**CHAPTER I**

**INTRODUCTION**

1. **Background**

Globalization that increasingly rapid made enhancement of human resource quality became urgent matter. The rapid development of information technology nowadays made someone left behind, if he/she does not have the quality of qualified resources to maximize the utilization of information technology. Every country as a part of global community working to improved human resources in order to be able to walk hand in hand with other countries.

Indonesian efforts in improving the quality of human resources through education, such as the function and purpose of education as stipulated in Law No.20 of Indonesia Year 2003 on National Education System Chapter II, Clause 3, which reads:

"National education serves to develop the ability and character development and civilization of the nation's dignity in the context of the intellectual life of the nation, is aimed at developing students' potentials in order to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and responsible. "

The same law also regulates components of the national education system, including formal education institutions as providers, educators and education personnel, and of course the students, who should support each other in order to create a national education system that is solid and have one goal, *qualifying human resource.*

Education is a basic needs that must be fulfilled, in accordance with both the demands of scientific progress and the demands of civilization and

technological progress of a nation. Civilization of a nation is determined by the level of education of its citizens, so that education is a benchmark of the progress of a nation. Education plays an important role in creating a human quality that will take the country more advanced.

Law No. 20 Year 2003 on National Education System stipulates that education in Indonesia can be organized through three channels, namely formal, non-formal and informal. Non-formal education pathways have the same status as formal education in providing educational services to all children of the nation. Non-formal and Informal Education also have the opportunity to fulfill the learning needs of a growing community that unable to be fulfilled by formal education. In that law also states that non-formal education serves as a complement, risers, replacement and supporting formal education. Therefore, it should be made various efforts to develop and expand access to education, improve the quality of education and governance that is transparent and accountable implementation so that able to realize a community-based education to achieve lifelong learning and education*.*

Formal and informal education have the character of a voluntary, flexible learning process, active participation of students and the exchange of ideas between students and educators. Because it is in the context of the national education system, family as the venue for informal education, school as a place of formal education, and public in relation to non-formal education is a component of the education system. Formal form that known as the structured education and program, while Non formal form is usually short-duration and aim to obtain forms of knowledge or skills that can be directly used by the owner. Forms of informal education do not know a certain time period and not structured, and happened a lifetime because it involves a process of interaction and adaptation to the social environment. The three types of education shall be merged into two parts, namely education (formal education) and school education (PLS) which includes informal and non-formal education.

Non-formal education has a function to learn the individuals or groups to be able to empower and develop themselves so that they can adapt to the changes/development period. In addition, also non-formal education should also in sync with the development of technology so that non-formal education is no longer boring for students. Like extra learning that using blogs.

Blog is stand for web log which means it is a form of application/web service created to allow a user to publish information it holds through the writings contained in a posting. To visit a blog needed internet network so that when we connect between education, blogs and network we can perform a learning process it is caused by utilization of internet for education can be done in three forms: *web course, web centric course,* and *web enhanced course* with expectations learning objectives can be achieved, especially on subjects that are often considered difficult by students but it is important in everyday life.

One branch of science in education was mathematics. Mathematics is a branch of science that is very important, both in everyday human life, as well as in the development of other disciplines. For example, the concepts of trigonometry became the basis for calculating the distances between stars in the science of astronomy, the concept of exponents and logarithms used in economics, and many other facts showing that to explore several disciplines, need mathematical theories as a basis. Recognizing the importance of mathematics in human life, the students as a target of *qualifying* the establishment of *human resources,* after the education process is expected to have adequate mathematical ability to sustain life as human resources.

Various measures taken by the government to achieve the educational goals, one is to continue to review the curriculum, be addapted to the needs of the curriculum and the development of the times. Curriculum 2013 (K-13) has now been enacted in a number of schools in Indonesia. In this curriculum, the learning process in the educational unit organized in an interactive, inspiring, fun, challenging, motivating the students to actively participate and provide enough space for innovation, creativity, and independence in accordance with their talents, interests, and physical and psychological development of participants students (Permendikbud 65, 2013). In its implementation, the government offers a scientific approach*.* Learning scientific principles contained in Permendikbud (65, 2013) are: participants facilitated students to find out; based on a variety of learning resources; strengthening the use of a scientific approach; Competency-based learning; integrated learning; learning that emphasizes the diverging answers are true multi-dimensional; Learning skills are applicable; increase and balance between physical skills *(hard skills)* and mental skills *(soft skills),* learning that promotes cultivation and empowerment of students as lifelong learners; learning to apply the values by giving exemplary, willingness to build and develop the creativity of learners in the learning process; learning that takes place at home, at school and in the community; learning to apply the principle that anyone who is a teacher, who is a student, and anywhere is a class; utilization of information and communication technologies to improve the efficiency and effectiveness of learning; recognition of individual differences and cultural background of learners.

Implementation of K-13 with the principles of the learning process above is expected to improve the quality of education, especially in the line of teaching and learning, including the process of teaching and learning mathematics. To realize p roses learning that meets the principles above, it takes a solid instructional design. Learning that is not designed systematically will not achieve maximum results. Moreover, in mathematics. Abstract mathematics requires extra power in the learning process, it took a systematic design, in order to study mathematics becomes meaningful. Instructional design is the development of learning systematically to maximize the effectiveness and efficiency of learning, in the form of an organized procedure includes the steps of analyzing, designing, development, application, and assessment of learning (Yaumi, 2013).

