

# Implementation of E-learning Using Schoology to Improving the Interest Learning Physics at DeBritto High School

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**Abstract**-The goal of this investigation was to define the increase in student interest in schoology-based E-learning in straight-motion material for middle school students at De Britto High School. This research is an action research classroom. The research design or design used is planning, action/implementation, and reflection. This study uses descriptive analysis techniques, namely by the method of calculating the percentage value of the results of student interest and student responses using questionnaire instruments. The questionnaire results from 75% interest in the first cycle and by 80% in the second cycle. Students respond to schoology-based e-learning by 81%. There is an increase between the first cycle and the second cycle using e-learning so that school-based e-learning in straight-motion material can otherwise increase student interest.

**Keywords**-E-learning, Schoology, Interest learning, Physics learning

## I. INTRODUCTION

The 21st century marked the rapid development of technology and information. Information technology can improve services providing features that can help activity and improve a product and share it through specific strategies[1]. The development of these technologies has changed the way of life in transacting, reading, having fun, communicating, and including learning. Technological advances allow everyone who has access to technology, to obtain information more broadly and faster. The means that people can learn anything, anytime, anywhere, with anyone, in any way [2]. To achieve quality learning students need to have a variety of thinking and innovation skills(e.g., critical thinking, creativity, collaboration, and communication) [3].

Technology displays outstanding in the lives of students with improvements in information and communication technology the computer used in education over the last few years[4][5]. Information and Communication Technology (ICT) is currently very fast in developing in all fields, especially in education. It viewed from both Internet use teachers and students in order to explore a broader knowledge through the internet. Innovations in the development of instructional media in the era of information and

communication technology advance now significantly encourage the birth of the concept and mechanisms of ICT-based learning. This concept, which became known as e-learning has changed the way traditional teaching and learning through face to face in the classroom into online learning. Teaching in this digital era can help students to be more involved in learning [6].

The presence of learning applying the internet called e-learning can be achieved anywhere and anytime to support learning media in facing future challenges [7]. The application of e-Learning in learning done in a form known as LMS (Learning Management System). LMS is computer software designed for online learning [8]. Distribution of learning material done online and allows for collaboration between teachers and students practically. LMS provides teachers to manage every aspect of education, from student registration to storing test results and also will enable students to accept assignments digitally and still be able to interact with other students [9]. One of the existing LMS (Learning Management System) is Schoology. Schoology is one of several LMS provides facilities for teachers and students to communicate with each other in a learning environment within online social networking [10].

Some factors will influence the success of the learning process includes the teacher's, the selection of learning methods, learning techniques, learning strategies, learning facilities, and the motivation and interest of students in learning. A combination and good synergy will provide a significant learning experience for students[11]. Investment in students is one of the factors that impact learning outcomes because, with interest, a student will try to achieve the goals he wants. With interest in students, the teacher will be beneficial and will facilitate in directing students to achieve goals in learning activities. The learning process that can involve students to carry out learning activities actively will be meaningful to students so is expected to be able to foster the values that students need in taking life.

The results implementation of the physics learning process that has been taking place shows that most students

seem less interested[12]. Therefore mastery of students 'concepts of physics is wanting and the need for learning media as a tool to increase students' interest in the concept of physics. Therefore, the goal of the study to determine the increase in student interest before using schoology and after using schoology on straight-motion material.

## II. METHOD

This research is a type of action classroom research. The research design used is planning, action/implementation, and reflection. The subject of this study was the tenth-grade students of De Britto High School. The instruments used in this study was student interest questionnaire instruments before and after using media schoology as well as student response questionnaires to learning using schoology. Technique analysis date using Calculate the percentage of each sub-variable formula :

$$NP = \frac{R}{SM} \times 100\% \quad (1)$$

Where:NP= percentage score, R= score total, SM= maximum score

Furthermore, the results of data analysis grouped into learning assessment criteria as presented in Table I

TABLE I ASSESSMENT CRITERIA

No	Interval (P)	Criteria
1	80% – 100%	Very good
2	66% – 79%	Good
3	56% – 65%	Poorly
4	0 – 55%	Not good

## III. RESULT AND DISCUSSION

This classroom action research divided into two cycles, namely the first cycle and second cycle. For cycle I and cycle II using schoology-based e-learning as a tool to increase students' interest in physics learning in straight-motion material. Schoology downloaded at PlayStore or access in [www.schoology.com](http://www.schoology.com).

