IMPROVING SCIENTIFIC ATTITUDE THROUGH PROJECT-BASED LEARNING FOR ELEVENTH GRADE STUDENTS AT MAN BATU

THESIS

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JULY, 2018

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THESIS

Presented to Tarbiyah and Teacher Training Faculty
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DEDICATION

Alhamdulillahi robbil alamin hamdan Syukron lillah giving thanks gratitude from the deepest of my heart ever sailed the fruit of my work simple. This study is dedicated to :

Allah SWT the best scenario writer of life,

Rasulullah SAW the best man in the whole word ,

My Beloved Father and Mother (Sugianto and Piasih)

Dearest Sisters (Dewi Novita and Marlik)

The education in Indonesia

All of the children as the greatest future

MOTTO

فَبَعَثَ اللَّهُ غُرَابًا يَبْحَثُ فِي الأَرْضِ لِيُرِيَهُ كَيْفَ يُوَارِي سَوْأَةَ أَخِيهِ قَالَ يَا وَيْلَتَا أَعَجَزْتُ أَنْ أَكُونَ مِثْلَ هَذَا الْغُرَابِ فَأُوَارِيَ سَوْأَةَ أَخِي فَأَصْبَحَ مِنَ النَّادِمِينَ

Then Allah sent a crow who scratched the ground to show him to hide the dead body of his brother. He (the murderer) said: "Woe to me! Am I not even able to be as this crow and to hide the dead body of my brother?" Then he became one of those who regretted. **(Al-Maidah:31)**

Give a bowl of rice to a man and you will feed him for a day. Teach him how to grow his own rice and you will save his life

H.Mokhammad Yahya, Ph.D
The Lecturer of Tarbiyah and Teaching Training Faculty
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To Whom It May Concern,

Dean of Tarbiyah and Teaching Training Faculty

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Assalamu'alaikum Wr.Wb

This office memo declares that Thesis originally owned by :

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Is considered **acceptable** to be defended after being intensively read and regularly consulted in the area of research content, language, and writing composition.

Wassalamu'alaikum Wr. Wb

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CERTIFICATE OF THESIS AUTHORSHIP

I hereby declare, that this thesis is originally written by Septa Indayanti, students of Social Science Education Program (PIPS) as the requirement for degree of Sarjana Pendidikan (S.Pd), Tarbiyah and Teaching Training Faculty at Maulana Malik Ibrahim State Islamic University, Malang. This research writing does not incorporate any material previously written or published by other parties to achieve the other *Sarjana* status of other Higher Tertiary Education, except those which are indicate in the notes, quotation, and bibliography. Therefore, I am the only person who is responsible for the thesis if there is any objection or claim from others.

Malang, May 22nd 2018

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Bismillahirrahmanirrohim

All praise and thanks to Allah SWT, God who gives blessings and grace. Over his aid author able to complete this thesis with the title "Improving Scientific Attitude through Project-Based Learning for Eleventh Grade students at MAN Batu". Peace and salutation may always be given to our Prophet Muhammad SAW.

This thesis is proposed to fulfill the requirement to finish the study and the degree of *Sarjana Pendidikan* (S.Pd) at Faculty of Education and Teacher Training. In other hand this thesis is also as a simple contribution of the author to world of education.

The author would like to say thank full to all parties who was involved over the process of the writing either direct or indirect :

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3. H. Mokhammad Yahya, Ph.D, as the supervisor ,teacher and mentor, who has taught me more than I could ever give him credit for here, and has shown me, by his example, what a good scientist (and person) should be.

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Malang, 22nd of May 2018

Septa Indayanti

GUIDELINES OF ARAB LATIN TRANSLITERATION

The writing of Arabic - Latin transliteration in this thesis using transliteration guidelines based on the decision by Minister of Relious Affairs and the Minister of Education and Culture of Republic Indonesia No. 158 of 1987 and No. 0543 b/U/1987 which can be broadly describe, as follows:

A. Alphabet

ا	=	A	ز	=	Z	ق	=	Q
ب	=	B	س	=	S	ك	=	K
ت	=	T	ش	=	SY	ل	=	L
ث	=	TS	ص	=	SH	م	=	M
ج	=	J	ض	=	DL	ن	=	N
ح	=	H	ط	=	TH	و	=	W
خ	=	KH	ظ	=	ZH	ه	=	H
د	=	D	ع	=	‘	ء	=	,
ذ	=	DZ	غ	=	GH	ي	=	Y
ر	=	R	ف	=	F			

B. Vocal Long

Vocal (a) long = â

Vocal (i) long = î

Vocal (u) long = û

C. Dipthhongs Vocal

أَوْ = aw

أَيْ = ay

أَوْ = û

اِيْ = î

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ABSTRAK

Indayanti, Septa. 2018.Peningkatan Sikap Ilmiah melalui Pembelajaran Berbasis Proyek pada Siswa kelas 11 di MAN Batu. Skripsi. Pendidikan Ilmu Pengetahuan Sosial,Fakultas Ilmu Tarbiyah dan Keguruan, Universitas Islam Negeri Maulana Malik Ibrahim Malang. Pembimbing: H.Mokhammad Yahya, PhD

Kata Kunci : Sikap Ilmiah, Project-Based Learning, Siswa kelas XI MAN Batu

MAN Batu adalah sekolah menengah atas negeri berbasis Islam yang berada di Kota Batu. Perkembangan pendidikan yang begitu pesat menjadikan MAN Batu terus melakukan perubahan disegala bidang yang menunjang ketercapaian pendidikan yang diharapkan. Kemajuan prestasi sekolah tidak hanya didukung dengan nilai akademik yang baik, namun juga beberapa hal terkait sikap peserta didik yang mampu berkembang dan menjadi pribadi yang adaptif terhadap perkembangan zaman. Perkembangan sikap yang menjadi acuan institusi sekolah yakni perkembangan sikap social, spiritual , dan ilmiah. Melalui pengimplementasian model belajar konstruktiv mengacu pada kurikulum 2013 dapat mengembangkan berbagai sikap pada peserta didik dengan proses pembelajaran yang bermakna.

Tujuan penelitian ini adalah untuk: (1) mejelaskan bentuk pembelajaran berbasis project yag digunakan dalam pembelajaran geografi untuk meningkatkan sikap ilmiah siswa kelas XI di MAN Batu, (2) mendeskripsikan sikap ilmiah yang ditingkatkan melalui pembelajaran berbasis proyek untuk siswa kelas XI MAN Batu, (3) menjelaskan kelebihan dan hambatan proses pengimplementasian project-based learning pada siswa kelas XI MAN Batu.

Dalam mencapai tujuan tersebut digunakan pendekatan penelitian kualitatif dengan jenis penelitian studi kasus. Peneliti bertindak sebagai instrument utama penelitian. Teknik pengumpulan data yang digunakan adalah wawancara, observasi dan dokumentasi. Data dianalisis melalui tiga tahapan analisis data yakni : mereduksi data yang tidak relevan, memaparkan data dan menarik kesimpulan. Uji keabsahan data dilakukan dengan dua teknik, yaitu: tringulasi dan member check.

Hasil penelitian ini menunjukan bahwa: (1) Pembelajaran berbasis proyek dalam meningkatkan sikap ilimiah dalam pembelajaran geografi ini berbentuk pembuatan karya tulis ilmiah sederhana tentang permaslaahan kependudukan di Kota batu (2) peningkatan sikap ilmiah pada siswa IPS III di MAN Batu terlihat sangat baik dalam kategori kerjasama dan cukup dalam kategori menghargai fakta yang ditemui di lapangan (3) kelebihan dari pengimplementasian pembelajaran berbasis proyek ini adalah: dapat meningkatkan motivasi belajar siswa, meningkatkan sikap ilmiah siswa, dan meningkatkan kemampuan memecahkan masalah oleh siswa. Sedangkan hambatan yang muncul adalah : memerlukan banyak waktu, permasalahan perijinan, dan materi pembelajaran yang luas.

ABSTRAC

Indayanti, Septa. 2018.Improving Scientific Attitude Through Project-Based Learning for Eleventh Grade Students at MAN Batu. Thesis. Social Science Education Department, Faculty of Education and Teacher Training, Maulana Malik Ibrahim State Islamic University of Malang. Advisor: H Mokhammad Yahya, Ph.D

Key Words : Scientific Attitude, Project-Based Learning, Eleventh Grade Students MAN Batu.

MAN Batu is an Islamic state-based high school located in Batu City. The rapid development of education makes MAN Batu continue to make changes in all scope that support the expected educational attainment. The progress of school achievement is not only supported by good academic value, but also some things related to the attitude of learners who are able to develop and become an adaptive person in current development. The development of attitudes that become the reference institution of the school that is the development of social, spiritual, and scientific attitudes. Through the implementation of constructivist learning model referring to the curriculum 2013 can develop various attitudes on learners with meaningful learning process.

The purpose of this research is to: (1) explain project-based learning model constructed in geography lesson for eleventh grade students to improve scientific attitude at MAN Batu, (2) describe the scientific attitude improved through project-based learning for eleventh grade students at MAN Batu, (3) explain the advantages and obstacles of the process of implementing project-based learning in eleventh grade students of MAN Batu .

In reaching that goal, a qualitative research approach with case study research is used. Researchers act as the main instrument of research. Data collection techniques used were interviews, observation and documentation. Data were analyzed through three stages of data analysis namely: reducing irrelevant data, exposing data and drawing conclusions. Validity test of data is done by two techniques, namely: triangulation and member check.

The results of this study indicate that: (1) Project-based learning to improving scientific attitudes in geography learning is construct simple scientific papers on demographic problems in Batu city (2) Improving of scientific attitudes indicator especially in IPS III class of MAN Batu can reach in project-based learning show that students have good skills in cooperation and lack of respect for empirical facts in the field, (3) the advantages of implementing this project-based learning are: can improve students 'learning motivation, improve students' scientific attitude, and improve problem solving ability by students. While the obstacles that arise are: time consuming , problem of license and permit, and vastness of learning materials.

الملخص

إندايتي، سبتيا. ٢٠١٨. الحفاظ على المواقف العلمية من خلال التعليم القائم على المشروعات في طلاب الفصل ١١ بمدرسة العالية الإسلامية الحكومية باتو. بحث جامعي. قسم تعليم علوم الإجتماعية، كلية علوم التربية و التعليم. جامعة مولانا مالك إبراهيم الإسلامية الحكومية ملانج. المشريف: الحاج محمد يحيى، دكتوراه.

الكلمات الرئيسية: المواقف العلمية، التعليم القائم على المسروعات، طلاب الفصل ١١ بمدرسة العالية الإسلامية الحكومية باتو.

مدرسة العالية الإسلامية الحكومية باتو هي المدرسة التي تقع في مدينة باتو. وجد الإجراء التغييرات التي عملتْه مدرسة العالية الإسلامية الحكومية باتو في جميع المجلات التي تدعم التحصيل على التعليم المتوقع و هذا لأجل تطويرُ التعليمِ السريعِ. لا تحصل المدرسة على تقدّم الإنجاز لأجل النتائج الاكاديمية الممتزة فقط و لكن لأجل مواقف الطلاب الذين يتطوّر حتى يصبحوا و يملكوا الشخصية التكيف على الزمان المتطور. جعل تطوير المواقف مصدرا أو مرجعا للمؤسسات المدرسية و من تطويرها هو تطوير المواقف الإجتماعية و الروحية و العلمية. فستحصل العملية التعليم على تطوير مواقف الطلاب المتنوعة بتنفيذ نموذج التعليم البنّاء الذي يشير إلى المنهج ٢٠١٣.

الأهداف من هذا البحث هي (١) شرح التعليم على أساس الخطة الذي استخدمه في تعليم الجغرافيا لترقية الموقف العلمي لطلاب الفصل الحادية عشر في مدرسة الثانوية الحكومية باتو, (٢) وصف الموقف العلمي الذي يزيد من تعليم على أساس الخطة لطلاب الفصل الحادية عشر في مدرسة الثانوية الحكومية باتو ، (٣) يشرح مزايا و شغب عملية تنفيذ التعليم القائم على المشاريع في طلاب الفصل ١١ في مدرسة العالية الإسلامية الحكومية باتو.

أستخدم النهج النوعي في هذا البحث لنيل أهداف البحث و باستخدام نوعه هو الدراسة الحالة، فأما التقنيات جمع البيانات المستخدمة هي المقابلة و المراقبة و الوثائق ثم أحلل البيانات بثلاث مراحل منها: تقليل البيانات غير ذات الصلة، و كشف البيانات و استنتاج النتائج. يتم اختبار صحة البيانات من خلال تقنيتين، هما: التثليث (triangulasi) و فحص الأعضاء.

يدل هذا حصول البحث على أن (١) التعليم على أساس الخطة لترقية الموقف العلمي في تعليم الجغرافيا هو صناعة الورق العلمي البسيط عن مشكلات السكان في باتو ، (٢) ترقية الموقف العلمي لطلاب الفصل الحادية عشر في مدرسة الثانوية الحكومية باتو الذين ينظرون جيدا جدا في فئة التعاون وتماما في فئة القيمة الحقائق

الموجودة في الميدان (٣) مزايا من تنفيذ التعليم القائم على المشاريع هي: يمكن أن تحفر الدافع التعليمي للطلاب و تحسين المواقف العلمية للطلاب و مهارة حل المشكلات لدي الطلاب. فأما الشغب المنشئ هي: يحتاج إلى الأوقات و قضايا الترخيص أو الإستئذان و أوسع المواد التعليمية.

CHAPTER I

INTRODUCTION

A. Background

Education nowadays has precocious, 21 century education has encouraged education aspects accommodated to human development and technology development. Through education policy, Indonesia was encouraging education development. K-13 is part of the main aspect which helps toward 21 century education in Indonesia. By design of learning be able to think better of students. Ministry of education in Indonesia has made modify in the model, method, and learning evaluation which appropriate with the development of K-13 that bring into 21 century education.

The education improvement not only about structure and system of the school but also how education can guide the students to achive their cognitive development and skills. Through precisely model, method and assessment development, students are going to achieve their better cognitive development if their study aright.

During that time, social science study inclined that students only study social science as a product, memorize the concept, and theory. In the aftermath science education as process, attitude and application untouchable in learning. Teachers still use direct learning, it's causing that direct learning more practice and easy to achieve the purpose of learning. The consequent of it, learning process centered on teachers and students only memorize the fact information and science as a product. Many learning models developed by teachers and education institution. In implementation of K-13 have several learning strategy and learning method such us,

discovery learning, problem-based learning, project-based learning and so forth. For all concerned have each characteristic, in applied of that strategy and learning method we also adjust with students characteristic and their cognitive development.

As one of the strategy or learning method that applicable in social studies at senior high school, project-based learning (PjBL) is learning strategy which be able to increasing cognitive development of students in senior high school. Project-based learning is a real-world problem-based learning model faced by students and they consider it meaningful, how to address it, and then act collaboratively to create problem solutions[1].Project-based learning is based on constructivism theory which form of students active learning or student centered learning. Project-based learning have different with problem-based learning, as learning theory between project-based learning and problem-based learning have similar on it, they are based on constructivism theory .In output, Project-based learning produce a product that must create and presented by students, problem-based learning have not.

Project that means in PjBL, have different with "project" which made by students and unsolved the society problem or contextual problem[2]. Effective project based learning has characteristics, such us: leads students to investigate important ideas and question, is framed around an inquiry process, is differentiated according to student needs and interest, is driven by student independent production and presentation rather than teacher delivery of information, requires the use of creative thinking, critical thinking, and information skills to investigate, draw conclusion

[1] Bender, William N., *Project-Based Learning:Different Instruction for the 21th century* (United States of America: CORWIN a SAGE company, 2012)
[2] Sani, Ridwan Abdullah. *Pembelajaran Saintifik untuk Implementasi Kurikulum 2013*. Jakarta:Bumi Aksara,2015,page 173

about, and create content, and connects to real world and authentic problems and issues.

Steps in project-based learning which is implemented in this research, there are: presentation of the problem, project planning, scheduling, guided inquiry and product creation, scoring and evaluation[3].

The implementation of project-based learning have some advantages that occur in learning process. The main advantages of project-based learning include: claims of improved academic results, the development of wider skills, increased student motivation and enjoyment, enhanced outreach and engagement beyond academia and advantages for lecturers[4]. In other side project-based learning have challenges, the challenges come from group work, group work which is seen as a hugely important skill but holding the potential for conflict and free-riding by individuals. Another challenges of project-based learning place on lesson time, the limited of lesson time may influence in result of project-based learning. Teachers and students have to make good collaboration to achieve the learning goals.

Social science learning in K-13 has different way to apply , in K-13 use scientific learning approach, which is generally in learning process involve observation to collect data and to analyze. Implementation of scientific approach in learning as sure as improve the student scientific attitude. Students attitude can observe through student action and student activity in social science study classroom. Scientific attitude must appear in science studies, students have to scientific attitudes and teachers must develop that ability in learning process. Scientific attitudes are

[3] *Ibid*, page 181
[4] Harmer,Nichola and Stokes Aliso. *The benefits and challenges of project-based learning:A review of the literature* (Plymouth University: PedRIO paper 6, 2014)

include curiosity, critical thinking, respect to data and facts, open mindedness and cooperation, and perseverance.

In this research, MAN Batu as the one state Islamic senior high school in Batu which implementation K-13. The implementation of K-13 in MAN Batu has been running around 3 years. Learning strategy, method, and learning model that used by teacher use inquiry learning. Majority of teachers, especially social science teachers says that learning strategy, method and learning model which they apply in class is in accordance with scientific learning. Unfortunately, most teachers do not understand which one model, method or strategy that they apply in class, is it discovery learning, problem-based learning, or project-based learning. It will affect the assessment process and student learning outcomes. Given that student learning outcomes not only the result of numbers but also student outcomes are the improve student ability in society, improve student attitude and prepare students for adulthood.