Many SMA being targeted Schools K-13. K-13 schools used to be a pilot project since 2013/2014. As demanded by the curriculum, the learning is based on the principles of scientific learning. Applying scientific learning for high school level students who study habits dominated by teacher centered learning (learning centered on the teacher) is not an easy thing, especially math. Moreover, a lot of research showing that students' difficulties working on a math problem without a complete example is shown by the teacher beforehand. Most of the students were only able to complete exactly the same math problem as an example of his teacher. Editors slightly different math problems make students confused to find a solution. Therefore, it takes a synergy models, strategies, and methods of teaching mathematics to support the implementation of scientific learning of mathematics in the classroom.

Another factor that could affect the outcome of learning is learning habits outside of school hours. Formal mathematics learning time in the classroom for mathematics courses required only 4-7 hours of lessons (the equivalent of 3 to 5.25 hours) a week. If it is not supported by a lot of practice outside the classroom, learning outcomes become less than the maximum. However, technological developments in recent years, seem to influence a child's study habits at home, results of observations conducted in SMA Negeri 1 Bajeng against a number of students conducted by Husniyati (2016) showed that the average duration of a gadget play is three hours a day. Those who have a facebook account her status *updates* at least twice a day, not including post a comment. Those who use *Blackberry Messenger* (BBM) to replace the *Picture Display* (DP) or the image to see an average of three times a day, not including updating *Personal Message* and watch a you tube video that is often done by the students. If the time spent on these activities is used to repeat the lesson, most likely a result of their learning will be better. Moreover, if we capitalize upon video. Video is a medium that is suitable for a wide range of science learning, such as classes, small groups, even though one student alone.

In addition, there is one factor that must be considered as supporting the learning outcome that is the culture of reading. On one of the websites that *www.etyabdoel.com* shows survey results of UNESCO in 2012 says the average person Indonesia only read three books per year, while in developed countries people read 20-30 books per year. There is another survey of UNESCO said that in Indonesia from 1000 turned out to be only one person who has interest in reading.

Unfortunately interfere with the duration of the student's learning at home is not authorized subject teachers. Teachers only authorized to give advice and counsel what they should do at home. Along with the development of technology, one of the solutions to overcome the above is a learning extra use of the Internet network-assisted video *tutorial,* the authors intend to conduct a research study entitled "Application of Extras Learning In The Internet Network Assisted Video Tutorial At mathematics learning on Grade X SMA Negeri 1 Bajeng"

1. **Limit of Problem**
2. Extra learning process in this research is to help students to learn well outside the formal lessons with the aim to increase the knowledge and strengthen the material they have learned in class.
3. Extra learning in this study using the internet on *Web enhanced course* by using blogs.
4. Video tutorial in this study aim to make students more familiar with the material that has been read in the blog.
5. Extra learning in this study will be used in learning the material mathematic exponent
6. The model used in this study the type cooperative learning model *Students Teams Achievement Division* (STAD).
7. **Research Problems**
8. How does the description of students’ mathematics learning outcomes taught using a model of cooperative *Students Teams Achievement Division* (STAD) with the provision of extra learning in the Internet network-assisted video tutorial?
9. How does the description of students’ mathematics learning outcomes taught using a model of cooperative *Students Teams Achievement Division* (STAD) without the provision of extra learning in the Internet network-assisted video tutorial?
10. How does the improvement of student’s mathematics learning outcomes after being taught using a model of cooperative *Students Teams Achievement Division* (STAD) with the provision of extra learning in the Internet network-assisted video tutorial?
11. How does students’ mathematics learning outcomes after being taught using a mathematical model of cooperative *Students Teams Achievement Division* (STAD) without the provision of extra learning in the Internet network-assisted video tutorial?
12. Is there a difference in students’ mathematics learning outcome among the students taught using a model of cooperative *Students Teams Achievement Division* (STAD) with the provision of learning extra in the Internet network-assisted video tutorials and the students taught using a model of cooperative *Students Teams Achievement Division* (STAD) without the provision of learning extras in the internet network-assisted video tutorial?
13. **Research Objectives**

The purpose of this study was fatherly to know:

1. Description of students’ mathematics learning outcomes taught using the model of cooperative *Students Teams Achievement Division* (STAD) with the provision of extra learning in the Internet network-assisted video tutorial.
2. Description of students’ mathematics learning outcomes taught using the model of cooperative *Students Teams Achievement Division* (STAD) without the provision of extra learning in the Internet network-assisted video tutorial.
3. Students’ mathematics learning outcome after being taught to use a model of cooperative *Students Teams Achievement Division* (STAD) with the provision of extra learning in the Internet network-assisted video tutorial.
4. Students’ mathematics learning outcome after being taught to use a model of cooperative *Students Teams Achievement Division* (STAD) without the provision of extra learning in the Internet network-assisted video tutorial.
5. Enhancement of students’ mathematics learning outcomes among students who are taught using a model of cooperative *Students Teams Achievement Division* (STAD) the provision of learning extra in the Internet network-assisted video tutorials and the students taught using a model of cooperative *Students Teams Achievement Division* (STAD) without the provision of learning extra in the network internet-aided video tutorial.
6. **Research Contributions**
7. Theoretical Contribution

Contribute to knowledge about the use of the Internet as a media-assisted video tutorial for learning.

1. Practical Contribution
	1. For Teachers
	2. As a reference material to make students learn
	3. As a reference material to select appropriate learning media to improve student learning outcomes.
	4. For Students
2. Help students understand math.
3. Create a new atmosphere in math-based learning.
	1. For Schools
	2. As a reference material that can be taken into consideration or input for the development of learning
	3. Supporting the development of technology in the school environment.