### A. First cycle

The research phase consisted of:

#### 1) Planning

At this stage, the researcher prepares to learn implementation plans, media schoology, and questionnaire sheets for students' interest in the learning process and the tools needed to support the learning process.

#### 2) Action/implementation

The implementation of the action refers to the implementation plan of learning with straight-moving material. Each student is

asked to bring a smartphone or laptop in order to access media researchers used Schoology.

#### 3) Reflection and analysis

At this stage, the researchers evaluated the implementation of the action in the first cycle used as a material planning consideration next cycle of learning. If the expected results have not achieved, then repairs carried out on the next cycle and beyond. The following results of the analysis of student interest in the first cycle seen Table II and Fig. 1:

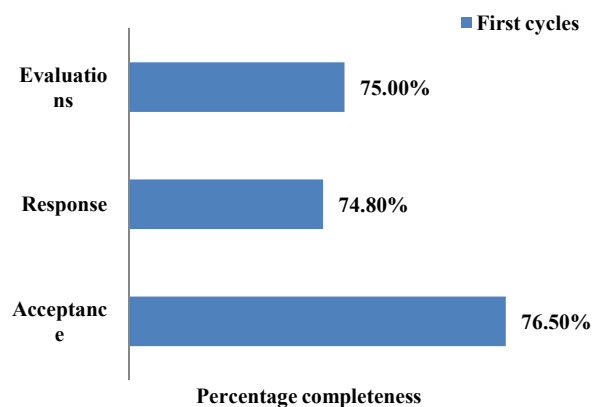


Fig. 1 The percentage of student interest in cycle of 1

### B. Second cycle

The research phase consisted of:

#### 1) Planning

At this stage, almost the same as the first cycle that researchers set up as needed during the learning process. In cycle II, students divided into two groups, each group consisting of 5 students. The task of the group is to discuss some of the questions given by researchers who compiled in schoology. Group 1 discusses regular straight-motion material, and group 2 discusses regular motion with irregular changes.

#### 2) Action/implementation

The implementation of actions I and II each of two meetings with the same material. Each student discusses groups in schoology and uploads the work of each group into schoology.

#### 3) Reflection and analysis

At this stage, the researcher evaluates the implementation of actions in the second cycle to see the level of student interest in e-learning based on schoology. Here are the results of student interest after passing the first cycle.

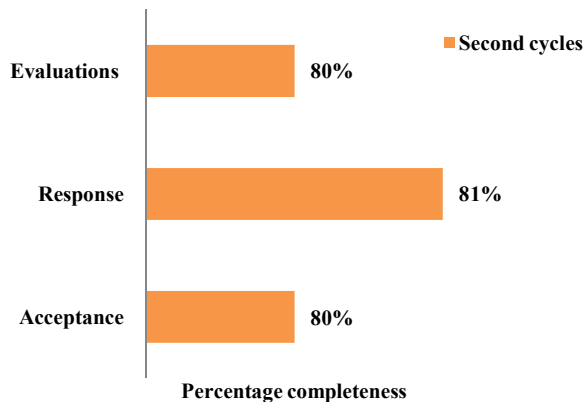


Fig. 2The percentage of student interest in cycle 2

Based on research Fig. 2 that obtained the interest of students in the first cycle with three aspects of assessment, namely interest assessment aspect, feedback and acceptance got an average yield of interest of the students in the first cycle is 75.4%.

TABLE II

PERCENTAGE OF SUCCESS OF STUDENT INTEREST

Indicator	First cycles	Second cycles
Acceptance	77%	80,0%
Response	74,8%	81,0%
Evaluations	75,0%	80,0%
Average percentage	75,4%	80,4%

Based on Table II, it shows an increase in interest in learning between cycle one and cycle 2 with the components of acceptance, responses, evaluations with average percentages in cycle 1 of 75.4% and cycle 2 of 80.4%. Based on the analysis that carried out, there is an increase from the first cycle to the second cycle, namely in the first cycle, the average yield percentage is 75.4%, and for the second cycle, the average percentage of acquisition is 80.4%.

