning media to improve learning achievement had achieved the expected results in this study, each of which had achieved an achievement indicator of > 75%

1. Introduction
The government currently continues to discuss the 4.0 industry issue. Even President Jokowi also inaugurated a road map or roadmap called Making Indonesia 4.0. Indeed, this industrial revolution began in the days of the Dutch East Indies government. At that time, the first industrial revolution was present in the context of a steam engine or steam engine. Then the second industrial revolution at the time of automotive, general fort made Indonesian production lines still in the Dutch East Indies. The third industrial revolution began in the 90s with the start of automation, and at that time there was the name of globalisation. At that time globalisation was feared to bring about the birth of digitalisation, which globalisation analysed for ASEAN would begin in 2020. At this time was the 4th industrial revolution,
starting with the internet revolution which started in the 90s, it not known that the internet would affect the present time. Today all countries in the new world see how the effects of the internet of things are. The use of the internet of things first done in Germany. Germany also globalized the term industry 4.0. The flow of globalisation is no longer unstoppable into Indonesia with the 4.0 industrial revolution, which emphasises the digital economy pattern, artificial intelligence, big data, robotics, and so on or known as the disruptive innovation phenomenon. Facing these challenges, teaching and learning in schools and colleges are also required to change, including in producing qualified students, students and lecturers for future generations.

It can monitor that the development of technology and science from time to time is increasingly rapid and also supported by the increasingly intense globalisation. The most critical step in fostering human resources is to improve quality in the field of education. An advanced nation in technology and science reflects that the country has superior knowledge. Therefore, education should receive attention from the government and society in general, as well as education managers in particular. In the process of learning and teaching, there are two essential elements and can be trusted to influence learning outcomes namely teaching methods and learning media. Selection of teaching methods will significantly affect the use of types of learning media according to the kind of task, response and learning objectives, which students expect including student characteristics. Nevertheless, it can say that one of the primary functions of learning media is for learning aids that can affect the conditions, climate, and learning environment created and arranged by the teacher.

The development of the times continues to change rapidly, as at this time it is indispensable the availability of learning resources that are actual, and easily accessible. The conventional education system is not a time to be boring and shows a more pleasant nature with alternative ways of learning that use technology, by using information technology for learning and teaching as a learning medium, teachers and students are required to be more creative in digesting material and knowledge. Books as a form of print media now replaced with e-books and one of the press using information technology is a blog. A blog is a website in the way of an application that consists of several posts often referred to like a post on a web page. The ease of making a blog with WYSIWYG (what you see is what you get) does not need to use a very complicated programming language. The ease of making assistance services and the enrichment blog page including posting using social networking services make blogs increasingly popular. SMA Negeri 1 Gedangan is a high school that always adds quality to its learning.

Observation results at SMA Negeri 1 Gedangan, students of class XI MIPA 4 academic year 2017/2018 show the condition of the class which classified as less active in learning and teaching activities in the classroom. Interviews with teachers can obtain by data showing that when the teacher gave real explanations in front of the class with a total of 33 students, only 14 students listened, noticed and the reasons the teacher gave recorded. While students who are willing to do the questions in front of the class and who have the initiative to answer questions without being told only 5 students. This shows the low level of students in learning activities. In addition to these problems, the level of students' daily test scores is still low.

Improved learning achievement for students of class XI MIPA 4 is lower than class XI MIPA 1, class XI MIPA 2 and class XI MIPA 3. That shown by the percentage increase in learning achievement subjects only reached 47.55%. While the growth in student achievement in class XI MIPA 1 is 58.40%, XI MIPA 2 is 64.71%, and XI MIPA 3 is 66.54%. Percentage of improvement in learning achievement that is still low influenced by several factors such as intrinsic and extrinsic factors. Extrinsic factors of the teacher are very influential, the environment, infrastructure and means of learning, one of which is learning media. Therefore, Technology and Communication subjects are chosen in class XI MIPA 4 to conduct classroom action research so that the low learning achievement can increase.