Project-based learning as learning model that implemented in eleventh grade students MAN Batu on geography subject has been optimal, especially in geography subject. In geography subject, students have less interest because the impression material that appears only a concept and memorization, it is make low of students interest. Geography subjects are not just talking about concepts and theories, for example on natural resource matter which learn in eleventh grade school. Natural resource potential in Indonesia have potential to improve as higher intellectual value. Therefore, the view of the natural resources that exist in a region not only in the form of a collection of concepts but a source of science that has great potential for greater human welfare such as the utilization of natural resources, diversification of natural

resources, the impact of misuse of natural resources and so forth. The problems and potentials through a project-based learning model can serve as a means of training high-level thinking processes, developing scientific skills and attitudes.

Based on phenomena above, researchers have an interest in this research because project-based learning is one of the models applied in science learning. Because, so far its implementation in social science lessons in MAN Batu, especially geography lessons need for improvement in scientific attitudes of student, through project-based learning able to training high-level thinking processes. Therefore, project-based learning is studied to improve scientific attitude through project-based learning for eleventh grade student at MAN Batu.

B. Research Question

Based on the introduction above, the statement of the problem is:

1. What is project-based learning model constructed to improve scientific attitude in geography lesson for students in eleventh grade at MAN Batu?
2. How is scientific attitude improved through project-based learning for students in eleventh grade at MAN Batu?
3. What are the supporting and resisting factors in the implementation of project-based learning to improve scientific attitude in geography lesson for eleventh grade students at MAN Batu?

C. Objective of the Research

Based on the statement of the problem above, the objective of the research includes:

1. To explain project-based learning model constructed in geography lesson for eleventh grade students to improve scientific attitude at MAN Batu.

2. To describe the scientific attitude improved through project-based learning for eleventh grade students at MAN Batu
3. To describe the supporting and resisting factors in the implementation of project-based learning in geography lesson to improve scientific attitude for eleventh grade students at MAN Batu.

D. Significance of the Research

This research is expected to provide benefit for student, for the institution or school, and for researcher .For the student researcher expected to improve scientific attitude in social science studies and expected to help students understanding about demography problems in Indonesia.

For the institution or the school, this result of research expected can be used as input to improve the quality of school in social study science, can be use as input in provision and management of learning resources in school, and as reference learning which is leads students to high-level thinking skills.

The significant research for the researcher in this researcher is to know the improving scientific attitude through project-based learning for eleventh grade students at MAN Batu.

E. Previous Research

This previous research became one of the authors' references in conducting research so that the writer can enrich the theory used in reviewing research conducted. From the previous research, the authors did not find the research with the same title as the title of the author's research. But the authors raised some research as a reference in enriching the study material on the author's research. Here are the

previous research of some journals, theses and dissertations related to research conducted by the author.

Didi Nur Jamaludin, tesis the title *Pengaruh Project Based Learning terhadap Berpikir Kritis, Berpikir Kreatif dan Sikap Ilmiah pada Materi Tumbuhan Biji*. This research uses quantitative approach. Data collection using pre-test, post-test, scale of scientific attitude and questionnaire. The results show that (1) project-based learning can significantly increase critical thinking skills compared to conventional defenders (2) that project-based learning can significantly improve creative thinking skills compared to conventional learning (3) students' scientific attitudes are higher, but did not show any significant difference.

Musyiatun, skripsi the title *Meningkatkan Sikap Ilmiah Siswa melalui Pendekatan Verification Laboratory dalam Pembelajaran IPA Kelas V SD Negeri Kebon Gebong,Kendal*. This study uses a classroom action research approach (PTK). Data collection used observation sheet of teacher activity, observation sheet of students' scientific attitude and interview guidelines. The result of the research shows that: (1) the implementation of science learning through the use of verification laboratory approach on science subjects can improve the quality of learning process, it is characterized by increasing students 'activity (2) science learning through the use of verification laboratory approach to improve students' scientific attitude class V SD Negeri I Kebon Gembong, Kendal.

Intan Mustika Ningrum, Skripsi dengan judul *Pengaruh Model Pembelajaran Project-Based Learning berbantuan Fotonovela terhadap Hasil Belajar dan Sikap Sains Siswa SMP*. This research uses quantitative approach. Data collection using interview guides, tests, and questionnaires. The results showed that:

(1) PjBL-assisted learning model fotonovela categorized have a strong effect on student learning outcomes on the theme of global warming in SMPN 36 Semarang (2) Learning model of PjBL assisted fotonovela categorized quite influential on student's science attitude on the theme of global warming in SMPN 36 Semarang.

Tabel 1.1 Research Originality

Num	Writer, Title, Type (Thesis/journal/etc), Publisher, and Year of Research	Similarity	Difference	Originality of Research
1.	Didi Nur Jamaludin, *Pengaruh Project Based Learning terhadap Berpikir Kritis, Berpikir Kreatif dan Sikap Ilmiah pada Materi Tumbuhan Biji*. Tesis, Universitas Pendidikan Indonesia, 2013.	To examine the related project-based learning model and its influence on scientific attitudes	In this research focuses on the influence of project-based learning and its influence on scientific attitude in which the subject of the research is eleventh grade students at MAN Batu which is a high school based on Islam	Focusing research on social science learning related to the implementation of project-based learning and its influence on students' scientific attitude on madarasah aliyah
2.	Musyiatun, *Meningkatkan Sikap Ilmiah Siswa melalui Pendekatan Verification Laboratory dalam Pembelajaran IPA Kelas V SD Negeri Kebon Gebong,Kendal* Skripsi, Universitas Negeri Yogyakarta, 2012.	Scientific attitude as a reference in researching the subject of research	This study looks for answers to the impacts of project-based learning on scientific attitudes and student learning outcomes, whereas in the previous study to examine how to improve students' scientific attitude through the learning method.	Focusing research on social science learning related to the implementation of project-based learning and its influence on students' scientific attitude on madarasah

				aliyah
3.	Intan Mustika Ningrum, *Pengaruh Model Pembelajaran Project-Based Learning berbantuan Fotonovela terhadap Hasil Belajar dan Sikap Sains Siswa SMP* Skripsi, Universitas Negeri Semarang, 2015.	To examine the related project-based learning model and its influence on scientific attitudes	In previous research using a particular learning media to determine the influence of project-based learning on student attitudes, whereas in this study researchers focused on the learning process and the results of learning to determine the influence of scientific attitude of students on project based learning	Focusing research on social science learning related to the implementation of project-based learning and its influence on students' scientific attitude on madarasah aliyah

From some examples of the results above, it can be illustrated some of the similarities and differences. This thesis equation with the results previous research is to examine the related project-based learning model and its influence on scientific attitudes. Meanwhile, the difference between this thesis and the results of research formerly was in previous research using a particular learning media to determine the influence of project-based learning on student attitudes, whereas in this study researchers focused on the learning process and the results of learning to determine the influence of scientific attitude of students on project based learning.

F. Definition of the Terms

1. Project-based learning

Project-based learning is a learning model which directing students to solve a problem that appropriate with lesson matter using collaborative learning.

The learning directing students to learn structured and organized in a project that produces the product.

2. Scientific attitude

Scientific attitude is a tendency to act toward something systematically based on scientific judgment, students' scientific attitudes include, critical-mindedness, respect for evidance, open-mindedness, tolerance of uncertainty and cooperation. Scientific attitudes are observe directly by researcher.

G. Structure of the Thesis

Systematics writing in this proposal is as follows:

Chapter I is an introduction chapter that includes the background of the problem, the focus of the problem, objective of the research, significance of the research, previous research and the terms of the research

Chapter II is a review of related literature that includes a discussion of project-based learning theories and the scientific attitudes theories.

Chapter III is a chapter which describe the research methods used by researcher in the discussion includes :approach and type of research ,the attendance of the researcher, site of research, source of the data, data collection, data analysis, checking the validity of data, and stage of research.

Chapter IV is chapter Finding of Data and Analysis of Data which includes the data of anything found by researcher, which includes general description of the object of the research .The data which includes in this chapter is the data that focus on the statement of the problem.

Chapter V is chapter describing the discussion of the result of the research. In this chapter will discuss the findings of the research appropriate with chapter four.

Chapter VI is a closing chapter that consist conclusion from the previous chapters, this chapter contains conclusions and recommendations that are constructive suggestions.

CHAPTER II

LITERATURE REVIEW

A. The Implementation of Project-Based Learning

1. Understanding of Project-Based Learning

According to the Buck Institute for Education (BIE), project-based learning has its roots in experiential education and the philosophy of John Dewey. The method of project-based learning emerged due to developments in learning theory in the past 25 years. The BIE suggests, "Research in neuroscience and psychology has extended cognitive and behavioral models of learning which support traditional direct instruction to show that knowledge, thinking, doing, and the contexts for learning are inextricably tied."[5] Because learning is a social activity, teaching methods can scaffold on students' prior experiences and include a focus on community and culture. Furthermore, because we live in an increasingly more technological and global society, teachers realize that they must prepare students not only to think about new information, but they also must engage them in tasks that prepare them for this global citizenship. Based on the developments in cognitive research and the changing modern educational environment in the latter part of the 20th Century, project-based learning has gained popularity.

Project-based learning (PjBL) is approach, strategy or learning method which is student centered, have integrated subject characteristic, and in long term process. Project-based learning (PjBL) is a model that organizes learning

[5] Manap,Yazid Abdul, *Project Based Learning of Biomass Energy*, Proceeding of the Global Summit on Education GSE 2014

around projects. According to the definitions found in PJBL handbooks for teachers, projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities; give students the opportunity to work relatively autonomously over extended periods of time; and culminate in realistic products or presentations[6]

Project-based learning is an instructional model based on having students confront real-world issues and problems that they find meaningful, determine how to address them, and then act in a collaborative fashion to create problem solution[7].

Meanwhile, according to Patton in Ridwan Adullah Sani, Project-based Learning must involve students in produce a product that will present to society, "Project-based learning refers to students designing, planning, and carrying out an extended project that produce a publicly-exhibited output such us a product, publication, or presentation"[8]

Hence, project-based learning can be defined as long term learning activity which capture students attention with real world problems and solve the problem with collaboration between students and students in learning process with planning, produce and present the product which produced by them to solve the problem in society.

[6] Thomas, John W. A *Review of Research on Project-based Learning* (Califrnia:The autodesk Fonation, 2000)
[7] Bender, William N., *Project-Based Learning:Different Instruction for the 21th century* (United States of America: CORWIN a SAGE company, 2012)
[8] Sani,Ridwan Abdullah, *Pembelaajran Saintifik untuk Implementasi Kurikulum 2013*, 2015 ,Jakarta:Bumiaksara

According to Stripling, et al, project-based learning have effective characteristic, as following:

1) Directing students to investigate important ideas and questions;
2) an inquiry process;
3) Concerned to student needs and interest;
4) Student centered by creating products and making presentations independently;
5) Use creative thinking skills, critical and seek information to investigate, draw conclusions and produce products;
6) Related to authentic real-worlds issues. [9]

In order to create effective project-based learning units, professional development organizers suggest using the following guidelines:

1) Begin with the end in mind and plan for this end result
2) Craft the driving question; select and refine a central question;
3) Plan the assessment and define outcomes and assessment criteria;
4) Map the project: decide how to structure the project
5) Manage the process: find tools and strategies for successful projects.[10]

[9] *Ibid*, page 174
[10] *Ibid*, page 180

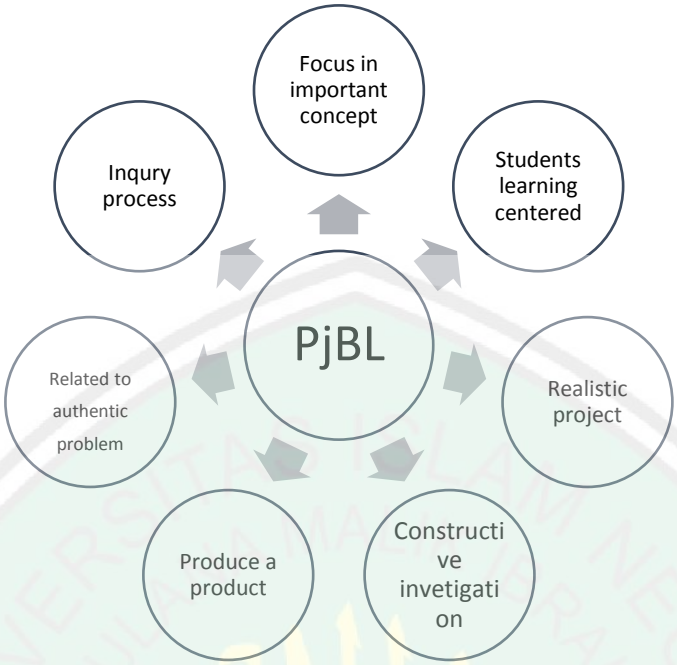


Chart 2.1 Characteristic of PjBL

Project-based learning covered problem solved activity, decision making, investigation skill, and skill of making creation. Project-based learning expected to students deep knowledge and skill which get from create a product that related with lesson competence.

Product that created by project-based learning can be electronic media, printed media, appropriate technology, papers, and so forth. Learning with project-based learning needs some based skill to create a product. Some base skill that must have students to learn in project based learning that are: reading, writing, listening, speaking, and base calculating. To identify the problem and to create product student must have thinking skills. Thinking skills which must be owned by students are critical thinking, creative thinking, problem solving, making decision, seeking concept of idea, reason and know how to learn.

2. Stages of Implementation Project-Based Learning

Teachers can implemented project-based learning in the most general way, we can break it down into the following nine steps (of course, teacher-coaches should modify the steps accordingly to suit the task and the students):

1) The teacher-coach sets the stage for students with real-life samples of the projects they will be doing;
2) Students take on the role of project designers, possibly establishing a forum for display or competition.
3) Students discuss and accumulate the background information needed for their designs;
4) The teacher-coach and students negotiate the criteria for evaluating the projects;
5) Students accumulate the materials necessary for the project;
6) Students create their projects;
7) Students prepare to present their projects;
8) Students present their projects;
9) Students reflect on the process and evaluate the projects based on the criteria established in Step 4.[11]

Some experts propose some major stages that need to be done in project-based learning, that is: a) asking question; b) planning; c) scheduling; d) monitoring the project creation; e) make an assessment; f)

[11] Stix,Andi and Hrbk Frank, *The nine steps of project-based learning*,(online) www.ascd.org

evaluation. The steps of implementation project-based learning can be seen on diagram below:

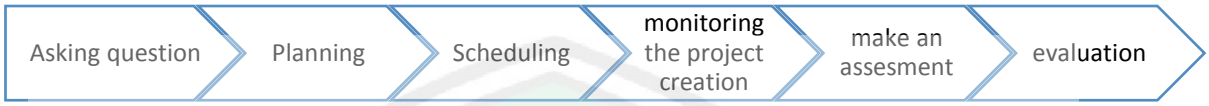


Chart 2.2 Steps of Project-based learning generally

B. Supporting and Resisting of Implementation Project-Based Learning

1. Supporting of Implementation Project-Based learning

Some virtues are gained with apply project-based learning, such us:

1) Involving students in the complex real world, enabling students to define issues that are meaningful to them;
2) Requiring inquiry processes, research, planning skills, critical thinking and problem-solving skills through project-making efforts;
3) Engaging students actively in applying the knowledge and skills to make projects vary widely;
4) Providing students with opportunities to practice interpersonal skills in working with groups and others;
5) Providing skills to students to practice skills to live in real life with the community;
6) Including reflection ativities that lead students to think creatively and connect the experience to learning standards. [12]

The Advantages of the Implementation of PJBL includes:

1) Project-based learning increases students' learning motivation

[12] *Ibid*, page 176

Project-based learning increases the motivation of students. When teachers successfully implement PjBL, students can be highly motivated, feel actively involved in their own learning, and produce complex, high-quality work.

2) Project-based learning increases students' academic achievement

Through Project-based learning, students get knowledge (including insight and meta-cognition), skills, and attitudes. Students create tasks or problems which are more concrete, and arrange potential solutions by using theoretical and practical knowledge). PjBL provides productive environments for the development of meta-cognition.

3) Project-based learning increases cooperation/collaboration ability

With PjBL, students work in teams and they collaborate. Learning effectiveness was assessed based on the students‟ perceptions and their group discussions, collaboration and communication behaviors.

4) Project-based learning increases the ability to communicate

Through PjBL, students learn how to do research, how to organize a team, and how to communicate. It is also important when students learn to articulate their thought, they learn how to explain, and how to convince. The PJBL helps students develop positive communication skills. Students learn to advocate, to defend their ideas, but at the same time they learn to listen to their opponents and open to the opinions of others. PjBL overcomes the gap between knowledge and thinking. Students "know" and "do".

5) Project-based learning increases students skill in managing learning resources (improve library research skill)

In project-based learning students can finding the problem solution for their project in a variety of sources such as observation, online library, field trips, etc. Through the application of web-based project, the lecturer does not present the knowledge to students yet; otherwise the students have learned how to achieve the knowledge and use this knowledge in the solution process. Thus the PjBL will improve students' skill to seek and obtain information.

6) Project-based learning creates fun learning

PjBL makes learning fun atmosphere, so that students and teachers enjoy the learning process. Project based learning made students happy during learning process by providing them with rich learning experiences increased.

