CHAPTER II

REVIEW OF RELATED LITERATURE

In this study, there are many related theories that have to be reviewed in order to know the related literature. The researcher defines the problem and obtains the definite idea. Those are about definition of Curriculum 2013, Scientific Approach, and previous study.

2.1 Curriculum 2013

According to the philosophy of education, education is a long and ongoing process to transform into a human learner in accordance with the purpose of creation, which is beneficial for himself, for others, for the universe, and all its contents and its civilization (Muhammad:2013). Moreover, education is a conscious effort to develop a human into manhood, good manhood intellectual, social, and moral maturity. Therefore, the process of education is not only to develop students intellectually, but also covers the full potential of learners (Wina Sanjaya: 178-179). This case illustrates that learners are not subject to be bombarded with information, but they are subjects that have potential to be directed in the learning process. These are the concepts which are developed by the government in the curriculum 2013.

Curriculum 2013 has been set by the government and legalized in Permendikbud No 81A year 2013. This curriculum is a curriculum that complements the concepts that have been developed in the curriculum KTSP

2006. As previously described, this curriculum emphasizes the development of the overall competence of learners.

2.1.1 The Development in Curriculum 2013

Curriculum 2013 development is a further step from the previous curriculum that is Competency Based Curriculum 2004 and SBC 2006, which includes competency attitudes, knowledge, and skills in an integrated manner (Susilowati, 2013).

The demands of education in Indonesia are referring to the eight National Education Standards which include; Management Standards, Standard Cost, Standard Infrastructure, Teachers and Education Personnel Standards, Content Standard, Standard Process, Standard Assessment and Competency Standards (Ministry of Education and Culture, 2013). Similarly, existing development in the curriculum in 2013, which is inseparable from the national standards, especially in the aspect of content standard and competency standard compared with the previous curriculum, the curriculum CBC 2004 and SBC 2006. These developments can be illustrated by the following table:

No	CBC 2004	SBC 2006	Curriculum 2013
1	Competency standards derived from the Content Standard		Graduates Competency standards derived from the need
2	Content Standards formulated by Course Objectives (Subject Graduates Competency Standards) which are specified into Competence Standard and Basic		The content standards derived from the Graduates Competency Standards which has Core Competencies through free subjects.

	Competence Subjects	
3	The separation between the subjects forming attitudes, skills formation and shaping of knowledge	All subjects must contribute to the formation of attitudes, skills, and knowledge
4	Competencies derived from subjects	Subjects derived from the competency
5	Subjects have no correlation with other (subject), like a bunch of separate subjects	All subjects bound by core competencies (per class)

Table 2.1.1 The development of curriculum 2013 based on Content Standard and Graduates Competency Standard (Ministry of Education and Culture, 2013)

Besides, the development of the curriculum in 2013 also includes improvements in the mindset of the learning process, both in terms of subject orientation, educational atmosphere, loads of material, the media and the role of the teacher.

In terms of subject orientation, developments are oriented to student learning (Student Centered). This affects the learning atmosphere, where previously a one-way, isolated on teaching materials and passive, becomes interactive, more complex and active. Learning was also more cooperative with the team-based learning project.

In teaching materials aspect, they are adapted to the context of real life and are related to each other. In addition, the burden of the material is also tailored to the needs of students by considering their potential. In addition, the learning process is supported by more innovative media-based technology developments. The

autonomy and trust which are previously only held by the teacher, it has been given to students. So in this case there will be a process of knowledge exchange between teachers and students.

2.1.2 Changes Elements of Curriculum 2013

There are four elements of curriculum changes in 2013 include the Graduate Competency Standards, Content Standards, Process Standards and Assessment Standards. As for changes, can be explained as follows

2.1.2.1 Graduate Competency Standards

Element	Description			
	ES	JHS	SHS	VS
Graduate Competence	An increase in the balance of soft skills and hard skills and competencies which include aspects of attitudes, skills, and knowledge			

Table 2.1.2.1 Elements of changes in the curriculum 2013 include the Graduate Competency Standards (Ministry of Education and Culture, 2013)

The table above is described Graduate Competency Standards in all grades, from Elementary School (ES), Junior High School (JHS), Senior High School (SHS) and Vocational School (VS). The increase in the balance both soft skills and hard skills in terms of attitudes, skills, and knowledge becomes the goal of this standard.

2.1.2.2 Content Standards

Element	Description			
	ES	JHS	SHS	VS
Subject position	The competencies which are derived from subjects transformed into subjects are developed from the competency			
Approach	Competence is developed through:			
	Thematic integrated in all subjects	Subject	Subject	Vocational

Table 2.1.2.2 Elements of changes in the curriculum 2013 include The Content Standards (Ministry of Education and Culture, 2013)

There are two points in this standard, subject position and approach. In subject position, the focus is on the competency of learners. The subjects choice is based on their competencies.