Therefore, researchers only do two cycles because they have achieved the desired goal, namely to increase students' interest in schoology-based e-learning, student responses to schoology-based e-learning. Unique from increasing interest among the two classes, this study also looked at how students respond to using schoology in learning physics. Student responses obtained using a questionnaire consisting of indicators ease of learning, ease of interaction, and learning fun — the results of student response analysis displayed in the form of Fig. 3.

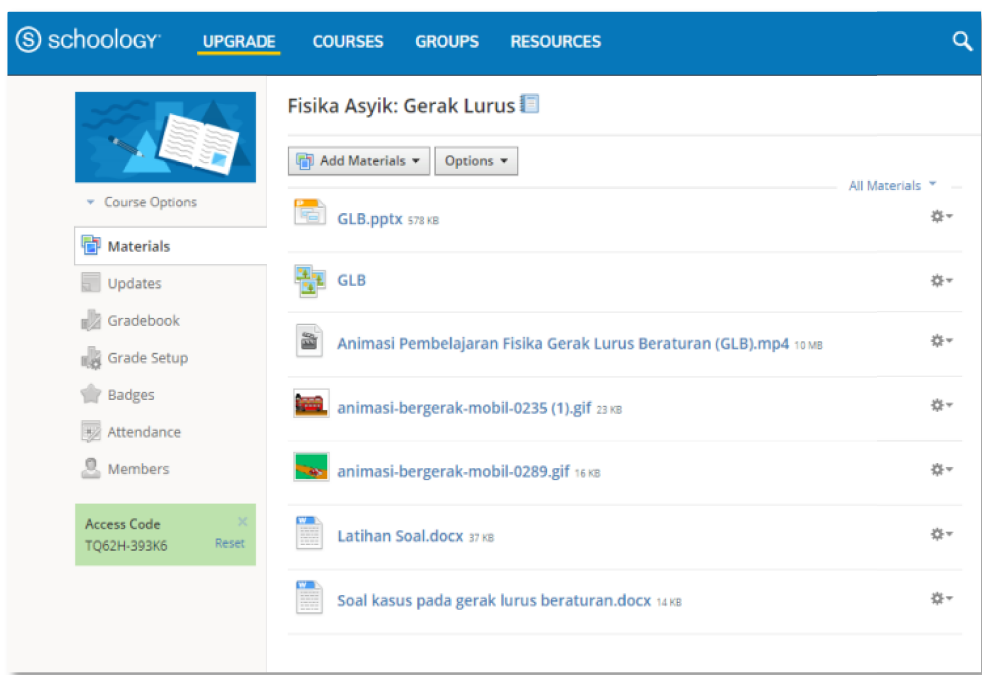


Fig.3 Display material on the courses menu Schoology

The purpose of using Schoology in schools is to connect teachers, students, and parents in a virtual class that is supported by technology to help enhance student learning outcomes [13].The teacher can access the material in the

online course anytime and anywhere using a smartphone, tablet, or laptop as long they connected to the internet [14]. The learning process using internet media is different from the process of face-to-face learning with teachers, learning to use

internet media needs to consider risks, systems, structures, schedules, and costs. One solution to overcome the risks in terms of cost is to use a Learning Management System [15]. The Learning Management System presents a virtual platform for e-learning by activating management, student monitoring, delivery, learning control, testing, communication, registration, and scheduling processes [16].

Schoology as one of the learning management systems (LMS) implemented various organizations in online learning systems. It is because registering Schoology benefits includes ease of use, security for student safety, and efficient tools and resources for teachers [17]. Next, [18] mentions the advantages of Schoology based on its features (Fig.3)