7) Project-based learning increases students' attitudes toward learning

There is a relationship between students' attitudes toward chemistry with their performance. Students will be learning a lot with web-based learning compared to traditional methods. In the application of web-based project, the students benefit from simulation experiments by determining questions of their own projects. Simulation experiment becomes their visual resource and also they can look back on when needed.

8) Project-based learning increases students creativity

The conclusions of this method implementation include, the development of Group creativity is a socio-cultural activity because it is influenced by many factors introduced in the learning given by the environment, as well as the broader socio-cultural context. In the PJBL environment, the project task is a center to build a learning community. Stimulation with project tasks will motivate the emergence of individual creativity and group creativity. In the PJBL community, long-term collaborative relationships between students is established and expanded.

9) Project-based learning lowers students' anxiety level in the learning process

When the children are excited and enthusiastic about what they are learning, they often get more involved in the subject, the level of anxiety is reduced and then expand their interest to other materials. Enthusiastic students tend to retain what they learn, not to forget it as soon as they have passed the test.

10) Project-based learning increases problem solving ability

Project-based learning can improve the ability to solve problems, making the students more active and successful in solving complex problems. Project-based learning also requires students to develop skills such as collaboration and reflection.

11) Project-based learning increases resource management skills

PiBL gives students learning experience and practice in organizing project and makes the time allotment and other resources such as equipment for finishing tasks, providing learning experiences that

complexly engage the students and are designed to develop according to the real world. [13]

2. Resisting of Implementation Project-Based Learning

Behind the advantages possessed by Project-based learning, of course, there also found many deficiencies in the implementation affecting the success of PJBL, especially when implementing project based learning approach in a large class. According Woro Sumarni, the implemented of project base learning have some disadvantage are as follow:

1) PjBL requires a lot of time that must be provided to solve complex problems. This will lead to a lack of time available for the material or content;
2) Many parents of students who feel aggrieved, because it adds to the cost of entering the new system;
3) Many instructors/teachers feel comfortable with traditional classroom, where the instructor/ teacher play a central role in the classroom. This is a difficult transition, especially for instructors/teachers who have little or no control of the technology;
4) Applying project based learning in the classroom may be intimidating for some experienced teachers and will be even worse for beginners;
5) The amount of equipment to be provided, so that the demand for electricity increases;
6) Almost all examples of successful project based learning capitalize on the success of cooperative or collaborative learning. Students who have a

[13] Sumarni, Woro. *The strengths and weaknesses of the Implementation of Project Based Learning:a review*,IJSR:vol.4 issue 3,2015

weakness in the experiment and the collection of information will have trouble;

7) Students who are not experienced with working in groups may have difficulty in negotiation and compromise. If this method has not been used before, it may be necessary to teach students how to interact in a group and manage conflict within the group. There is a possibility of students who are less active in group work;
8) When the topic given to each group is different, it is feared that students cannot understand the topic entirely;
9) For a self-assessment survey, the data may have been influenced by a slight inconsistency;
10) Lack of student interest in the subject, including methods of teaching.[14]

C. Scientific Attitudes

1. Understanding of Scientific Attitudes

Social science**,** any discipline or branch of science that deals with human behavior in its social and cultural aspects. The social sciences include cultural (or social) anthropology, sociology, social psychology, political science, and economics. Also frequently included are social and economic geography and those areas of education that deal with the social contexts of learning and the relation of the school to the social order.

A scientific attitude is a disposition to act in a certain way or a demonstration of feelings and/or thoughts. Studies of the actions of scientists have led to lists of scientific attitudes such as displayed below.[15]

[14] Sumarni, Woro. *The strengths and weaknesses of the Implementation of Project Based Learning*:a review,IJSR:vol.4 issue 3,2015

Semiawan in Patta Bundu, suggests that that science previously better known as Natural Science in a sense broad is the lesson and translation of human experience of the world physical in a regular and systematic way, covering all aspects of knowledge produced by scientific methods, not limited to facts and concepts but also the application of knowledge and processes that it refers to thinkers of men.[16]

Attitudes relate to objects accompanied by positive feelings (favored) or negative feelings (unfavorable). Scientific attitude is "scientific attitude" or a pattern of problem solving rationally and objectively and eliminates the element of subjectivity and see the case neutrally by relying on the opinions of experts, who are believed to have done research, analysis and through several stages of criticism so that its truth content has been tested and trusted.

The clustering of scientific attitudes by experts varies considerably, although when examined further there is almost no significant difference. Variations appear only in the placement and naming of scientific attitudes that are highlighted. For example the American Association for Advancement of Science (AAAS) incorporates open mindedness as one of the main scientific attitudes. AAAS emphasizes the four attitudes necessary for the elementary school level: honesty, curiosity, open mindedness, and skepticism.

Table 2.1 Grouping Scientific Attitude According to Experts

Harlen (1996)	AAAS (1993)
Curiosity	Honesty
Respecting for evidence	Curiosity
Critical reflection	Open minded

[15] *http://www.crystaloutreach.ualberta.ca/en/ScienceReasoningText/ScientificAttitudes.aspx* (November,2017)

[16] *Bundu, Patta*.Penilaian Keterampilan *Proses dan Sikap Ilmiah Dalam. Pembelajaran Sains SD* (Jakarta Depdikdas,2006)

Perseverance	Skepticism
Creativity and inventiveness	
Co-operation with others	
Willingness to tolerate uncertainty	
Sensitivity to environment	

2. The Dimensions of Scientific Attitudes

Measurement of students' scientific attitude can be based on the grouping of attitudes as dimensions, attitude further developed attitude indicators for each dimension so as to facilitate the compilation of items of scientific attitude instruments. Referring to the opinion of the experts above, the dimensions of scientific attitude examined in this study are high curiosity, honest attitude, critical attitude, flexible attitude, and meticulous. These indicators can be self-developed in order to properly support the dimensions of attitudes to be measured. Research of the actions of scientists have led to list of scientific attitudes such as:

Table 2.2 The Dimensions of Scientific Attitude

Scientific Attitude	Characteristic
Critical-mindedness	looks for consistency and challenges the validity of statements
Respect for evidence	looks for evidence through an empirical approach, collects as much evidence as possible
Open-mindedness	considers several possible alternatives when investigating, considers and evaluates ideas presented by others
Curiosity	Characterized by high student interest, often trying new experiences and begins with a question.
Cooperation	Essential in a group work. Better result is obtained when a group works well together. Involves giving due respect to other people's views.

Below is the detail explaination of them:

1) Critical-mindedness

Looking at ideas including your own, from multiple perspective in effort to improve. Critical mindedness is when someone is willing to take in others ideas and use them to their advantage.

That attitude can appears in high school students when A student confidently and correctly explaining exactly to his or her peers the methodology used to reach a particular conclusion, or why and how a certain methodology or standard of proof was applied.

2) Respect for Evidence

Looks for evidence through an empirical approach. At cure we take care to source, appraise, calibrate and use evidence as the springboard for all work.

It make students in high school stage be able to collect the information from many sources, rather than from people or document that related with the issue in the society.

3) Open-mindedness

Open-mindedness relates to the way in which people approach the views and knowledge of others, and "incorporate the beliefs that others should be free to express their views and that the value of others' knowledge should be recognized.

In high school students, they can explain arguments on all sides of the issue, not just for and against, but also those perspectives in between for and against that might endorse affirmative action under a different guise or altered institutional framework.

4) Curiosity

Curiosity is a desire to investigate and seek an understanding of the natural events or social events that are happening. Based on that understanding can be concluded that curiosity is a natural emotion that is in the human being where the desire to investigate and find out more about a thing he learned. Curiosity will keep students constantly finding out what they do not know, by finding out that students will gain a lot of new information and knowledge and add insight to what they have

Students of senior high school have high interest to many things that new for them. Often trying new experience and begins with a question.

5) Cooperation

Essential in a group work. Better result are obtained when a group works well together. Involves giving due respect to other people's views.

In senior high school student cooperation attitude can nurture as good as, the student have been understood about work together with one other. The cooperation can be in the form of group work, data collection and discussion to draw conclusions from observation.

3. Improving Scientific Attitudes

Wuest and Lombardo, cognitive development in high school students improvement of intellectual function, memory and language capacity, and Conceptual thoughts Students experience increased ability self-expression, problem-solving skills decisions will increase. The development of cognition in

high school students are the ability to think of concepts that are abstract (such as brotherhood, democracy and morals), and capable thinking hypotheses (able to think of things that might happen based on his experience).

Consequently, it is clear that basically a student already has scientific attitude. For example as has been suggested by experts in over that the student naturally has that curiosity and interested in the surrounding world that surrounds themselves. This matter strongly support the efforts of a teacher in developing attitudes scientific students, because basically students already have signs a scientific attitude which then a teacher needs to strive for improve the attitude to be better and directed.

Scientific attitudes which have by students necessary to develop , nurture and improve. Developing of scientific attitude is the important one to help develop positive attitude in students self. In nurturing the scientific attitude, the main things that part of it is teachers role and learning activity.

According to Patta Bundu in Musyiatun, that four main teachers role in develop students scientific attitude such as, give example of scientific attitudes, give positive reinforcement toward scientific attitude through reward, give opportunity to develop scientific attitude, and discuss about behavior that appropriate with scientific attitude.[17]

In holy Qur'an, the ayat that releated with project-based learning and scientific attitude which must have by all of human in the world are below:

[17] Musyiatun, *Meningkatkan Sikap Ilmiah Siswa melalui Pendekatan Verification Laboratory dalam Pembelajaran IPA Kelas V SD Negeri Kebon Gebong,Kendal* Skripsi, Universitas Negeri Yogyakarta, 2012.

إِنَّ فِى خَلْقِ ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ وَٱخْتِلَٰفِ ٱلَّيْلِ وَٱلنَّهَارِ لَءَايَٰتٍ لِّأُو۟لِى ٱلْأَلْبَٰبِ(١٩٠) ٱلَّذِينَ يَذْكُرُونَ ٱللَّهَ قِيَٰمًا وَقُعُودًا وَعَلَىٰ جُنُوبِهِمْ وَيَتَفَكَّرُونَ فِى خَلْقِ ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَٰذَا بَٰطِلًا سُبْحَٰنَكَ فَقِنَا عَذَابَ ٱلنَّارِ (١٩١)

Al-Imran: (190) Indeed, in the creation of the heavens and the earth and the alternation of the night and the day are signs for those of understanding. (191) Who remember Allah while standing or sitting or [lying] on their sides and give thought to the creation of the heavens and the earth, [saying], "Our Lord, You did not create this aimlessly; exalted are You [above such a thing]; then protect us from the punishment of the Fire.

At-Tabari and Ibn Abi Hatim narrated from Ibn Abas ra., that the Quraysh came to the Jews and asked, "What evidence did Moses bring? to you? "Answered," His wand and his white hand are shining for those who see him". Then they went to the Christians and asked, "What about Isa?" Answered, "Isa heals eyes blind from birth and ailments and turns the liver people who have died. "Next they came to the Messenger of Allah. and said, "Ask from your Lord that the hill of safa be gold for us. "So the Prophet prayed, and this verse came down invites them to think of the heavens and the earth about the events, the amazing things in like the stars, the moon, and the sun and its circulation, the sea, the mountains, trees, fruits, animals, and so on.

Contents of Qs. Ali Imran (3): 190: 1) Muslims must think critically about the universe God's creation2) By paying attention to God's creation, it will add human science 3) Taking into account God's creation will add flavor our gratitude to God 4) Taking into account God's creation will improve awareness of God's omnipotence.

Qs. Ali Imran (3): 191: Ulul Albab is a man who wants to use his mind to pay attention to Allah's creation, multiply remembering God in every opportunity, and realize that whatever is created by God is not in vain

Below is some behavior according to the content above:

1) Always give thanks to Allah SWT. on the grace of common sense;
2) Always give thanks to Allah SWT. of the grace of the universe for man;
3) To conduct studies on Qur'anic verses more deeply with the people experts in their respective fields;
4) Making verses of the Qur'an as an inspiration in doing scientific research to unravel the mysteries of the creation of nature;
5) Making the verses kauniyah (universe) as an inspiration in developing science and technology;
6) Optimizing the utilization of nature in a friendly manner for the benefit of mankind;
7) Read and analyze natural phenomena to anticipate the occurrence of hazards;
8) Always think ahead and become more motivated to become a visionary person.

CHAPTER III

RESEARCH METHODOLOGY

A. Approach and Type of Research

To find out the result of the improving scientific attitude through project-based learning in eleventh grade student at MAN Batu, with main element which have to find related with focus of the problem, purpose, and the benefit of research. Therefore, this research use qualitative research.

Qualitative research is research method which uses the research in natural condition of object, where the researcher as key instrument is , the data collection technique through triangulation, the inductive of data analysis characteristic, and the result of qualitative research which is more emphasize in the meaning than generalization.[18]

Research design of this research is case study research, which in this study is limited by space, time, matter and events or activities to be observed. Researchers will present the results of research in the form of qualitative descriptive. The results of data and findings in the field will be presented specifically and correctly in accordance with the facts. Through descriptive qualitative method, the depiction of the existing data is presented in detail, natural and what it is. The learning that takes place is explained in detail and naturally, the growth of scientific attitude to the students is studied deeply and intensively.

[18] Sugiyono, *Memahami Penelitian Kualitatif* (Bandung:Alfabeta,2008)

B. The Attendance of Researcher

In qualitative research, the key instrument of the research is researcher. In qualitative research of improving scientific attitude through project-based learning in eleventh grade students at MAN Batu, researcher be manifest in learning activity which is geography subject in MAN Batu.

Researcher directly presence in learning activity in eleventh grade students. The subject which includes in this research is geography subject in demography problems material.

C. Site of Research

This research held in MAN Batu. MAN Batu is the one Islamic senior high school state in Batu city. Located in Jalan Pattimura No.25, Temas, Batu, East Java. MAN Batu established since 1970, previously was MAN II Malang and now the name is MAN Batu. This school have vision to create the intelligent Muslim generation, skilled and akhlaqul kharimah. The mission are holding Madrasah Aliyah education to prepare superior and qualified human resources and achievement, organizing education to prepare learners to get to college, organizing education that can develop the potential of students who are imbued Islamic art, conducting training and skills on the foundation of akhlaqul karimah.

Around three years has implemented curriculum 2013. Curriculum 2013 is the one way to improve education outcomes. The implemented curriculum 2013 in senior high schools expected to create 21 century students that related with Islamic perspective Al-qur'an and hadith.

D. The Source of Data

Data that use in this research is qualitative data. Qualitative data is a data which is verbal data that form is description not numeral.[19] Which are include in qualitative data in this research are: the history establishment of MAN Batu, vision and mission, structure of organization in MAN Batu, teacher situation, students situation, infrastructure and utilities condition, standart assesment and implementation of class assessment and effective of geography learning in eleventh grade students at MAN Batu.

Data resource is subject where the data can obtained. In this research, researcher use two type of data resources, which are:

a. Primary Data

Primary data is the data that collected by researcher from the first source directly. [20] The primary data in this research are Curriculum vice, Geography teacher, and eleventh grade students MAN Batu.

Table 3.1 Primary Data Resources

Num.	Data	Data Resources
1.	The result of interview with the curriculum vice priciple of MAN Batu	Interview with the curriculum vice principle of MAN Batu.
2.	The result of the interview with teachers at MAN Batu and observation in classroom	Interview with the geography teachers at MAN Batu. Observation in classroom activity when teacher teach the students
3.	The result of the interview with the eleventh grade students in MAN Batu and observation of students	Interview with the students (approximately 10-15 students) in MAN Batu observation in classroom and outclass activity.

[19] *Ibid*, page 62
[20] *Ibid*, page 62

b. Secondary Data

The data which collected by researcher to support the main sources or a data which consist of documentation reports.[21] The secondary data resources in this research are documentation report.

E. Data Collection

Data collection technique is a strategic step in the research, because the main purpose of the research is to get the data. In qualitative research, data collecting in natural setting, primary data, and the most data collecting technic is on participant observation, in depth interview and document review.[22]

To collect the data, researcher use several technique such as: observation, interview, document review and composite of the third technique. Researcher collect the data at last week of January until the first week in March 2018. The techniques used to obtain data in accordance with the needs of researchers in examining improving scientific attitude through project-based learning in eleventh grade students at MAN Batu. Here is the detail explanation:

a. Observation

According Nasution in Sugiyono, observation is the foundation of all knowledge.[23] A researcher can work based on data from observations in the field of reality obtained through observation.

To know the reality toward improving scientific attitudes in geography subject of eleventh grade students at MAN Batu directly, the researcher conducted moderat participant observation in ongoing geography subject learning activity.

[21] *Ibid*, page 62
[22] *Ibid*, page 63
[23] *Ibid*, page 64

In moderat participant observation means that the researcher maintains a balance between being insider and being outsider. Researcher collects the data participate in several learning activity.

Researchers make observations on learning activities in the classroom, observation focused on project-based learning activities and the nurture of scientific attitudes on each student.

b. Interview

To know things deeper from the data source the researcher uses interview. Susan Stainback in Sugiyono, Interviewing provide he researcher a means to gain a deeper understanding of how the participant interpret a situation or phenomenon than can be gained through observation alone.[24]

In this research, researcher conducted in depth interview or semi structure interview, in which researcher get information from geography teacher as flexible as and deep. Researchers conducted free interviews and invited geography teacher and student data sources to give their opinions and ideas openly. Researcher get deeper information related to the implementation of project-based learning in teachers, and conducted in depth interviews to students about their scientific attitude on geography learning using project-based learning.