Besides, the use of approach is differentiated based on the grade. For students in Elementary school, it uses thematic integrated approach. Then for Junior and Senior high school use subject to develop the competencies. The last, for vocational school use its current vocation as its approach.

2.1.2.3 Process Standards

<table>
<tr><td rowspan="2">Elemen</td><td colspan="4">Description</td></tr>
<tr><td>ES</td><td>JHS</td><td>SHS</td><td>VS</td></tr>
<tr><td rowspan="2">Learning process</td><td colspan="4">• Standard Process which originally focused on the exploration, elaboration, and Confirmation completes with watching, asking, Processing, Presenting, Concluded, and Creating.
• Learning does not only happen in the classroom, but also in schools and communities
• Teachers are not the only source of learning
• Attitude is not taught verbally, but through example</td></tr>
<tr><td>Thematic and integrated</td><td>Science and social studies are taught in an integrated</td><td>There are compulsory and optional subjects according to their talents and passion</td><td>Competence skills are appropriate with industry standards</td></tr>
</table>

Table 2.1.2.3 Elements of changes in the curriculum 2013 include The Process Standards (Ministry of Education and Culture, 2013)

Learning process in curriculum 2013 is designed based on the purpose of it that is focus on students' competencies. The activities during learning process are more complex but integrated with the subject in order to maximize their understanding of an object and also give them more experience to learn something. Role of teacher is not only as the source of education, but he facilitates the students while teaching.

Besides, the preparations of constructing the syllabus and lesson plan are included in this standard. Thus,

it has to consider the idea in scientific approach in the application.

2.1.2.4 Assessment Standards

Element	Description			
	ES	JHS	SHS	VS
Assessment of learning outcomes	Assessment of competency-based • The shift from assessment through tests [measuring competence based on knowledge alone], toward authentic assessment [measure all competency attitudes, skills, and knowledge based process and outcome] • Strengthening ARS (Assessment Reference Standard) that is the achievement of learning outcomes based on the scores obtained on the position of the ideal score (maximum) • Assessment is not only on the level of Basic competence, but also core competencies and standard graduation • Encourage the use of portfolios that the students as the main instrument of assessment			

Table 2.1.2.4 Elements of changes in the curriculum 2013 include The Assessment Standards (Ministry of Education and Culture, 2013)

Assessment as the measurement tool of learning process is not only formed as test but included the whole process and outcome. Test measures the cognition of the study, thus by this changing, it shows that the aspects to get good result are not only the cognition, but also affective and psychomotor which may be found during learning process. As other element of changes, the main instrument of assessment is the students themselves.

2.1.3 Pilot Project schools

Curriculum 2013 is currently a pilot project for the Indonesian government. The implementation in some schools have been scattered in several parts of Indonesia. Noted there are 6,326 schools from elementary school level, junior high schools, high schools and vocational schools.

The number of schools and the names of schools which are targeted as the curriculum 2013's implementation can be accessed at the web address which has become government's official website. (http://kurikulum.kemdikbud.go.id/public/school.)

2.2 The Concept of Scientific Approach

In the implementation of Curriculum 2013 in the field (read: school), teachers should use a scientific approach during the learning process, because this approach is more effective than traditional approaches (Ministry of Education and Culture, 2013)

2.2.1 The Criteria of Scientific Approach

Based on the material of Curriculum 2013 Socialization Training and Education that has been designed by the Ministry of Education and Culture 2013, there are seven criteria for a learning approach that might be described as scientific learning, those are;

2.2.1.1 Learning materials based on facts or phenomena that can be explained by a certain logic or reasoning; are not the extent of balance, fantasy, legend, or a fiction.

2.2.1.2 Explanation teacher, student response, and teacher - student interactions. Educational free from prejudice immediately, subjective thinking , or reasoning that departs from logical thinking groove.

2.2.1.3 To encourage and inspire students to think critically, analyst, and accurate in identifying, understanding, solve problems, and apply their learning material.

2.2.1.4 To encourage and inspire students to be able to see the difference in hypothetical thinking, equality, and link to each other from the teaching materials.

2.2.1.5 To encourage and inspire students to be able to understand, apply, and develop rational thought patterns in response to the material and learning objectives.

2.2.1.6 Based on the concepts, theories and empirical facts that can be held accountable.

2.2.1.7 The purpose of learning is formulated in a simple and clear, yet attractive system’s presented.

A learning process must be protected from the properties or non-scientific values such as intuition, use common sense erroneous, prejudices, discovery through trial and error, and the origin of critical thinking.