Based on observations in class XI MIPA 4, there was some identification of problems that led to low learning achievement, including 1) The learning process was still conventional and focused on the teacher (teacher centre); 2). The teacher in the learning process uses PPT (powerpoint) and the blackboard as the learning media; 3) The teacher explains more about the learning in front of the class and students only record the material taught.
Based on this description, it can see that the problems experienced by class XI MIPA 4 are the lack of focus on students in carrying out the learning process. The learning process that takes place is centre on the teacher (teacher centre). The teaching and learning process using learning media can increase new interest and arouse desire, arouse stimulation of learning activities, motivation and even bring positive psychological influences on students. So that learning needs to be carried out using the scientific approach. Learning using a scientific method is learning that includes three domains, namely skills, knowledge, and attitude. Therefore, it can move the affection (for learning motivation) and information delivery. Blogs can use as a learning medium or learning resource. The blog also functions as a medium for discussion and interaction between teachers and students, teachers with teachers, students with other students, students of one school with other school students and so on. It expected that the use of this blog media could increase the activity and learning achievement of students of SMA Negeri 1 Gedangan Sidoarjo.

Learning media is a tool for learning and teaching. Everything that can be used to stimulate feelings, thoughts, abilities or skills of students and attention so that it can encourage the learning process. That is following the opinion [1][2] that in education, one-time using technology to develop and distribute subject matter. By the times the learning media also experienced improvements both using technology and technical use, so that teachers are required to be professional in choosing. A teacher must be more selective in selecting and using learning media and must adapt to conditions and situations.

The era of globalisation is currently a paradigm shift in the world of education. The ongoing training now faces two challenges. The first challenge stems from a change given learning. The second challenge faced by the education world today is the rapid advancement of communication and information technology, which offers a variety of facilities for learning. There was a shift in learning orientation due to the progress of the previous technology from outside-guided to learning from oneself (self-guided).

The development of blogs in Indonesia itself began initially around 1999-2000, Indonesians who live abroad who are pioneering it, where they have faster access to information, especially from their social environment. That is following the opinion of Silva [3] the development of technology and communication allows easy access to products and services related to computer communication, application and telecommunications equipment. Their blog content is in Indonesian. Generally, they are people of the web developer or a web designer (Blogging Special Computer Chip Magazine, October 2007 edition, pp. 14-17). According to Rustam Abdillah [4] online display in the form of e-mails, blogs (electronic bulletins) is presented by educators to provide information and places to communicate between students with each other and all work together through online.

The benefits of blogs for teachers include proof of portfolios related to their professionalism, the development of different learning processes, as teaching media and learning, where to discuss, share information and communicate[5][6], [7]. Relatively inexpensive and able to penetrate space and develop a more comprehensive network of teachers is an advantage of blogs. Teachers through blogs can express their ideas or ideas, display learning material that can be downloaded by students, link links as references, provide assignments and evaluation of learning. Blogs available comment applications offer natural interaction between students and teachers. The teacher can also "transmit" blogging to students as an activity.

Based on this background, the formulation of the problem in this study is: "How is the use of blogs as learning media can improve the learning achievement of technology and communication subjects in class XI MIPA 4 SMA 1 Gedangan Sidoarjo in the academic year 2017/2018?". The objectives to be achieved are to improve the learning achievement of class XI MIPA 4 SMA 1 Gedangan Sidoarjo through the use of blogs as a learning medium

2. Method
This research is Classroom Action Research (CAR). The term in English is Classroom Action Research (CAR), which means doing a research activity in class[8]. The definition of course here is not only related to the understanding of the classroom, but a group of students who are at the same time, the teacher gives the same lesson[9]. This class action research in each cycle consists of planning, action,
observation, evaluation, and reflection. Each period held in several teaching meetings; each time allocation meeting is 2 x 45 minutes. Procedure and research design for each cycle. The type of data needed in the form of student achievement data is Mapel Technology and Communication. Data sources include primary data and secondary data. The cause of primary data in this study is student learning achievement XI MIPA 4 SMA 1 Gedangan Sidoarjo after the action is applied. Secondary data sources in the form of school archives regarding the implementation of learning (RPP), student notes, and assessment books. At odd semester daily test scores. Data collection in the study was obtained from several techniques, as follows, namely: observation technique, test technique, field notes, interview technique, documentation method. Researchers use triangulation techniques. According to Rahardjo[10] triangulation techniques are divided into four types, namely: Triangulation Method, Triangulation of Researchers, Theoretical Triangulation, Triangulation of Data. Researchers used data validity tests with data or source triangulation techniques, namely by using various data sources such as interviews, documents, observations. Guided interviews to find out the truth of the observation results and the impact of the implementation of learning[11]. Quantitative data analysis is used to process student learning outcomes obtained by formative testing and tabulating questionnaires. Qualitative analysis techniques are used to describe the research process in detail and to explain the facts that occur in the form of field notes. The data obtained in this study is in the form of a learning process observation sheet, the results of interviews with teachers and students. Comparative analysis techniques are used to compare the initial condition test scores, test scores after cycle 1, test scores after cycle 2 and so on. So it can be seen that there are differences before and after the action is taken.