Table 3.2 List of Interviewee

Num	List of Interviewee	Purpose
1.	Curriculum Vice Principle	To explore about implementation of curriculum 2013 in MAN Batu
2.	Geography teacher in eleventh grade	To explore about implementation of project-based learning in geography subject.
3.	Ten XI IPS students	To explore scientific attituted that have

[24] *Ibid*, page 72

		and nurture in students through project-based learning

c. Document review

Document is a record of past events. Documents may be in the form of writings, diagram or monumental works of a person According Sugiyono, the results of research from observation or interview, will be more credible if supported by related documents.

Documents review that can support the results of this research include lesson planning and implementation which is owned by teachers related to the learning geography by using project-based learning, student learning outcome, syllabus, and learning journal.

Table 3.3 The Data Collection

Num	Data	Method	Instrument	Subject	Time
1.	Observation	Interview	Interview guidelines	Teacher	Before research
2.	Interview of project-based learning	Interview	Interview guidelines	Students and teacher	Pre and post learning process
3.	Scientific attitude assessment	Observation	Observation sheet	Students	In learning process
4.	Observational congruence of project-based learning method	observation	Observation sheet	students	In learning process
5.	Response of project based learning by students	Observation	Observation sheet	Students	After learning process

F. Data Analysis

The data analysis in this research use qualitative approach. After all the data have collected, then researcher make data analysis with use data analysis based on Miles and Huberman. The qualitative data can get from data reduction, display of data, conclusion and drawing or verification.[25]

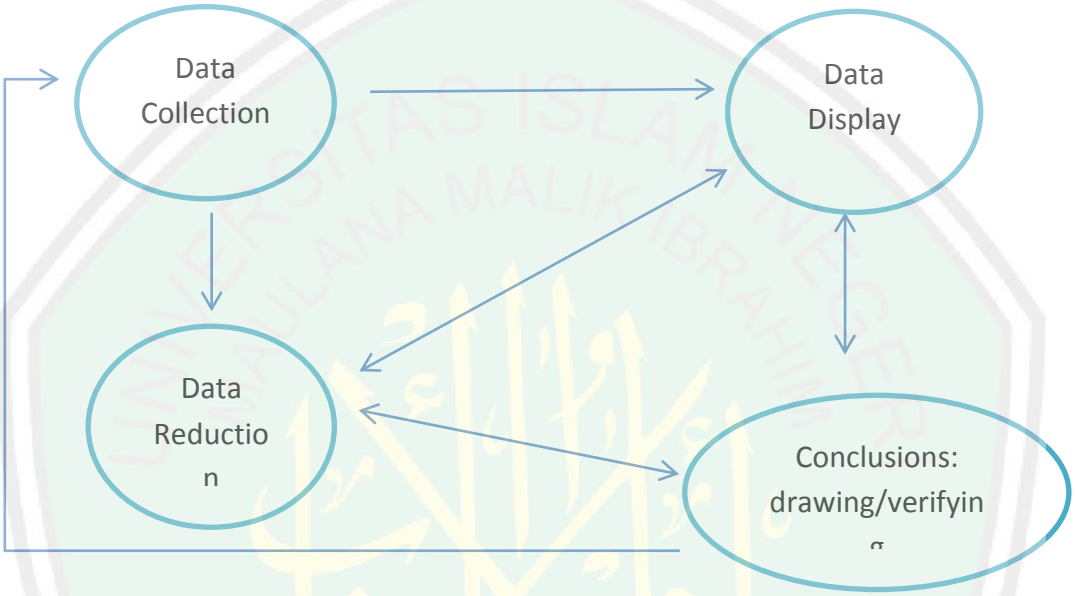


Chart 3.1 Schema of Data Analysis Miles and Huberman

a. Data Reduction

Data reduction is the process of selecting, focusing attention, on simplification, abstraction and transformation of coarse data arising from written records in the field. By reducing the data then the reduced data will provide a clearer picture, and facilitate researchers to conduct further data collection, and look it up if necessary.

After the data has been collected through observation, interview, and document review, it needs to be focused in accordance with the focus of

[25] Sugiyono, *Memahami Penelitian Kualitatif* (Bandung:Alfabeta,2008) page 91

the problem in this research, namely improving scientific attitude through project-based learning in eleventh grade students at MAN Batu.

b. Data Display

After the data is reduced, the next step is to dismiss the data. In qualitative research, the presentation of data can be done in the form of charts, tables, graphs, text that is narrative and the like. By presenting the data, it will make it easier to understand what is happening and plan the next work based on what has been understood.[26]

The next step done by the researcher is to display the data by making narrative descriptions, as well as in the form of charts and graphs so that the next work plan can be known based on what has been chosen and understood

c. Conclusion Drawing/ Verification

In qualitative research the expected conclusion is a new finding that has not previously existed or in the form of an image of an object that was previously still unclear so that after examination becomes clear. Conclusions resulting in qualitative research is still a conjecture or hypothesis and may be a theory if it is supported by other data.[27]

In above is the explanation data, then this conclusion step begins by looking for patterns, relationships, things that often arise that leads to the scientific attitude of students on learning geography with project-based learning method in MAN Batu

G. Checking the Validity of Data

[26] *Ibid*, page 95
[27] *Ibid*, page 99

To establish the trustworthiness of the data required inspection technique. Inspection techniques are based on certain criteria .According Moloeng, examination criteria have four criteria used, namely credibility, transferability, dependability, and confirmability. [28] On validity the most important is the credibility of the test data. The credibility test is done with extension of observation, triangulation, discussion with peers, and member checks.

In drawing the conclusion of the researcher using guidance of research instrument which is derived from related reference. Next synchronize with data result of interview, and result of observation in field. From the observation results will be known whether the implementation of learning is in accordance with the scheme of the instrument guidelines of the implementation plan of learning and the results of previous interviews.

a. Triangulation

In data collection techniques, triangulation is defined as a combination of data collection techniques. The researchers used Triangulation technique because researchers used different data collection techniques, the researchers used moderate participant observation, in depth interview, and document review. Researchers also use several different sources of teachers and students. Therefore, to obtain data from different sources and techniques, the researcher uses triangulation techniques so that the data obtained are credible and reliable.

b. Member Check

[28] *Ibid*, page 117

Member check is the process of checking data obtained by the researcher to informant. The purpose of member check is to know how far the data obtained accordance with what is provided by informant. When data is found agreed by the informant means that the data is valid and more credible. The aim of member check in order to the information obtained and will be used in the report writing accordance with what is meant by informant.

In this research member check done after a period of data collection is complete or after getting a research findings or conclusion. In this research member check done by individually.

H. Stage of Research

The research procedures that are conducted include research preparation, instrument preparation, research implementation and conclusion.

1) Make a pre observation in MAN Batu. Observation conducted in the form of interviews with eleventh grade students and Geographic teachers to see the environment around the school;
2) Determining the research subject and the sample used on this research. The selected sample is the eleven class IPS 3 of social science majors in MAN Batu;
3) Developing instruments for research:
   a) IPS draft interview sheet at MAN Batu;
   b) Observation sheet of the implementation of the PjBL learning model
   c) Observation sheet of scientific attitude indicators .
4) Data collection
   a) Interview to curriculum vice

b) Interview to eleventh grade geography teacher

c) Interview of ten students in IPS 3 at geography lesson

d) Observation of learning activity, process when in class and out the class

e) Observation of the scientific attitude that nurture by teacher

5) Identifying the Data

The data that collect from interview, direct observation and documentation should be identify by researcher.

6) Showing data in description

7) Analyzing data with main purpose

CHAPTER IV

EXPLANATION DATA AND FINDINGS

In this chapter will explain data and research findings that have been obtained researcher for implement research in MAN Batu including school profiles and anything that researchers get when the research progresses. The research was conducted on February 5 until March 6, 2018. This research was conducted to obtain general description of improving scientific attitude through project-based learning implementation includes planning, implementation, and evaluation, as well as obstacles faced by MAN Batu. Here is an explanation data and research finding that have been obtained researchers, including:

A. General Description of MAN Batu

Madrasah Aliyah State of Batu is one of the islamic high school state in Batu. This school one of the senior high school based on Islamic that is located on Pattimura street no. 25, Temas, Batu.This school is classified as good accreditation school with A accreditation of the school. Establish in 1970, and had operation in 1980 have many generation and now the number of students around 1064 with around 61 teachers.

The history of the early development until now of the Madrasah Aliyah State in Batu City, continue to make improvements in facilities and infrastructure for the implementation of education. Since its inception the MAN Batu has passed several name changes as follows:

a. At the beginning of the stand was PGAA NU Batu, then inaugurated as SPIAIN Sunan Ampel with the Decree of the Minister of Religious Affairs

No. 02 of 1970, at that time did not have its own building, to temporarily occupy the building belonging to Al-Maarif Batu in Jalan Semeru. 22 Batu.

b. In 1978 officially became Madrasah Aliyah Negeri Malang II based on the Decree of the Minister of Religious Affairs No. 17 of 1978, and still occupies Al-Maarif Batu Building.

c. In 1979 MAN MALANG II moved location occupies the building owned by MI Raoudlatul Ulum on Jalan Lahor 23 Batu with Right of Building Rent.

d. Then in the year 1981 officially MAN MALANG II newly occupies the own building (Government) located in Jalan Patimura Number 25 Batu which was built with funds DIP Fiscal Year 1980/1981, and until now continue to clean up to complete the facilities and infrastructure. And developed has a boarding school with a land area of 4000 m2 built on land belonging to the Village of Temas Batu.

e. With the increasing status of Batu City, MAN Malang II Batu changed to Madrasah Aliyah State Batu based on Minister of Religious Affairs Decree no. 157 Year 2014 dated September 17, 2014.

At the beginning stood as a pioneer in 1970, until now also experienced several times the turn of the leadership. Change of leadership 10 times for almost 47 years. And continue to make improvement to fulfill the demands of educational needs of education with a growing number of students.

1. Vision of MAN Batu

The realization of an intelligent, skillful and virtuous generation of Islam, free from drug abuse, and care for the environment.

2. Mission of MAN Batu

Facilitate education oriented on the quality of graduates either scientifically, or morally and socially so as to be able to prepare and develop human resources that await in the field of science and technology and imtaq.

a. Holding MA education to prepare superior and qualified human resources and achievement
b. Organizing education to prepare learners to continue to Higher Education
c. Organizing education that can develop the potential of learners
d. Holding Life Skills training based on Akhlaqul Karimah
e. Increasing the devotion of worship
f. Organizing education that saves learners to avoid any form of Drug abuse
g. Organizing education that can develop the potential of learners in the field of Language
h. Conducting Education to awaken every Madrasah citizen to care for the environment
i. Make schools safe, comfortable, shady, clean and healthy

3. Educational Infrastructure Facilities at MAN Batu

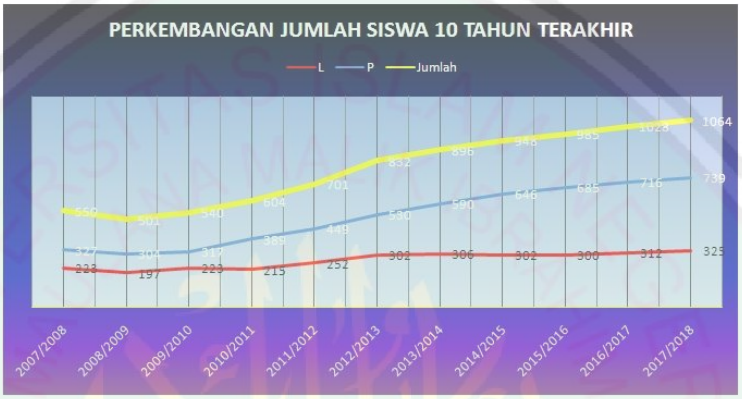
MAN Batu has 32 study rooms, Physical Laboratory, Chemistry, Biology. Since 2005 Ma'had Al-Ulya has been built for students who want to deepen the knowledge of Islam.

4. Teacher, Head Master and Educational Staff

MAN Batu have been several time made change of the head master, Sudirman, S.Pd., M.M is the leadership of MAN Batu who lead now. Madrasah Aliyah State of Batu have approximately 60 - 79 teachers and educational staff.. around 60 of them are teachers, and 19 other are educational staffs.

Teachers and educational staffs of MAN Batu have different educational background.. Education background of teachers consists of Bachelor of S-2, Bachelor of S-1. background of education staff Bachelor of S-1, diploma 3, high school graduates and junior high school graduates.

5. Students growth of MAN Batu



Picture 4.1 Development of Students quantity

The quantity of students in MAN Batu during the last decade has experienced significant growth, the development of this number of learners is the impact of the development of school quality both physically and educational system is getting better and follow the development of education in Batu.

6. Organization Structure of MAN Batu

In an effort to improve management and quality of education as a whole in MAN Batu, then the determination of the right organizational structure is important and must be formulated appropriately.

The following is the organizational structure of MAN Batu, ranging from the highest principal authority holder to the parents of the students. in supporting effective, efficient and meaningful education, the relationship

between the organizations in the school organization structure must always show cooperation in creating learning and teaching innovation.

Picture 4.2 Organization Structure of MAN Batu

B. Explanation Data Research

1. The Project-based Learning Model Constructed to Improve Scientific Attitude in Geographic Lesson for Eleventh Grade Students at MAN Batu

Based on curriculum 2013, the learning process is active learners instead of the learner receiving. During implemented curriculum 2013, teacher implemented strategy and learning model which appropriate with it, strategy and models which pay attention to cognitive aspect and provide opportunities for students to build their own knowledge and understanding. As has been pointed by teacher Novita Selviana, S.Pd who teaching geography in eleventh grade in the interview is.

> "Pembelajaran geografi disini memang sudah berdasarkan kurikulum 2013. Semua perangkat pembelajaran , pengembangan materi, metode , strategi pembelajaran, dan evaluasi pembelajaran sudah mengacu pada kurikulum 2013 . Saya juga sudah beberapa kali menerapkan pembelajaran dengan pendekatan ilmiah, dimana pendekatan ilmiah tersebut merupakan pokok dalam pembelajaran kurikulum 2013. Dalam

> penerapannya, tentunya saya sesuaikan juga dengan materi ajar yang sesuai dengan Kompetensi Dasar yang harus dikuasai oleh murid."[29]

In geography learning, the selection of models and learning strategies are planned in accordance with the content of the material to be transferred by the teacher to the students. Commonly used model is cooperative learning model with learning model such as Course Review Horay, Problem Based Learning, Discussion or debate, and so on so forth.

Teacher Novita Selviana, S.Pd related learning with scientific approach in the interview stated that:

> "Dalam rencana pelaksanaan pembelajaran yang telah saya rancang, pada materi dinamika dan permasalahan kepedudukan ini saya menggunakan model pembelajaran berbasis proyek. Karena waktunya sedikit terbatas sehingga saya mengajukan kepada siswa untuk membuat proyek berupa karya tulis ilmiah sederhana berdasarkan permasalahan kependudukan yang ada di sekitar tempat tinggal siswa."[30]

Improving of basic scientific attitude that is owned by students is something that should be developed by the teacher. Teachers as facilitators and mentors should be able to develop what is already in the students, students are not only given memorizing material and listening to what the teacher says.

Mr Munawirul Qulub, S.Pd., M.Si as a curriculum vice confirmed that

> "Peningkatan sikap ilmiah siswa adalah salah satu hal wajib yang harus diikutsertakan oleh seorang guru dalam proses pembelajaran. Sarana untuk mengembangkan sikap ilmiah sudah cukup mendukung, kekuatan pendorongnya adalah guru. Jika guru mampu memanfaatkan sarana dan prasarana yang ada untuk mengembangkan sikap ilmiah siswa, pasti hasil dari hasil belajar tidak hanya skor kognitif tetapi juga sikap ilmiah yang sangat berguna bagi siswa untuk kelak beradaptasi pada keadaan zaman yang terus berkembang ini dan peduli terhadap lingkungan sekitarnya."[31]

[29] Interview with geography teacher Novita Selviana, S.Pd. 22 January 2018, in teacher room, at 10.00 a.m
[30] Ibid
[31] Interview with Mr. Munawirul Qulub, S.Pd, M.Si. 5 March 2018, in curriculum vice room, at 09.30 a.m

To improve students' scientific attitude, make planning of learning is important. In complex geography learning there must be some material that can be delivered with appropriate methods. Methods that are often applied in some geographical materials is discussion method with another method are problem-based learning and project-based learning.

In the first lesson in the second semester of the academic year 2017-2018, the main geography lesson materials are the demography dynamics and that problems. In accordance with the syllabus and teacher handbook the material dynamics and problems of the population divided into sub-themes of population data, quantity and geographical analysis, population quality, population mobility, and problems of the population.

Demography problems which sub-theme that chosen by teacher Novita which is implementing project-based learning. Demography problems are complex material that include economy, education, health, and social aspect. Teacher Novita put more emphasis on making scientific writing projects on this lesson. It is easier to apply and the impact can be felt widely.

To explain about demography problems in Indonesia as general and Batu city in specific scope, teacher construct project-based learning as method which implemented in learning process. According to teacher Novita Selviana, S.Pd when in interview said that:

> "Permasalahan kependudukan adalah materi yang rumit, materi ini akan mudah dipahami jika dipelajari secara langsung oleh siswa. Jadi, saya memilih pembelajaran berbasis proyek sebagai metode bahan ini untuk membuat siswa memahami masalah demografi di sekitarnya. Saya berharap siswa saya tidak hanya mengerti tentang fakta sosial yang terjadi di sekitar mereka tetapi juga mereka akan memiliki sikap yang

baik untuk peduli dan berpikir mendalam untuk memecahkan masalah yang sesuai dengan posisi mereka sebagai siswa."[32]

Improvement of scientific attitude through project-based learning, it is necessary to have time-related planning and also the material discussed. With the right time planning then the learning will be accomplished in accordance with the time scheduled. Associated with the subject matter itself will affect the level of students 'understanding of the material and the growth of students' scientific attitude that will grow naturally through social sensitivity.