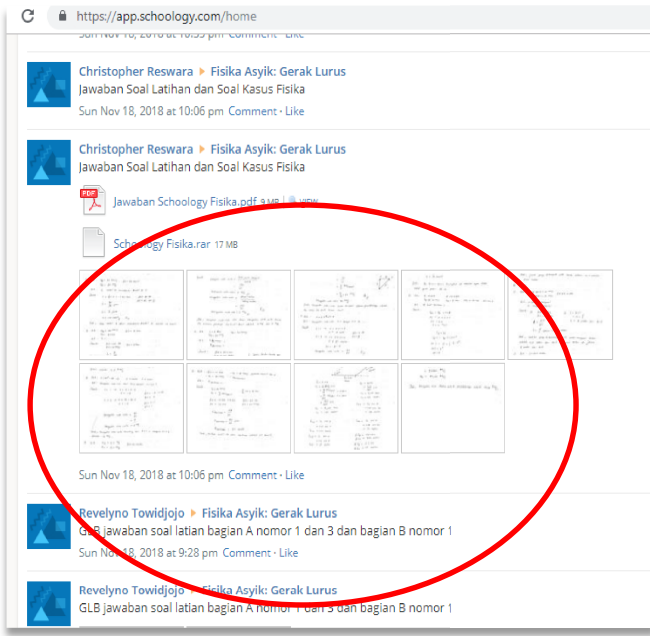


Fig. 4 Display student activity during the learning process

The use of technology in education leads to a positive impact on educators and students. A recent trend in education use of e-learning based schoology that can be accessed online by students as learning [19]. Schoology-based E-learning is an alternative learning media used to deliver teaching materials to students utilizing information and communication technology. Students can learn independently by using e-learning as a medium so that the activities of students become the center of learning (Fig. 5). Learning by using e-Learning requires students to be more independent in the learning process, thus learning with e-learning can increase student activity [20]. The successful implementation of schoology-based e-learning depends on user perceptions, as well as the skills and knowledge in using computers [5]. The education process based on the self-employed motivated and controlled, students can study at school comfortably and have the occasion to interact immediately with the teacher [21]. E-learning is an innovation that has the most significant contribution to changes in the learning process. Students not only listen to the explanations of material from the teacher,

but also carry out activities to observe, ask questions, assume information, get simultaneously, and communicate [22]. E-learning is one learning model that uses information and communication technology [23]. In general, physics learning activities using schoology shown in Table III.

TABLE III  
TEACHER LEARNING ACTIVITIES USING SCHOOLGY

Topic	Learning activity	Mode
Straight Motion	Discussion of straight motion, the percentage of straight motion, motion simulation straight, rectilinear motion formula	Online
	Form a group	Online
	Explaining the concept of straight motion	Online
	Display a video of learning related to straight motion	Online
	Interact question questions related to the material provided with students	Online
	Resolving questions about the rectilinear motion	Online
	Collect assignments given by the teacher	Online
	Evaluate learning	Online

In Schoology-based e-learning, various menus are making for the learning process, and With the help of an access code from Schoology, students can enter the class that the teacher has made. Schoology-based e-learning has similarities with conventional learning, but in schoology learning, students interact more online using android. The menu on the Schoology view that made contains subject matter that made in the form of powerpoints, pdf files and can also include in simulation videos/learning videos. All made by the teacher concerned for each meeting on Physics subjects, accompanied by assignments or discussion activities as well as the learning process in the classroom. Question and answer interaction regarding physics subject matter and the completion of questions related to vertical motion, as shown in Fig. 4.

Furthermore, the teacher provides a variety of straight-motion material (Fig. 3) that can be download and other supporting material in the form of a URL. Students can access Schoology e-learning material anywhere and anytime, according to the target time determined by the teacher. The makes it easy for students to study anywhere and anytime. In Schoology, there is also a menu to provide questions that must be followed by students (Fig. 4) the clarity of the target students in a consistent way of working on the problem can fulfill well. Students and teachers can interact in Schoology in the form of discussions related to the topic that has given, and students can also ask questions in the forum icon on schoology. In addition, students can also interact with other students to discuss and work together. Therefore, according to the author, the use of schoology-based e-learning is very

useful in physics learning. Many features can be used compared to using existing e-learning.

#### IV. CONCLUSION

The results of the research that applied that there is an increase in percentage in the first cycle and second cycle, the application of schoology-based e-learning is concluded to increase students' interest in physics learning. Increased interest in learning between cycles 1 (75.4%) and cycles (80.4%).

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