3. Result And Discussion

Research in class XI MIPA 4 of SMA Negeri 1 Gedangan Sidoarjo began by conducting interviews and observations before the implementation of the use of blogs as a learning medium, which aims to find out more in the problems experienced by students. Interviews conducted with teachers who are subject to Technology and Communication. Based on the results of interviews with teachers of Technology and Communication subjects, it knows that students in class XI MIPA 4 have low learning achievement problems. Evidenced by the results of the increase in the results of the average score of 1 and two replications in the even semester of students which only reached 64.50%. Percentage of completeness of students' learning outcomes is 47.55%, and the percentage of students who are not complete is 52.45%. Also, when the learning process in the classroom the teacher only explained the material and students recorded the material. The learning that teachers do is less varied and less use of the media for learning and teaching.

4. Conclusion

Based on the results of the implementation of the actions in the first and second cycles, it can be said that there has been an increase in the learning achievement of technology and communication subjects by utilizing blogs as learning media with a variety of Think Pair Share (TPS) cooperative learning models from cycle one to the next period. The use of blogs as media Learning with the scientific approach to improving student achievement in class XI MIPA 4 of SMA Negeri 1 Gedangan Sidoarjo can be proven. Based on the results of the study it can be seen that before the implementation of the blog as a medium of learning with the scientific approach with an average value of 72.40 and the completion of the study results percentage of 47.55%

That shows that the learning outcomes of students of class XI MIPA 4 specifically on technology and communication subjects are still not good because there are still many students who have scores below the deadline for successful learning outcomes that is 75. The low student learning outcomes are due to lack of understanding by students and the absence of the enthusiasm of students to follow the learning process. Learning systems by utilising blog learning media with a scientific approach is proven to improve learning achievement.
That is evident from the increase in the results of student learning scores in the first cycle with a percentage of completeness of learning outcomes of 88.85% and the average grade of 84.85, increasing the average degree of 12.45 (pre-cycle value 72.40 and the cycle value of 84.85). As for the learning outcomes of cycle II, the average grade increased by 2.51 (the amount of period I was 84.85 and cycle II 87.36) and completeness was 6.15% (in cycle I 88.85% and cycle II 95.00%).

Based on data from cycle I, cycle II, data obtained shows that student activities and learning achievement always increase. Utilizing a blog as a medium of learning with a scientific approach involves students and students, given the opportunity for groups to be able to share information obtained through the delivery of the results of the discussion.

This learning model makes students more active because, during learning, students are the subject of education. Students who seek information, process information, and convey information obtained through presentations from representatives of each group's members and encourage communication between students and student achievement can increase.

Therefore, utilizing a blog as a learning medium can improve student learning performance as seen from the improvement of student learning outcomes from each cycle. Based on these actions, the results of the teacher carrying out technology and communication learning can attract students' attention and are fun so that they can improve student learning achievement. Also, researchers can also improve teacher performance in creating useful and engaging learning.

This is evident in increasing student activity and learning achievement encountered during the learning process by implementing the use of blogs as a learning medium with the scientific approach: Students in the learning process are more active, both in group discussions, asking questions, issuing opinions, solving problems, listening to material, and make a report on the results of the debate.

A learning environment that is not monotonous and relaxed makes students more enthusiastic in following the process of learning by utilising blog media to find material and solve problems to make learning using the scientific approach more enjoyable for students. Discuss, and there is a responsibility to study the article with the group so that the knowledge and insight of students develops, it is easier to understand the material studied so that active learning can achieve.

The use of learning media with blogs using the scientific approach can improve student learning achievement. That shows that in general the material presented has been well understood by students in the learning and teaching process by utilising blogs as a learning medium with the scientific approach.

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