Based on lesson plan that design by teacher Novita Selviana, S.Pd, learning process will be done in fourth session. Student learning plan consists of several learning steps that are implemented in the following activities in accordance with the observation that is :

a. Teachers explain the topics to be studied, learning objectives, motivation, and competencies to be achieved. Students identify issues or questions related to the topic being studied, the teacher asks questions of help problems in accordance with the topic to be studied by the students.
b. The group makes project planning related to the settlement of identified issues. Students prepare some of the necessities needed in making scientific papers related to the problems of the population in Batu City.
c. Teachers make judgments concerned in the place, time and subject that will take an information of students.
d. Teachers perform monitoring and assessment

[32] Interview with geography teacher Novita Selviana,S.Pd. 21 February 2018, in teacher room, at 02.30 p.m

e. Groups create scientific papers by understanding the concepts or principles relating to the subject matter

f. The teacher facilitates the presentation or publication of the work produced by the learner.

g. Students prepare to present their projects

h. Teachers make judgments

i. Evaluation and reflection of learning activities[33]

Teacher Novita Selviana, S.Pd construct short project-based learning with time estimate around fourth session in details is eight multiplied forty five each lesson hour. The short project-based learning that construct by students are about criminal, traffic congestion and also early marriage. To facilitate students in making papers, teachers provide worksheets in the process before taking data directly.

2. The Scientific Attitude Improved through Project-Based Learning in Geographic Lesson for Students in Eleventh Grade Students at MAN Batu

Scientific attitude improved by teacher through learning process with project-based learning model. Especially in geography subject, as the main subject in social science study have complex material to deal with other subject.

This project-based learning is conducted in the classroom, institution and the place where the problem is presents directly, as illustrated as follows:

[33] Observation in learning process, 21 January - 22 February 2018, Monday and Tuesday at 01.00 p.m – 02.30 p.m in class room

Picture 4.3 The first meeting, teacher Novita is explaining the demography problems in Indonesia through video (in IPS III classroom, at 01.00 p.m)

At the beginning of the learning meeting, students are given explanations regarding the material and learning process that will be implemented by the students. Through the video of population problems in Indonesia, the teacher gives an illustration of the latest population condition in Indonesia. Conditions and problems of population that will be a reference of students in conducting further learning process. The teacher explains in detail what method will be used in this lesson and the teacher gives students an opportunity to analyze the demographic problems that exist in Batu city and provide solutions based on the problem, according to their capacity as students. Students are required to be able to create a project in the form of scientific papers related to the demographic problems in the Batu city and the solution.

Picture 4.4 students gathered in group, making the planning of scientific writing (in IPS III classroom, at 01.30 p.m)

Picture 4.5 students get the worksheet from the teacher as a reference in determining the direction of data search, collection and writing of scientific papers (in IPS III classroom, at 01.00 p.m)

In groups students discussed the condition of population and population problems that occurred in Batu City. Population problems that are raised from the real conditions that exist around the students. Each group makes scientific papers based on social facts around them. They determine what data they need and the data source that matches the issues they are raising

Picture 4.6 data collection of occupation density, directly at the statistical center of Batu city

Data collection is not only through book, magazine, newspaper and electronic media, but students also directly seek data to the appropriate data source and in accordance with the problems they review. Seen students who

took data to BPS Batu city to determine the level of population growth in Batu city.

Picture 4.7 Presentation the result of their scientific papers about early-age marriage in Cangar,Bumiaji

After make a scientific paper, each group presented the results of the analysis and problem solving they had formulated. They explain about fact that they encountered in the field. Give solution about demography problems appropriate with their capacity as students in senior high school.

In this learning process, it appears that there are many students from other groups responding well to the group of presenters. ask each other questions, ideas and exchange opinions. From this process students have nurture their curiosity attitude, open minded, and critical mindedness of the problem that occur in Batu.

Teachers as moderator and facilitator on this discuss take a role as mediator in the course of the discussion. Teacher Novita give some evaluation

and mentoring to conclusion of the discussion, make improvements to group writing result of scientific papers.

The result of observation explain that each students has different range of attitude science as follow:

Table 4.1 Score of Students Attitude which appear in Project-Based Learning Activity

No	Students Name	Score	Criteria
1	Abdi FAiqul Ishbah	60	Good
2	Hafidz Hamdani	61	Very Good
3	M. Akbar Rizky	60	Good
4	Wildan	61	Very Good
5	Hanifuddin	79	Very Good
6	Ibnu Fajar A	60	Good
7	Ubaid	59	Good
8	Anjumi Zuhuri I	60	Good
9	Eiva Venesia Ochalisa	75	Very Good
10	Regita	61	Very Good
11	Alfenia Dewi S	59	Good
12	Reva Bram Ananta	58	Good
13	Tasya Yuli F	58	Good
14	Elta Rizqi R T	56	Good
15	Silvi Intan L	59	Good
16	Sintia Puspitasari	62	Very Good
17	Rahmadi Jaya S	60	Good
18	Hani Fatu	61	Very Good
19	Nurul Latifatus S	59	Good
20	Sherly Olfiya Rifana	64	Very Good
21	Yumrotul S	66	Very Good
22	Anindyas Yuniar	64	Very Good
23	Umi Farida	67	Very Good
24	Shofuro Nauval	64	Very Good
25	Aviva Dewi Aulia R	66	Very Good
26	Ridho	62	Very Good
27	Hanin Afifah Dzikra	61	Very Good
28	Elta Rizki	60	Good
29	Haikal Wildan	59	Good
Average score		62	Very Good

A scientific attitude that has improved of students in classroom average are:

Table 4.2 Average score of Scientific Attitude Indicators

No.	Scientific Attitude Indicators	Class score average
1.	Critical mindedness	3,2
2.	Respect for Evidence	2,8
3.	Open-mindedness	3,2
4.	Curiosity	2,9
5.	Cooperate	3,4
	Average Score of Indicators	3,1

In the development of the learning process teachers have done their best in maintaining students' scientific attitude. Giving simple questions to the development of solutions to population problems through scientific papers. It can be seen from the table above that the average grade score on each indicator shows a fairly good average. There are fourteen students who get good score and fifteen students who get very good score in scientific attitude skill. The average of the class score give reason that improvement of scientific attitude in eleventh grade students especially in geography lesson have good result.

The highest score of scientific attitude that appear in this lesson is cooperate with score 3,4. Then the lowest score of scientific attitude skill is respect for evidence skill. The other indicator have different rating score, critical mindedness has 3,2 , open mindedness has score around 3,2 , and curiosity has 2,9 score by the class.

Through direct experience passed by the students, the development of students' scientific attitude is honed and developed well. Directly the

development of students' scientific attitude can be observed from the behavior that often arises that is done in the learning process.

3. Advantage and Resisting Factors in the Implementation Project-based Learning to Improve Scientific Attitude in Geography Lesson for Eleventh Grade Students at MAN Batu.

Each learning activity must have advantages and resistance in implementing it. The advantages in the implementation of project-based learning is more directed to the results of thinking and attitudes of students who nurture along with the implementation of this learning. The advantages in the implementation of learning based projects in the eleventh grade classroom of geography subjects of MAN Batu are:

a. Increasing students' learning motivation

Eleven grade students look more enthusiastic in examining the population problem in Batu City. The growth of several population problems in Batu City that go hand in hand with the development of the city makes the students more interested in this.

From the interviews, 9 of 10 students stated that they were happy and enthusiastic with this kind of learning. However, one student named Abdi said that he felt difficult. Not because he can not follow the lessons well but because according to him this kind of learning makes him only focus on one problem and override other problems. Active participation of each student at the time of learning can be seen from the presence of students that 95% of students always follow this geography learning diligently and well.

b. Increasing scientific attitude of students

To complete the project that has been designed by each group would require good cooperation among group members. The division of tasks within the group helps students know their respective duties and cooperation is built on a regular basis.

Hanifudin as the students of eleventh grade students give statement.

> "Melalui pembelajaran geografi dengan metode pembelajaran berbasis proyek, menurut saya dapat meningkatkan kemampuan kerjasama dengan teman-teman. Pembagian tugas yang jelas juga membantu kelompok saya memecahkan masalah yang terkait dengan kriminalitas yang ada di Kota Batu dengan mudah."[34]

Of the 6 groups, on average each group worked together by dividing roles according to their task. This division of tasks makes students work professionally and group cohesiveness can established as good as.

> "Saya merupakan siswa yang kurang bisa berbaur dengan teman-teman saya, dalam kegiatan pembelajaran ini saya mencoba mengambil peran dalam pengambilan data langsung di lapangan, teman-teman saya juga berpartisipasi penuh di beberapa bagian, diataranya yakni pada pengolahan data dan ada pula yang mendapat bagian dalam merancang data kedalam tulisan karya ilmiah. Kerja sama yang dibentuk dari kelompok saya membuat saya yakin dengan kemampuan saya dapat berkomunikasi dengan baik dengan teman-teman saya, model pembelajaran seperti ini juga memacu saya untuk terus mencari informasi terkait permasalahan yang kami pilih.".[35]

The case raised in the material demography problems of geography lessons is an ongoing problem in the student environment. Excavation of information related to existing problems requires students to think deeply.

Based on teacher Novita Selviana, S.Pd speech in the interview:

[34] Interview, Hanifudin students in IPS 3, in classroom, 5 March 2018, at 02.00 p.m
[35] Interview, Tasya students in IPS 2, in classroom, 5 March 2018, at 02.00 p.m

> "Dari pengamatan saya terhadap siswa selama proses pembelajaran di dalam kelas dapat terlihat bahwa sikap kritis siswa dapat terasah dalam kegiatan pembelajaran berbasis proyek ini secara alami. Meskipun proyek yang kami rancang masih termasuk dalam proyek yang sangat sederhana, tetapi saya pikir apa yang dilakukan oleh para siswa telah melebihi harapan saya."[36]

c. Increasing problem solving ability of students

This learning activity is conducted directly by the students. Problems solving comes from the observation results and data that have been collected by the students. Teacher Novita Selviana, S.Pd gives instruction to students to solve their demographic problems with their capacity as students. In classroom teacher Novita give example to students how give the problem solution that appropriate with them. With the students' social sensitivity, students are able to solve the problem in best.

> "Solusi yang diberikan oleh siswa untuk masalah demografi yang mereka pelajari telah didasarkan pada fakta yang mereka temui di lapangan dan kondisi yang mereka alami. Seperti dalam kasus kemacetan yang disebabkan oleh meningkatnya jumlah kendaraan yang memasuki Batu, para siswa memberikan solusi untuk memungkinkan warga Batu pergi lebih awal, untuk melakukan perjalanan selama jam-jam ketika jalan belum penuh sesak dan juga mengambil keuntungan dari jalan alternatif yang telah difasilitasi oleh pemerintah Kota Batu.[37]

The resistance that follow in implementation of project-based learning to improving scientific learning of eleventh grade students in MAN Batu are:

a. Time-Consuming

Project-based learning is a learning process required a long process. Many stages of learning and process of completing tasks that take a long

[36] Interview, geography teacher Novita Selviana, S.Pd, in teacher room, 5 March 2018, at 02.00 p.m
[37] Interview, geography teacher Novita Selviana, S.Pd, in teacher room, 5 March 2018, at 02.00 p.m

time to make this learning model is often implemented on certain materials that are more directed to social issues around students.

Teacher Novita Selviana, S.Pd explain when in interview:

> "Alokasi waktu yang kurang menjadikan pembelajaran dengan PjBL ini kurang maksimal, proses penyelidikan dan perumusan karya tulis ilmiah hanya berlangsung singkat. Karena alokasi waktu yang sedikit lebih banyak dari pengalokasian waktu pada RPP menjadikan kondisi ini berpengaruh pada pembelajaran materi selanjutnya."[38]

In the geography material of the population problem in Batu City, teacher Novita makes a time allocation of 6 x 45 minutes for classroom learning. Twice face-to-face in the classroom, the teacher explains in detail related to the method materials and learning objectives at the first meeting, the students begin to design the planning. Subsequently meetings of students have obtained the results of the investigation and have found solutions related to the demographic problems that exist around them. The results of the findings and solutions they provide then they are compiled into a project of scientific work. The preparation is carried out in groups with the guidance of teachers. At the last meeting students are ready to present their scientific work in front of the class.

Actually with a very limited learning time, students certainly can not be thorough in understanding this material. However, by making a scientific work and directly to the field to make students quickly respond and catch any problems that exist in the Batu City society.

Result of observation the that time given to students is very less once. Moreover, students came home from school at half past three in the

[38] Interview, geography teacher Novita Selviana, S.Pd, in teacher room, 5 March 2018, at 02.00 p.m

afternoon. Students have difficulty dividing the time to finish the investigation and also the preparation of scientific work together and on time.

b. Problem of License and Permit

Data collection related to the problem not only comes directly from the community, but also from some related demographic institutions. Permissions for data retrieval in institutions is one of the things that students should do. However, with limited time and time-consuming permission also create its own constraints in project-based learning in this geography lesson.

When the second group will look for crime-related data, they try to come to the Batu city police station. However, because at first they did not bring a letter from the school so they can not find data. Then they made a letter from school and went back to Batu police station. However, they do not always get permission because there must be a companion teacher who participated. So finally they decided to just take the data through interviews a little related to criminality in Batu City.

c. Vastness of learning materials

The geography material present in each learning refers to the structure of the 2013 curriculum, teacher handbook and syllabus is the elaboration of the curriculum content that will be achieved in the learning process in detail. The development of existing material comes from that learning tool.

In geography lesson the subject of dynamics and population problems has five sub chapters, with the allocation of time 8 meetings based on the teacher handbook.

In the matter of dynamics and problems of population is indeed the material to be studied is very dense and complex. However, students in the guide to be able to understand the material in real terms are not only fixated on the theory that is in the package book only. Existing material may be spent with 4 meetings with an estimated time of 90 minutes per one meeting.

Based on the interview to the head of curriculum Mr. Munawirrul Qulub, S.Pd, M.Si describes this matter, as follows:

> Dalam proses pembelajaran dengan pendekatan ilmiah, pembelajaran berbasis proyek adalah salah satu metode pembelajaran yang tepat,akan tetapi tidak semua mata pelajaran, semua guru, dan semua materi dapat menerapkan model pembelajaran ini. Tergantung pada alokasi waktu dan materi yang sedang dipelajari. Jika semua materi dalam model seperti itu digunakan maka kemungkinan besar dalam satu semester guru hanya bisa menyelesaikan 1 atau dua kompetensi dasar, karena meskipun sudah berbentuk tema materi yang ada dalam silabus masih sangat banyak dan padat."[39]

[39] Interview with Mr. Munawirul Qulub, S.Pd, M.Si. 5 March 2018, in curriculum vice room, at 09.30 a.m

CHAPTER V

DISCUSSION

After researcher have been collected the data from interview, observation, and documentation, then researcher will make data analyze to explain more about result of research.

According to the data analyze technic which choose by researcher that is descriptive qualitative. The data that obtained and explanation before, will analyze by researcher related with research result. The result of data analyze from the research in MAN Batu are follow :

A. Background of Project-Based Learning Constructed to Improve Scientific Attitude in Geography Lesson of Eleventh Grade Students at MAN Batu.

According to general illustration of MAN Batu that consist of history of the school and have been exist 1970 until now can indicate that MAN Batu have good prospect in school physical construction either on human. This is evident from the condition of the school that still stands firmly with the amount of active space used around 32 study rooms, Physical Laboratory, Chemistry, Biology. Since 2005 Ma'had Al-Ulya has been built for students who want to deepen the knowledge of Islam.

Along with the accreditation of MAN Batu that have been "A". MAN Batu have the vision and mission that related with the learning process, development of Islamic education culture that is : the realization of an intelligent, skillful and virtuous generation of Islam, free from drug abuse, and care for the environment.

On occasion of realization the vision and mission. MAN Batu certainly get support from the part of school society such as teachers, students, staffs, headmaster, school committee and society that are around the school. Sixty one of the teachers be there on MAN Batu will make realization of expectation that all the members of MAN Batu expect be developed school in Islamic and science case. The ability of teachers in teaching which can take advantage of existing facilities will certainly make the learning process to achieve maximum results.

Education development in MAN Batu not only in infrastructure aspect but also in education system. Curriculum 2013 as the main part of the education system that new in MAN Batu. Around 3 years ago MAN Batu implemented this curriculum as the main instruction to develop the quality of education in MAN Batu. Innovative goal of school have to related with the goals that expected by education ministry.

Curriculum 2013 is the key to create 21 century education, innovation not only on learning tools but also all the unsure that include in learning process such as method, strategy, media and evaluation of learning process. Different from previous curriculum, this curriculum bring new face in learning process that make study be a fun activity and make students more understand about the material by themselves.

In MAN Batu the teachers have to implemented the learning process with scientific approach. The learning process based on scientific approach have five main steps that are observation, asking, collecting data, analyze data, and informing. The evaluation have three main scope such us cognitive aspect, affective aspect, and skill aspect. In the first competence and second competence encompass development of religion and social attitude.

Learning process which reflect with scientific attitude are much form that can implemented with teachers. Various method and learning strategy able to used by teachers where is the method and learning strategy can make students as main roles in learning process. To make success of the curriculum 2013 goals, constructive learning have to implemented in learning process. Kind of method that related with curriculum 2013 that are develop in MAN Batu are discussion, debate, problem-based learning, project-based learning so on and so forth.