2.2.2 Steps in Scientific Approach

Scientific approach has several steps that are implemented in the study. As for these steps can be illustrated by this following chart:

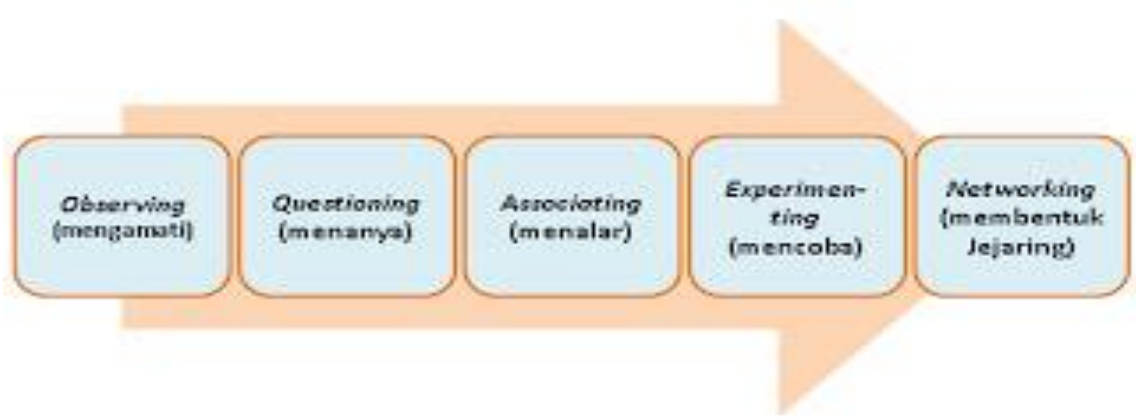

Chart 2.2.2 steps of scientific approach (ministry of education and culture, 2013)

2.2.2.1 Observing

At this stage, learners are asked to observe an object with a specific purpose. Objects which can be observed are a speech, article, video, and other things that can be accepted by audio and visual learners. More activities can be done impersonate or identify the object.

2.2.2.2 Questioning

In the second stage, after students observe the objects that have been defined, they are asked to question some parts in the object, such as the structure, differences or similarities, or the possible use of other objects while remaining in the same context.

2.2.2.3 Experimenting

The third stage of the Scientific Approach is often also known as the Exploration. In this stage, the learners are asked to do activities that are more complex and structured. Through these activities the learners will be able to explore their understanding of an object in a semi-real context (simulated).

2.2.2.4 Associating

In Association stage, students will compare the objects that have been previously studied with a teacher with other sources. It is aimed to give experience for learners in seeking the truth of an object, so that the role of the teacher is not the only source of knowledge for students.

2.2.2.5 Networking

The final stage in this scientific approach is also known as networking or communicating. Earlier in stages Exploration, students were asked to perform structured activities (simulation) of an object. However, in this phase, students will learn object by applying it to real activity, both outside and inside the classroom. In addition, besides introducing students to the application of

science in the real life, the activities in this stage also increases the courage of the students in the study of an object.

After applying it, the students were also asked to write down problems that may occur associated with the object. These problems can be obtained through experience in implementing object or obtained from studies that have been done with regard to the object.

2.3 Previous Study

Scientific Approach is a part of Curriculum 2013 as Indonesia's curriculum today which is implemented in some schools that has been described before. This concept is classified as something new in the realm of education in Indonesia. Therefore, only a few of the academic and practitioner who examined about this, because Scientific Approach's implementation is executed less than a year and only in a few places that have been determined.

However, the authors have found a journal that discusses about the analysis of curriculum 2013. The journal is written by Deden Cahaya Kusuma (2013) with the title of the journal analysis "*Analisis Komponen-Komponen Pengembangan Kurikulum 2013 pada Bahan Uji Publik Kurikulum 2013*".

In this analysis, it described on curriculum development component found on the curriculum in 2013. Moreover, it explained about the advantages and disadvantages of the components of curriculum development 2013 which

are available on the Public Test Materials Curriculum 2013. These Two things are the object of this journal.

The analysis in the journal says there are several components of the development of the curriculum in 2013, both from elementary school, junior high school or senior high school / vocational school. Such components include components of purpose, content components, component of methods, and evaluation components. Practically, there are several components that have been implemented properly and also their vice versa.

Based on the results of the analysis, three components of curriculum development in 2013 are the components of objectives, content, and methods have been said as good implementation, while evaluation components does not contribute to the fullest. It can be seen from some of the 2006 curriculum issues which are still not resolved.

Seeing the discussion of curriculum 2013 is still very little, the researcher feels confident that the sustainability of this research will be conducted. The title of this research is "A Study of the Scientific Approach in English Class at SMP Muhammadiyah 12". The researcher hopes that this study will assist the government in implementing the development of education in Indonesia through the curriculum in 2013.