Geography as the based subject in social science majors have important roles that give impact to other subject in social science majors. The wide space range that include in geography, put the geography as main matter have to understand by students. In MAN Batu since as in the tenth grade, students give freedom of choice to enter in natural science, social science, language class, or religion class.

In the eleventh grade student of social science majors, geography as the one favorite subject. Learning geography with complex material makes students always interested in following the learning process. The use of appropriate learning methods and strategies makes the learning process effective and the results of its evaluation maximally.

In the study of geography with the main material of dynamics and population problems, the teacher chooses to use project-based learning to improve students 'learning outcomes, students' understanding and also to maintain the scientific attitude of the students that have been possessed by someone from an early age. According to the definitions found in PJBL handbooks for teachers, projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities, give students

the opportunity to work relatively autonomously over extended periods of time, and culminate in realistic products or presentation.[40]

The results of the study of dynamics and demographic problems are basically theoretical materials that can be seen directly on the social life in the community. Planning, problem formulation to problem solving through the results of projects made by students both in the form of products that can directly be used as well as product in the form of scientific papers.

Time planning has been adjusted by the geography teacher can influence the outcome of the learning by applying this method. On this occasion the teacher gives an estimate of enough time for students to complete a series of learning activities to produce a product of scientific work intact. With a time of 4 x meetings or approximately 8 x 45 minutes, it is certain that students have been able to complete the learning process and have made presentations to peers and teachers.

Preparation of planning and media used by teachers has been good enough in motivating students and giving direction to the purpose of problems that will be reviewed by students. All problems come from the experience and social circumstances surrounding the student's life. Social demography problems that come from the results of student discussions with the teacher that is the problem of traffic jam , acts of criminality and also early marriage in Batu city.

In determining the stages of data collection as well as information related to the demographic problems to be solved by the students, the teacher gives 2 x 45 minutes time allocation in the class to determine what issues they are raising and completing, also determining the place and subject as a representative data source.

[40] Thomas, John W. A *Review of Research on Project-based Learning* (Califrnia:The autodesk Fonation, 2000)

Using worksheets that have been provided by teachers, students can identify the formulation of problems and hypotheses they are likely to find as a result of their scientific papers.

In an effort to improve students' social sensitivity, open mindedness, curiosity, collaboration and another attitude that develop together with the learning process, the teacher gives the students the flexibility to collect data and search for data as they wish and discuss with the group.

Teacher learning planning has given some limitations that will lead the learning process on the development of scientific attitude as the main goal of teachers. Learning planning is certainly in accordance with the existing learning tools and able to impove the students science attitude.

B. The Scientific Attitude Improved Through Project-Based Learning in Geography Lesson for Eleventh Grade Students at MAN Batu

Project-based learning can be defined as long term learning activity which capture students attention with real world problems and solve the problem with collaboration between students and students in learning process with planning, produce and present the product which produced by them to solve the problem in society. According to Patton in Ridwan Adullah Sani Project-based learning refers to students designing, planning, and carrying out an extended project that produce a publicly-exhibited output such us a product, publication, or presentation.[41]

Based on the results of research that has been conducted by researchers in the eleventh grade of MAN Batu in geography lesson with the number of students as

[41] Sani,Ridwan Abdullah, *Pembelaajran Saintifik untuk Implementasi Kurikulum 2013*, 2015 ,Jakarta:Bumiaksara

many as 29 students, it can be known the implementation of the nurture of students' scientific attitude through project-based learning on the dynamics and demographic problems.

In general, the implementation of project-based learning is in accordance with the stages mentioned by Stix, Andi and Hrbk Frank, The nine steps of project-based learning, in www.ascd.org. There are nine steps implemented until the learning process is complete. From the nine steps can be seen that the growth of scientific attitude does not only occur in one stage, but each stage has a role to foster a different scientific attitude .The ninth steps of improving scientific attitude through project based learning are follow:

1. In the first stage of asking, teachers at the beginning of the meeting explain the topics to be studied, learning objectives, motivation, and competencies to be achieved. And provide questions about the methods that can be used in research and design a scientific work. Provide a stimulus to students through student questions that can increase students' curiosity and critical thinking about the demographic problems that exist around the students.
2. In the second step of planning, students take on the role of project designers, possibly establishing a forum for display or competition. Students explore the facts of the problems they have experienced and feel. Make a plan related to the project of scientific work to be completed related to the existing demographic problems in Batu city.
3. In the third step of scheduling, students discuss and accumulate the background information needed for their designs. Each group determines the exact source of information they will take, determining the time of direct observation to the

community. At this stage the teacher develops a collaborative attitude to each student, appreciates all the facts in the field and trains the students to show a sense of concern for the surrounding environment.

4. In the fourth step of monitoring, the teacher-coach the design project of the student who has been done. Monitoring of teachers helps students to solve some constraints when creating scientific papers and retrieving data directly. Students respond positively to teacher inputs that can make their work good and can be completed in time.
5. In this fifth step students have the appropriate data and will be processed into a scientific work on the demographic problems in Batu City. The data obtained comes from direct observation by students in some places they have previously planned. As in BPS offices, police stations, parking places of tourism, roads, houses of RT , and so forth. It makes students feel challenged to add their insight, be critical and open minded students continue to be honed properly. Students often ask various things about social facts that exist in people around the place they visit. In the classroom, teachers help with problem-solving according to the facts they get
6. The next step students make scientific papers based on data and discussion results that have been done by each group. The active participation attitude of each student in this phase can make it easier for the group to finish their scientific work on time. Attitude tolerance between students with other students without the attitude of individualism allows the results of the work of science that the group is to obtain maximum results and can be utilized to solve the existing population problems in Batu city.

7. Before presenting the results of scientific papers, students get mentoring and assessment of the teacher related content and discussion that is on the product of scientific papers that students make. Students show the attitude of not being right and being responsive to the products they have completed. Preparing product presentation is an important thing to be done by the students, the presentation is an activity where the students as the presenter of the product which is the result of thoughts and facts that exist in the field. Good preparation will have a good impact on the recipient of the information presented by the students.
8. Presentation activities by each group. Presentations are guided by the teacher. With enthusiasm and high spirits each group explains the description of the existing description on the scientific work that has been made by the students. A description of the issues raised, the background of the problem determination as well as the solutions given by the group are described in detail. Then the teacher opened a question and answer session, where each session is limited by 3 questioners. Seen the conditions in this session is good enough, many students who participate in the discussion of the results of the first group of products. A large number of students are eager to ask questions and respond. It is obvious that students have reflected some criteria of scientific attitudes, showing respect for others 'findings, showing respect for others' opinions, accepting advice from friends, showing enthusiasm in finding answers, analyzing questions given by teachers or friends, showing evidence to draw conclusions. In this activity is dominated by the development of the attitude of critical mindedness, open mindedness, and curiosity.

9. Product of scientific papers that have been published or presented to friends and teachers then through the evaluation phase. This evaluation is related to the way the group works, the results of scientific writing by the group, and the giving of solutions given by the group. Evaluations from friends and teachers will provide improvements from the written products that have been made by the students and also the motivation to make further social problem solving. Encourage students to continue to develop a scientific attitude that can make students more sensitive to the circumstances in the student environment.

Scientific attitudes are actually a series of behaviors of a person who show more attention to the surrounding nature through the facts. Through in-depth observation of a predetermined object of study the student can directly observe the facts of what is in the environment. Dealing with in-depth observations certainly encourages students to develop some of the scientific attitudes that essentially already possessed by students from an early age. Of the several criteria of scientific attitude that can appear in the students of the next class in MAN Batu, in this geography learning is more prominent is the attitude of critical thinking, respect for data and facts, open thinking, curious, and cooperation.

The nurturing of this scientific attitude has been formally set by the teacher, however, the teacher can not directly control the slow pace of development of every individual's scientific attitude. Each individual has a background of learning experiences, different physical and spiritual conditions. Through geography lesson with project-based learning method has been able to improve students' scientific attitude. However, every individual has different levels of ability.

From the observation data that has been presented previously in 4 times of the meeting can be concluded that the growth of students' scientific attitude through project-based learning shows very good results. The average level of critical student attitudes that develops shows a good level. from the results it can be concluded that the students have been able to ask every change and novelty quite well even though there are still 10 children who look passive and have not shown their critical attitude towards the new by way of entrusting the change to teachers or friends well, the majority of students have been able analyze the questions given by the teacher through an attitude to give answers to what the teacher asked the students by analyzing the question first, showing skepticism, not only in the form of opinions they convey spontaneously but when getting questions related to the existing population demographic in Batu City students showing evidence to make the right conclusions

In taking data directly or indirectly of course students assisted by teachers have been able to maintain respect for the data and facts well. Based on the data obtained by the researcher in the research in the 11th grade social science major MAN Batu, the average class level of respect for the data and facts reached at 2.8. The 11th graders have largely demonstrated an objective attitude in the data gathering in the field even though the observations are still less than optimal. Limitations of time and place of data retrieval resulted in students not being able to demonstrate honesty in data capture well, there are some groups who only get a little facts in the field so they have to manipulate data according to their own thoughts not based on actual facts that exist. Students' attitudes related to respect for facts and data can be indicated by pointing out the attitude of students who take the decisions to provide

solutions to demographic problems such as crime, early marriage and congestion by making decisions in accordance with the facts they find. The scientific papers they have produced also show that students do not mix facts well.

Open minded is one of the scientific attitudes that nurture out of the scientific activities conducted by the eleventh grade students of social science major in MAN Batu. scientific activities undertaken by students that is the completion of the project work of scientific papers that have context on the demographic problems in the Batu city. In the presentation of scientific paper all students have been able to show appreciation of the findings of others by showing the enthusiasm in the presentation and paying attention to the presentation of the products of other groups. All the students no one interrupts the question or response of the other students when someone asks questions and answers, proving that a good level of open thinking is demonstrated by respect for the opinions of others. At the presentation of the problem at the beginning of the meeting each group is entitled to discuss with a group of friends to discuss what issues they will adopt, here the researchers observed that how the level of open mindedness students develop through the attitude of receiving advice from friends, and from the observation of all students can show the attitude is very good although there are some students who have not shown that attitude because of lack of student participation in group discussion. Tolerance to the thoughts of friends is an important thing in doing scientific activities by showing the attitude does not feel the most right. The eleventh graders are very good at accepting the opinions of friends and almost no one feels his opinion is the most correct and ignores the opinions of others.

Students always ask when there are things that have not been understood to the teacher or friends. In relation to the fulfillment of permits for research in several instances students readily instruct teachers on how they can get the letter asking what methods are appropriate to the issues they are raising as material for their scientific work. At the time of the process in the classroom or in the field while collecting student data so enthusiastic about the existing science process. After formulating the problem in the classroom then students with high enthusiasm showed great zeal to find the answer to the problem. Not only in the process of seeking students also shows attention to the objects observed while feeding scientific papers. With this high curiosity that encourages excellent results from scientific papers compiled by each group.

A good cooperation will facilitate each group in completing the product of scientific writing to be the best and can be useful for others as a form of social problem solving that occurred in Batu city. The nature of active participation is one of the main things reflected in the performance of each group in the project. In the eleventh grade is divided into 6 groups with each group consisting of 5 people. The cohesiveness seen from the observation is not when all 5 people participate in one job, but seen in the project work in accordance with each task that has been divided on the early learning activities that is in the planning process. Each student has a different task by maximizing the responsibilities of each member of the group will form a very good cooperation. On several occasions, it seems that there are some groups that have difficulty in finding data in the situation. Every member of the group helps solve the difficulty of finding data by looking for alternative until the problem of the group is solved. Any work done together of course has a risk to a

problem, the problem can be related to the relationship of friends in the problem on the work done, seen from the majority of existing groups they can always solve problems in the group in the family and can compromise every problem that occurs within the group well. Each group has 5 members who must have different personalities, different learning experiences and enthusiasm in different scientific activities. Individualism is one of the basic attitudes of human beings, cooperation is one of the things to minimize the attitude of individualism with cooperation students are required to always work in a compact with friends in one group regardless of the conditions that exist within the group.

The results of observations in the classroom and outside the classroom by the researcher have produced a fact that is not necessarily obtainable without going through in-depth research. Eleventh grade students IPS III have the potential of excellent scientific attitudes to be more developed and nurtured. With this scientific attitude students are able to be sensitive to the social state of the community and point to a problem and its solutions in fact based on facts. Through the implementation of project-based learning this is the teacher can maintain scientific attitude naturally and well.

C. Advantage and Resisting Factors in the Implementation of Improving Scientific Attitude through Project-based Learning for Eleventh Grade Students at MAN Batu.

In project-based learning in this geography lesson can run well accompanied with advantages and disadvantages in the implementation. A learning activity can not be applied in a long time and repeatedly, the implementation of a method or learning strategy must be in accordance with the material and learning

objectives to be achieved. As in the implementation of project-based learning on geography subject matter of population problems in Batu City, teachers determine this method to encourage students to know more and understand the social conditions around them directly.

Given the advantages and disadvantages that appear this is what allows teachers to determine when and how the project-based learning is appropriate to be implemented. The advantages of implementing this project-based learning in the class of eleven class geography are as follows:

1. Increasing of students' learning motivation

   Often students feel bored with learning activities that are just in the form of discussion, question and answer and lecture. They are encouraged by the material contained in the package books and worksheets provided by the school. It makes students less motivated in learning.

   Implementation of project-based learning in revealing the demographic problems in Batu City enhances students' enthusiasm towards the learning process. Learning activities that depend on the social conditions of the people of Batu City actually provide their own motivation for students. Students show remarkable joy in collecting data and information. There are some groups who dare to visit some big institute which in the process for the entry must be accompanied by an official license from the school. High student motivation is shown in the active participation of students. Seeing the effective learning conditions both in the classroom and outside the classroom can be concluded that the project-based learning is suitable in applied to material issues related to social problems and proven to improve student learning motivation

2. Increasing Scientific Attitude of students.

In completing the project of making scientific papers related to population problems in Batu City, students are divided into several groups. Based on the interview data that each group assigns different task specifications to each member of the group. Group grouping is the main in this project-based learning.

The results of a good project are determined by the level of cohesiveness of each group. This series of learning activities trains students to improve their teamwork attitude in the team. A rigorous teacher assessment of the cooperation of each group also helps to cultivate a good cooperative attitude toward each student.

3. Increasing problem solving ability of students

Problems solved by students in making this scientific paper is related to existing demographic problems in the city of Batu. Problems that occur are selected according to the intensity of problems that continue to occur and there is no real solution by the government of Batu City. These problems are, problems of congestion, crime problems and problems of early marriage. With different backgrounds and geographical conditions, each group tries to analyze what is really happening to the community. The facts that have accumulated so that students can think about how to solve the right problem.

In this problem-solving process students are encouraged to determine appropriate solutions according to their capacity as students. The teacher gives an appeal not to criticize the performance of government or other institutions

related to solving existing problems. A good problem solving is a self-resolving problem solving that can be done by oneself and others. Ability to solve the problems by students is no doubt the result. From the existing data, the solutions given by the students to the community that experienced the problem is very good and can be implemented real life.

In contrast to the discussion of previous research results, the following will be discussed about what are the resistance of project-based learning that has been implemented in eleventh grade on geography subjects in MAN Batu.

1. Time-Consuming

In project-based learning it takes at least one month to complete all the projects thoroughly. It is very time consuming so that can disturb learning material.

The previous learning process makes the project-based learning less effective if used consecutively. Take long time is what makes this method can only be used on certain material funding and certain learning conditions. The material should be finished within 2-3 weeks, but because there are things that make some groups can not get data quickly, this learning process requires added time

The condition has an impact on the estimated time for the next material. if the teacher is unable to condition time properly eating will make the achievement of the goal of learning during one semester can not be achieved properly

2. Problem of License and Permit

License constraint is one of the things that exist in scientific-based learning. High student desire to get sufficient facts and students limitation to obtain permission from relevant institutions to make barriers in the success of this lesson.

To make permission latter students have to keep in touch with administration members, that permission letter can help students to get real information from the institution that they want. The data that obtained through related instants will provide the most accurate and up-to-date information

3. Vastness of learning materials

The 2013 curriculum comes with many updates but the update does not necessarily be adopted and implemented by teachers directly. Adjustments for the implementation of the 2013 curriculum must be tailored to the conditions of the school and the conditions of the learners.

In accordance with the syllabus and teacher handbook the material dynamics and problems of the population divided into sub-themes of population data, quantity and geographical analysis, population quality, population mobility, and problems of the population. One chapter has 5 sub-chapters it can be said that geography has compact material. Although in the curriculum 2013 the available materials have been simplified in the form of themes, but the actual content contained in it is still very compact.

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

A. Conclusion

1. Project-based learning to improve students' scientific attitude is not only encouraged by learning tools based on the 2013 curriculum being applied in MAN Batu. this learning is also related to the condition of the learning environment that supports the achievement of the expected learning objectives. Teacher construct learning media and determining learning resources related to the subject demography problems in Batu city. The product that construst by the teacher and students in geography lesson is make a scientific paper about demography problem in Batu city.
2. In improving students' scientific attitude through project-based learning teachers formulate some activities that can encourage students to grow the scientific attitude they have. Scientific attitude can be seen from several activities such as the following, asking, planning, scheduling, monitoring, collecting data, scientific papers formulation, assessment and mentoring, presentation and evaluation. The results of the activities designed by teachers using project-based learning can be seen that the scientific attitude that includes the attitude of critical thinking, open thinking, respect for facts, and the student's curiosity to grow and develop naturally. The results of observations and interviews show that eleventh graders students of IPS III have more ability on the attitude of cooperation and look less in respect to the attitude of fact. Limitations of time in implementing project-based learning makes the development of scientific attitude of students can not produce maximum.

3. Advantages and Obstacles

The advantages of the implementation of project-based learning is in improving scientific attitude on the students of class XI material problems in the city of Batu:

a. Increasing students learning motivation
b. Increasing students scientific attitude
c. Increasing problem solve skill of students

Obstacles encountered in the implementation of project-based learning include:

a. Time Consuming
b. Problem of License and Permit
c. Vastness of learning materials

B. Recommendation

To increase the result of scientific attitude in eleventh grade students of MAN Batu, the researchers suggest the following:

1. Teacher should make interest atmosphere in class, to make students interesting and create a conducive class even though the learning is done in the last hour
2. Teachers should strive to present innovative learning, especially in implementing project-based learning teachers should be able to review
3. Efforts that have been implemented or are still in the planning process by teachers and the school is maintained and realized in the learning activities. In order to form a student who berakhlakul kharimah with a high scientific attitude.

4. Provide convenience to students related to the provision of research licensing in certain agencies.

REFERENCES

Arikunto, Suharsimi.2006. *Prosedur Penelitian Suatu Pendekatan Praktik* Edisi Revisi VI.Jakarta:Rineka Cipta.

Bender, William N. 2012. *Project-Based Learning:Different Instruction for the 21th century*. United States of America: CORWIN a SAGE company.

*Bundu, Patta.2006. Penilaian Keterampilan Proses dan Sikap Ilmiah Dalam. Pembelajaran Sains SD.*Jakarta : Depdikdas

Devi Ertanti. 2010. *"Upaya Peningkatan Sikap Ilmiah Melalui Pembelajaran Berbasis Proyek (Project-Based-Learning) pada Materi Sistem Pencernaan Siswa Kelas XI IPA3 Semester II DI SMA Negeri 2 Bantul Yogyakarta Tahun Ajaran 2009/2010",* Skripsi. Biologi-FMIPA-UNY.

Harmer,Nichola and Stokes Aliso.2014*." The benefits and challenges of project-based learning:A review of the literature* ", Plymouth University: PedRIO paper 6) Permendikbud no 104,tahun 2014.

Musyiatun. 2012. "*Meningkatkan Sikap Ilmiah Siswa melalui Pendekatan Verification Laboratory dalam Pembelajaran IPA Kelas V SD Negeri Kebon Gebong,Kendal"*. Skripsi, Universitas Negeri Yogyakarta

Sani, Ridwan Abdullah.2015. *Pembelajaran Saintifik untuk Implementasi Kurikulum 2013*. Jakarta:Bumi Aksara.

Stix,Andi and Hrbk Frank, *The nine steps of project-based learning,(online) www.ascd.org*

Sugiyono, 2010. *Statistik untuk Pendidikan*. Bandung: Alfabeta.

Sugiyono, 2008. *Memahami Penelitian Kualitatif*. Bandung:Alfabeta

Sumarni, Woro. 2015. "*The strengths and weaknesses of the Implementation of Project Based Learning",* IJSR:vol.4 issue 3.

Thomas, John W. A. 2000. *Review of Research on Project-based Learning*.California:The autodesk Fonation.

APPENDIX

Appendix 1. Letter of Research Permission

KEMENTERIAN AGAMA REPUBLIK INDONESIA
UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG
FAKULTAS ILMU TARBIYAH DAN KEGURUAN
Jalan Gajayana 50, Telepon (0341) 552398 Faximile (0341) 552398 Malang
http:// fitk.uin-malang.ac.id. email : fitk@uin_malang.ac.id

Nomor : 81 /Un.03.1/TL.00.1/01/2018 22 Januari 2018
Sifat : Penting
Lampiran : -
Hal : **Izin Penelitian**

Kepada
Yth. Kepala MAN Batu
di
Batu

Assalamu'alaikum Wr. Wb.

Dengan hormat, dalam rangka menyelesaikan tugas akhir berupa penyusunan skripsi mahasiswa Fakultas Ilmu Tarbiyah dan Keguruan (FITK) Universitas Islam Negeri Maulana Malik Ibrahim Malang, kami mohon dengan hormat agar mahasiswa berikut:

Nama	:	Septa Indayanti
NIM	:	14130069
Jurusan	:	Pendidikan Ilmu Pengetahuan Sosial (PIPS)
Semester - Tahun Akademik	:	Genap - 2017/2018
Judul Skripsi	:	**Nurturing Scientific Attitude Through Project-Based Learning for Eleventh Grade Students at MAN Batu**
Lama Penelitian	:	**Januari 2018** sampai dengan **Maret 2018** (3 bulan)

diberi izin untuk melakukan penelitian di lembaga/instansi yang menjadi wewenang Bapak/Ibu.

Demikian, atas perkenan dan kerjasama Bapak/Ibu yang baik disampaikan terima kasih.

Wassalamu'alaikum Wr. Wb.

Dekan,

Dr. H. Agus Maimun, M.Pd
NIP. 19650817 199803 1 003

Tembusan :
1. Yth. Ketua Jurusan PIPS
2. Arsip

Appendix 2. Letter of Achievement

KEMENTERIAN AGAMA REPUBLIK INDONESIA
KANTOR KEMENTERIAN AGAMA KOTA BATU
MADRASAH ALIYAH NEGERI BATU
Jl. Patimura No. 25 Kelurahan Temas Telp./Fax. 0341 592185
web: www.mankotabatu.sch.id email : man_kotabatu@yahoo.com
Kode Pos 65315

SURAT KETERANGAN
Nomor : B- **406**/Ma.13.36.01/PP.00.6/05/2018

21 Mei 2018

Yang bertanda tangan dibawah ini Kepala Madrasah Aliyah Negeri (MAN) Kota Batu.
Menerangkan bahwa :

Nama	: **SEPTA INDAYANTI**
NIM	: **14130069**
Prodi	: **S1 PENDIDIKAN IPS**
Universitas	: **Universitas Islam Negeri Malang**

Telah mengadakan penetlitian dengan judul:
***"Nurturing Scientific Attitude Through Project-Based Learning for Elevent Grade Students at* MAN Kota Batu".**
Pada 05 Pebruari 2018 sampai dengan 06 Maret 2018.

Demikian Surat Keterangan ini, untuk digunakan sebagaimana mestinya.

a.n. Kepala
Kepala Tata Usaha

Lenny Maryani

Tembusan:
Yth. Kepala MAN Kota Batu sebagai laporan

Appendix 3. Evidance of Consultation

MAULANA MALIK IBRAHIM
STATE SLAMIC UNIVERSITY MALANG
FACULTY of TARBIYAH AND TEACHER TRAINING
Jalan Gajayana Nomor 50 Telepon (0341) 552398
Website:fitk.uin.malang.ac.id email:fitk@uin-malang.ac.id

EVIDENCE OF CONSULTATION

Name : Septa Indayanti

Number of Student : 14130069

Departement : Social Science Education Department

Advisor : H. Mokhammad Yahya, Ph.D

Title of Skripsi : Improving Scientific Attitude Through Project-Based Learning for Eleventh Grade Students at MAN Batu

No	Date of Consultation	Consultation Material	Signature
1	January, 19th 2018	Research Instrument	
2	January,24th 2018	Revision of Chapter I-III	
3	April,17th 2018	Data Analyisis	
4	April,20th 2018	Data Collecting	
5	April,27th 2018	Revision of Chapter IV-V	
6	May,15th 2018	Chapet I-VI	
7	May,18th 2018	ACC	

Acknowledged by,

Head of Department,

Dr. Alfiana Yuli Efianti, M.A

NIP. 197608032006041001

Appendix 4. Observation Guidebook

NO.	Dimensi Sikap Ilmiah	Indikator	Deskripsi
1	Berfikir Kritis	(1) Menanyakan setiap perubahan/hal baru	
		(2) Menganalisis pertanyaan yang diberikan guru	
		(3) Menunjukkan sikap skeptic yaitu tidak mudah menerima idea atau gagasan kecuali dia sudah dapat membuktikan kebenarannya	
		(4) Menunjukkan bukti-bukti untuk menarik kesimpulan	
2	Respect terhadap data/fakta	(5) Menunjukkan sikap objektif dalam pengambilan data.	
		(6) Menunjukkan kejujuran dalam pengambilan data	
		(7) Menunjukkan sikap pengambilan keputusan sesuai dengan fakta	
		(8) Menunjukkan sikap tidak mencampur fakta dengan pendapat	
3.	Berpikir terbuka	(9) Menunjukkan sikap menghargai temuan orang lain	
		(10) Menunjukkan sikap menghargai pendapat orang lain	
		(11) Menerima saran dari teman	
		(12) Menunjukkan sikap tidak merasa paling benar	
4.	Ingin Tahu	(13) Menanyakan apabila ada hal-hal yang belum dipahami	
		(14) Menunjukkan antusiasme terhadap	

		proses sains	
		(15) Menunjukkan antusiasme dalam mencari jawaban	
		(16) Menunjukkan perhatian terhadap objek yang diamati	
5.	Kerja sama	(17) Menunjukkan sikap partisipasi aktif dalam kelompok	
		(18) Membantu anggota kelompok yang kesulitan mencari data	
		(19) Mengompromikan setiap permasalahan yang terjadi dalam kelompok	
		(20) Menunjukkan sikap tidak individualis	

Appendix 5. Transcript of Interview with Teachers and Curriculum Vice

Fokus	**Implementasi pembelajaran PjBL Geografi di kelas XI**
Informan	Novita Selviana, S.Pd.
Status Informan	Guru Geografi kelas XI
Lokasi	Kantor Guru
Tanggal	22 Januari 2018 dan 21 februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Sejak kapan ibu mengajar sebagai guru geografi di MAN Batu?
I	Awal mulanya dulu saya adalah guru PKL di sini, itu sekitar tahun 2013. Setelah itu, saya masuk di MAN Batu pada tahun 2015 sebagai guru pengajar tetap mata pelajaran geografi dan tahun kemarin saya dipercaya juga untuk mengajar mata pelajaran kewirausahaan.
P	Apakah pembelajaran geografi di MAN Batu sudah berdasarkan kurikulum 2013?
I	Pembelajaran geografi disini memang sudah berdasarkan kurikulum 2013. Semua perangkat pembelajaran , pengembangan materi, metode , strategi pembelajaran, dan evaluasi pembelajaran sudah mengacu pada kurikulum 2013 . Saya juga sudah beberapa kali menerapkan pembelajaran dengan pendekatan ilmiah, dimana pendekatan ilmiah tersebut merupakan pokok dalam pembelajaran kurikulum 2013. Tentunya saya sesuaikan juga dengan materi ajar yang sesuai dengan Kompetensi Dasar yang harus dikuasai oleh murid.
P	Apa panduan guru dalam membuat Rencana Pelaksanaan Pembelajaran (RPP)?
I	Panduan perancangan Rencana Pelaksanan Pembelajaran (RPP) adalah buku pedoman guru mata pelajaran geografi kelas XI kurikulum 2013 revisi.
P	Bagaimana tahapan penyusunan RPP
I	Dalam penyusunan RPP saya mengacu pada buku pedoman guru mata pelajaran geografi kelas XI kurikulum 2013 revisi. Dari buku pedoman tersebut saya kembangkan sendiri metode dan model pembelajaran yang sesuai dengan Kompetensi Dasar yang ingin dicapai dan materi yang dibahas. Yang paling utama kita harus tahu terlebih dahulu apa KD dan tujuan pemebelajaran estimasi waktu, selanjutnya materi, strategi model dan metode pembelajaran, media yang akan digunakan, dan yang terakhir adalah bentuk evaluasi pembelajaran.
Fokus	**Strategi dan metode guru dalam menumbuhkan sikap ilmiah siswa**

P	Pada pembelajaran yang akan datang metode dan strategi apakah yang akan Ibu gunakan untuk menumbuhkan sikap ilmiah siswa?
I	Dalam rencana pelaksanaan pembelajaran yang telah saya rancang, pada materi dinamika dan permasalahan kepedudukan ini saya akan menggunakan perpaduan metode pembelajaran berbasis masalah dan juga pemebelajaran berbasis proyek. Karena waktunya sedikit terbatas sehingga saya mengajukan kepada siswa untuk membuat proyek berupa Karya Tulis Ilmiah berdasarkan permasalahan kependudukan yang ada di sekitar tempat tinggal siswa.
Post-Pembelajaran	
P	Bagaimana penerapan model Project-Based Learning ini memudahkan untuk menyampaikan materi permasalahan kependudukan pada pelajaran geografi?
I	Penerapan model PjBL ini dapat mengembangkan berfikir kritis siswa dan lebih peduli pada permasalahan-permasalahan sosial yang ada disekitar mereka. Karena menuntut siswa untuk menggali permasalahan sosial dan mengembangkan solusi secara mandiri
P	Strategi seperti apa yang ibu terapkan untuk menggali rasa ingin tahu siswa dan untuk mengembangkan sikap ilmiah siswa?
I	Saya melaukukan tanya jawab secara terus menerus untuk menggali pemikiran siswa. Jawaban dan tanggapan yang diberikan oleh siswa tersebut kemudian saya kembangkan dan saya arahkan ke materi utama yang akan mereka dapat
P	Apakah perencanaan pembelajaran PjBL dengan proses pembelajaran di kelas yang ibu laksanakan berjalan sesuai dengan tujuan pembelajaran yang ingin dicapai?
I	Untuk ketercapaian tujuan pembelajaran sudah tercapai, materi utama yang disampaikan kepada siswa sudah tersamapaikan dengan baik, namun karena alokasi waktu yang sedikit lebih banyak dari pengalokasian waktu pada RPP akan berpengaruh pada pembelajaran materi selanjutnya.
P	Apakah dengan menerapkan model pembelajaran ini pada materi permasalahan penduduk, sikap ilmiah siswa dapat terasah dan dapat berkembang dengan baik?
I	Yang jelas ini lebih mengarahkan kepada berpikir kritis,siswa secara aktif ikut memecahkan permasalahan sosial yang ada disekitar kehidupa mereka.Menunutut siswa untuk membuat karya tulis sederhana, dengan hal tersebut mendorong siswa untuk mengkolaborasikan fakta yang ada di lapangan dengan pendapat atas solusi yang mereka berikan.
P	Hambatan atau kesulitan apakah yang muncul saat proses pembelajaran dengan menggunakan PjBL ini? Apakah hal tersebut dapat berpengaruh terhadap perkembangan sikap

	ilmiah siswa?
I	Alokasi waktu yang kurang menjadikan pembelajaran dengan PjBL ini kurang maksimal, proses penyelidikan dan perumusan karya tulis ilmiah yang kurang panjang sehingga perkembangan sikap ilmiah siswa pun tidak dapat berkembang dengan baik.
P	Kelebihan atau manfaat apa yang didapatkan dari pengimplementasian model pembelajaran PjBL dalam materi perasalahan penduduk di Kota Batu?
I	Peka terhadap masalah sekitar, siswa lebih sensitive dan berfikir kritis siswa lebih terasah. Siswa mampu memecahkan msalah sosial dengan baik dan juga motivasi siswa dalam pembelajaran ini terlihat meningkat
P	Evaluasi
I	Seperti materi materi sebelumnya saya selalu menggunakan dua bentuk evaluasi yakni essay dan pilihan ganda
FOKUS	**Implementasi pendekatan scientific dalam menembangkan sikap lmiah di MAN Batu**
Informan	Bapak Munawir Qulub S.Pd, M.Si
Status Informan	Wakil Kepala Sekolah Bagian Kurikulum
Lokasi	Kantor Waka Kurikulum
Tanggal	5 Maret 2018
P	Kurikulum apakah yang sekarang diimplementasikan di MAN BATU?
I	Selama 3 tahun terakhir MAN Batu mengimplementasikan Kurikulum 2013
P	Sejak kapan MAN Batu menerapkan kurikulum 2013?
I	sejak tahun ajaran 2015-2016
P	Terkait pendekatan scientific learning pada proses pembelajaran kurikulum 2013, apakah penting mengembangkan sikap ilmiah siswa?
I	Sangat penting, tidak seperti pembelajaran konvensional sebelumnya dengan pendekatan scientific learning ini cenderung mengacu pada tahapan siswa menemukan
P	Apa saja yang dipersiapkan untuk mengembangkan sikap ilmiah siswa di MAN Batu?
I	Penerapan scientific dalam pembelajaran , ekskul karya tulis ilmiah
P	Bagaimana guru bidang studi menerepakan pendekatan pembelajaran scientific dalam mengembangkan sikap ilmiah?
I	Wajib, sebagian guru telah melaksanakan pembelajaran dengan pendekatan scientific.
P	Apakah sarana dan prasarana yang ada telah mendukung pelaksanaan pengembangan sikap ilmiah siswa?
I	Sarana untuk mengembangkan sikap ilmiah , sudah mencukupi, motor penggeraknya guru

P	Apakah kendala yang dihadapi dalam imlementasi k-13 ini dan juga imlementasi scientific learning?
I	Ada ketidak sesuaian antara materi masih sangat banyak, waktu cukup besar, materi masih cukup padat. Tidak semua materi bisa menggunakan pjbl.
P	Adakah solusi yang telah sekolah lakukan untuk mengatasi kendala tersebut?
I	Solusi, tidak semua menggunakan PjBL. Dikejar ketuntasan materi. Pihak sekolah memebrikan kebebasan pada guru dalam menggunakan metode apapun. Dan memberikan kemudahan juga apabila guru tersbut menggunakan project-based learning ini serta bantuan berupa administrasi ataupun fasilitas.

Appendix 6. Transcript of Interview with ten students of XI IPS III

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Hanifuddin
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Menambah wawasan terkait permasalahan kriminalitas di Kota Batu, menarik, bisa menelaah masalah secara langsung dan lebih peduli terhadap lingkungan
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi saat ini ?
I	Belajar kelompok
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Menyenangkan bisa menelaah langsung masalah dan lebih peduli terhadap lingkungan
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Sosiologi
P	Apakah dengan pembelajaran seperti kemarin kalian lebih mudah untuk memahami materi permasalahan penduduk?
I	Mudah memahami , tapi terbatas pada kriminalitas
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
I	Ya, saya jadi banyak ingin tahu, terutama terkait keadaan kriminalitas di kota Batu yang bisa menambah waawasan saya dan supaya saya tahu bagaimana menjaga diri di karenakan saya juga merupakan orang Pujon jadi ingin merasa aman saat di Kota Batu

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Rahmadi Jaya Saputra
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Sulit memahami materi secara luas karena saya merasa dipacu pada satu masalah dan saya ingin lebih tau banyak masalah.
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Karya Ilmiah
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Lebih terpacu pada masa kriminalitas, menyenangkan bisa mengetahui dan memberikan pemecahan masalah yang tepat yang berguna untuk masyarakat
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Sosiologi
P	Apakah dengan pembelajaran seperti kemarin kalian lebih mudah untuk memahami materi permasalahan penduduk?
I	Kurang bisa memahami karena terbatas pada kriminalitas
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
I	Kalo sering bosen , tapi kalu sekali-kali ya , meningkatkan rasa ingin tahu, karena mendapatkan data langsung riil dari kota batu, kalo dari kota lain akan sulit memahami.

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Hani Fatu Rahma O
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Bisa mengetahui masalah secara langsung dan lebih peduli terhadap lingkungan
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Diskusi
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Senang dan ingin leebih banyak tau tentang keadaan sosil dan merancang suatu pemcahan sosial dalam bentuk fisik maupun pemikiran
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Bahasa Indonesia
P	Apakah dengan pembelajaran seperti kemarin kalian lebih mudah untuk memahami materi permasalahan penduduk?
I	Mudah memahami karena tahu keadaan sebenarnya
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
	Saya rasa iya, karena setelah melakukan pencarian data langsung ke kapolres kemarin saya merasa ingin tahu lebih dalam lagi, meskipun kami kemarin terkendala ijin.

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Silvi Intan Lestari
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Pelajarannya langsung mengarah kepada masyarakat, saya jadi tahu bagaimana keadaan sosial di masyarakat
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Belajar kelompok
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Membuat saya lebih bisa respek terhadap keadaan sosial dan memberikan solusi nyata untuk menyelesaikan masalah kependudukan dalam posisi saya sebagai siswa
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Sosiologi
P	Apakah dengan pembelajaran seperti kemarin kalian lebh mudah untuk memahami materi permasalahan penduduk?
I	Mudah memahami dan lebih mengerti bagaimana materi ini dapat di laksanakan di kehidupan nyata
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
	Rasa ingin tahu saya lebih terasah terutama dalam hal pemecahan permasalahan kependudukan di Kota Batu, apalagi kota Batu merupakan kota wisata yang banyak di kunjungi, sehinggan dalam memcahkan masalh kriinalitas ini saya terpacu untuk mencari data dengan benar agar tercipta keamaanan

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Elva Venesia O
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 2
Tanggal	21 februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Bisa mengetahui masalah di masyarakat sekitar
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Belajar kelompok
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Seru dan menarik, menacari data secara langsung di lapangan dan merumuskannya dalam bentuk karya Ilmiah
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Sosiologi
P	Apakah dengan pembelajaran seperti kemarin kalian lebh mudah untuk memahami materi permasalahan penduduk?
I	Mudah memahami namun saya juga ingin mengembangkan pengetahuan terhadap permasalahan yang lain
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
	Iyaa, mencari tahu fakta dan memecahkan permsalahan dengan memberikan solusi menurut saya sangat membantu saya mendorong rasa ingin tahu saya lebih dalam

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Shofura Nauval Amiroh
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Tahu secara langsung bagaimana permasalahan kependudukan yang ada di Kota Batu
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Observasi, mengumpulkan data
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Menyenangkan, namun saya masih merasa kesulitan saat membuat karya ilmiah saya merasa bosen , menulis laporan. Kemarin terkendala , waktu dan tempat observasi, mengumpulkan teman-teman
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Bahasa indonesia
P	Apakah dengan pembelajaran seperti kemarin kalian lebh mudah untuk memahami materi permasalahan penduduk?
I	Lebih mudah memahami karena mengetahui secara langsung keadaan di lapangan
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
I	Iya meningkat, bisa menyusun karya tulis ilmiah,

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Ahmad Ubaidillah
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Dari pembelajaran ini saya bisa mengerti permasalahan kependudukan yang ada di Kota Batu dan yang menyenangkan saya bisa bermanfaat untuk orang lain dengan memberikan solusi pemecahan masalah
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Mengumpulkan data
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Merasa senang saat mendiskusikan permasalahan yang ada di Kota Batu , dan perumusan kary ilmiah. Namun kurang bisa mengikuti pada saat ke lapangan karena keterbatasan waktu dab transportasi (ubed) mngerjakan yang di kelas,
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Belum
P	Apakah dengan pembelajaran seperti kemarin kalian lebih mudah untuk memahami materi permasalahan penduduk?
I	Lebih mudah memahami dan mengingat bentuk permasalahan kependudukan
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
I	Iya ,saya jadi tahu dan ingin lebih tahu permasalahan kependudukan di Kota Batu

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Abdi Falikhul
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Membuat saya lebih peka terhadap kondisi masyarakat disekitar saya
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Tidak tahu
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Terlalu monoton saat di kelas kurang bisa berkreasi, kreasi hanya tersalurkan pada pembentukan karya ilmiah. Kurang menantang.
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Tidak tahu
P	Apakah dengan pembelajaran seperti kemarin kalian lebh mudah untuk memahami materi permasalahan penduduk?
I	Kurang bisa memahami,
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
	Kadang kala saya ingin mengetahui sesuatu terkadang juga hanya menerima apa yang sudah saya ketahui, tergantung mood

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Nurul Latifatus
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 3
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Materi permasalahan kependudukan ini menarik menurut saya, apalagi kita dapat menentukan permasalahan apa yang akan ita bahas lebih dalam dan secara langsung mencarinya ke masyarakat.
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Observasi dan karya ilmiah
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Menyenangkan saat di lapangan dan seru
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Bahasa indonesia
P	Apakah dengan pembelajaran seperti kemarin kalian lebh mudah untuk memahami materi permasalahan penduduk?
I	Mudah memahami, tahu lebih dalam dan bisa berbagi solusi dengan orang lain
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
I	Saya rasa rasa ingin tahu saya sedikit meningkat di bandingkan sebelumnya, pada saat di lapangan saya dituntut untuk mengajukan pertanyaan, namun setelah itu saya mengajukan pertanyaan di luar list pertanyaan saya sehinggan rasa ingin tahu lebih terasah.

Fokus	**Implementasi pengembangan sikap ilmiah melalui PjBL Geografi di kelas XI**
Informan	Tasya
Status Informan	Siswa kelas XI
Lokasi	Ruang kelas XI-IPS 2
Tanggal	21 Februari 2018
Pewawancara (P) dan Informan (I)	**Pertanyaan dan Jawaban**
Pra-Pembelajaran	
P	Bagaimana pendapat kalian tentang pembelajaran geografi materi permasalahan kependudukan ?
I	Pembelajarannya mengajarkan kita untuk bertindak secara bersama-sama dalam mengerjakan karya ilmiah dan mencari data dari lapangan
P	Apakah kamu tahu metode apa yang digunakan dalam pembelajaran geografi ? metode?
I	Observes, mengumpulkan data
P	Bagaimana perasaan kalian setelah mengikuti pembelajaran geografi dengan metode pembelajaran berbasis proyek kemarin?
I	Menyenangkan namun karena terkendala waktu menjadikan hasil karya ilmiah kurang baik
P	Apakah sebelumnya ada pembelajaran yang sama dengan pembelajaran seperti sekarang?
I	Bahasa indonesia
P	Apakah dengan pembelajaran seperti kemarin kalian lebh mudah untuk memahami materi permasalahan penduduk?
I	Lebih mudah memahami dan mengerti kondisi sekitar
P	Apakah rasa ingin tahu kalian dapat terasah dengan metode seperti itu?
I	Tergantung suasana, saya merasa kurang bisa mengembangkan rasa ingin tahu saya, saya lebih suka membuat laporan karya ilmiah dan mengolah data.

Appendix 7. Result of Observation

HASIL OBSERVASI SIKAP ILMIAH

No	Nama Siswa	Penilaian Sikap Ilmiah																				Jumlah	Keterangan
		Berfikir Kritis				Respect terhadap data/fakta				Berpikir Terbuka				Ingin Tahu				Kerja Sama					
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)		
1	Abdi FAiqul Ishbah	3	3	3	3	3	2	2	2	3	4	2	4	4	1	2	2	3	3	3	3	60	Baik
2	Hafidz Hamdani	3	2	3	2	2	3	3	3	3	2	3	3	3	3	2	3	3	3	3	3	61	Baik
3	M. Akbar Rizky	3	3	3	3	2	2	2	3	2	3	3	2	2	3	3	3	3	3	3	4	60	Baik
4	Wildan	3	3	3	3	3	3	3	3	2	2	3	2	2	3	4	3	3	3	3	1	61	Baik
5	Hanifuddin	4	4	4	4	4	4	3	4	3	4	4	4	4	4	4	4	4	4	4	4	79	Sangat Baik

6	Ibnu Fajar A	4	2	3	2	3	2	2	3	2	3	2	2	4	3	4	4	3	2	2	2	60	Baik
7	Ubaid	2	4	2	3	2	3	2	3	3	3	3	4	3	2	3	2	3	3	2	4	59	Baik
8	Anjumi Zuhuri I	3	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	60	Baik
9	Eiva Venesia Ochalisa	3	3	3	3	3	4	3	4	3	3	4	3	4	4	4	4	4	4	4	3	75	Sangat Baik
10	Regita	2	3	3	3	2	3	3	3	2	2	3	3	3	2	3	3	3	3	3	3	61	Baik
11	Alfenia Dewi S	2	3	3	2	2	3	3	3	2	3	2	4	3	3	2	2	3	3	3	3	59	Baik
12	Reva Bram Ananta	3	2	4	2	2	2	3	3	3	3	2	2	2	2	3	3	3	3	3	2	58	Baik
13	Tasya Yuli F	2	3	3	3	3	3	2	3	2	2	3	2	3	2	3	2	3	3	3	2	58	Baik
14	Elta Rizqi R	2	3	3	2	3	3	3	3	2	3	3	3	2	2	2	2	2	2	3	2	56	Baik

	T																						
15	Silvi Intan L	2	3	3	3	3	2	3	3	2	2	3	3	3	3	2	2	3	3	3	3	59	Baik
16	Sintia Puspitasari	3	3	3	2	2	2	3	4	3	4	4	2	2	3	2	2	3	3	3	4	62	Baik
17	Rahmadi Jaya S	3	3	3	2	3	2	3	3	2	3	3	3	3	2	2	2	3	3	3	3	60	Baik
18	Hani Fatu	2	2	3	3	2	3	2	3	3	3	3	2	3	3	3	2	3	3	3	4	61	Baik
19	Nurul Latifatus S	2	3	3	2	2	3	3	3	3	3	3	4	2	3	3	2	3	3	2	2	59	Baik
20	Sherly Olfiya Rifana	4	2	3	2	3	2	3	3	3	2	3	3	4	1	4	4	4	3	3	3	64	Baik
21	Yumrotul S	3	3	4	2	3	2	3	3	2	3	4	3	3	3	3	3	4	3	4	3	66	Sangat Baik
22	Anindyas	3	4	3	2	3	2	3	2	2	3	3	4	3	4	4	3	3	3	3	4	64	Sangat

	Yuniar																						Baik
23	Umi Farida	2	4	4	3	3	3	3	3	2	3	3	4	3	4	4	3	3	3	3	4	67	Sangat Baik
24	Shofuro Nauval	3	3	3	4	4	4	3	4	2	3	2	1	4	4	3	2	3	2	3	2	64	Baik
25	Aviva Dewi Aulia R	3	3	3	2	3	3	3	3	4	3	3	4	3	3	4	3	3	3	3	4	66	Sangat Baik
26	Ridho	2	3	3	3	3	3	3	3	3	3	3	3	2	3	2	2	3	3	3	3	62	Baik
27	Hanin Afifah Dzikra	3	3	3	2	2	2	3	3	2	3	3	4	3	3	3	3	3	3	2	4	61	Baik
28	Elta Rizqi R	3	3	3	2	3	2	3	3	2	3	3	3	3	2	2	2	3	3	3	3	60	Baik
29	Haykal Wildan	2	4	2	3	2	3	2	3	3	3	3	4	3	2	3	2	3	3	2	4	59	Baik

CATATAN :

Jumalah siswa laki-laki	= 13
Jumlah siswa Perempuan	= 17
Jumlah Siswa yang Mendapat kriteria Sangat Baik	= 8 orang
Jumlah Siswa yang Mendapat kriteria Baik	= 21 orang
Jumlah Siswa yang Mendapat kriteria Cukup Baik	= 0
Jumlah Siswa yang Mendapat kriteria Kurang Baik	= 0

RUBRIK PENILAIAN SIKAP ILMIAH

Petunjuk:

Berikan skor 1, 2, 3, atau 4 pada tabel penilaian perilaku sikap ilmiah siswa yang telah disediakan di bawah ini. 1, 2, 3 atau 4 memiliki makna sebagai berikut:

SKOR	KATEGORI	KETERANGAN
1	SANGAT KURANG	Jika siwa belum memperlihatkan perilaku yang tertera dalam indikator
2	KURANG	Jika siswa mulai memperlihatkan perilaku yang tertera dalam indikator, tetapi belum konsisten
3	BAIK	Jika siswa mulai konsisten memperlihatkan perilaku yang tertera dalam indikator
4	SANGAT BAIK	Jika siswa terus menerus/secara konsisten memperlihatkan perilaku yang tertera dalam indikator

- Konversi skor menjadi nilai:

Siswa dengan skor maksimal 61-80 akan memperoleh nilai A (Sangat Baik)

Siswa dengan skor maksimal 41-60 akan memperoleh nilai B (Baik)

Siswa dengan skor maksimal 21- 40 akan memperoleh nilai C (Cukup)

Siswa dengan skor maksimal 1- 20akan memperoleh nilai D (Kurang)

Appendix 8. Lesson Plan

RENCANA PELAKSANAAN PEMBELAJARAN

(RPP)

Satuan Pendidikan : MAN BATU
Mata Pelajaran : Geografi
Kelas / Semester : XI /2
Materi Pokok : Dinamika Kependudukan
Alokasi Waktu : 4 x 45 menit

A. KOMPETENSI INTI

KI 1 Menghayati dan mengamalkan ajaran agama yang dianutnya.

KI 2 Mengembangkan perilaku (jujur, disiplin, tanggung jawab, peduli, santun, ramah lingkungan, gotong royong, kerjasama, cinta damai, responsif dan proaktif) dan menunjukkan sikap sebagai bagian dari solusi atas berbagai permasalahan bangsa dalam berinteraksi secara efektif dengan lingkungan sosial dan alam serta dalam menempatkan diri sebagai cerminan bangsa dalam pergaulan dunia.

KI 3 Memahami, menerapkan, menganalisis dan mengevaluasi pengetahuan faktual, konseptual, prosedural dalam ilmu pengetahuan, teknologi, seni, budaya, dan humaniora dengan wawasan kemanusiaan, kebangsaan, kenegaraan, dan peradaban terkait fenomena dan kejadian, serta menerapkan pengetahuan prosedural pada bidang kajian yang spesifik sesuai dengan bakat dan minatnya untuk memecahkan masalah.

KI 4 Mencoba, mengolah, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, dan mampu menggunakan metoda sesuai kaidah keilmuan.

B. KOMPETENSI DASAR DAN INDIKATOR

Kompetensi Dasar	Indikator Pencapaian
1.1 Menghayati keberadaan dirinya sebagai makhluk Tuhan yang dapat berfikir ilmiah dan mampu meneliti tentang lingkungannya.	1.1.1. Berdoa sebelum melakukan kegiatan pembelajaran 1.1.2. Bersyukur setelah melakukan

	kegiatan pembelajaran
2.1 Menunjukkan perilaku proaktif dalam mempelajari hakekat ilmu dan peran geografi untuk diterapkan dalam kehidupan sehari-hari.	2.1.1. Sungguh-sungguh mengikuti pembelajaran 2.1.2. Mengerjakan tugas tepat waktu
2.2 Menunjukkan perilaku yang bertanggung jawab sebagai makhluk yang dapat berfikir ilmiah.	2.2.1. Bekerja dengan kelompoknya 2.2.2. Menghargai pendapat temannya 2.2.3. Berani berpendapat
3.4 Menganalisis dinamika kependudukan di Indonesia untuk perencanaan pembangunan	1. Mengidentifikasi permasalahan kependudukan di Kota Batu 2. Menganalisis dampak permasalahan kependudukan terhadap pembangunan di Indonesia 3. Menyajikan hasil analisis data kependudukan dalam bentuk tabel atau diagram
4.4 Menyajikan data kependudukan dalam bentuk peta, tabel, grafik, dan/atau gambar	4.4.1 Menyajikan laporan diskusi kelompok dalam bentuk makalah

C. MATERI PEMBELAJARAN

Permasalahan yang diakibatkan dinamika kependudukan:

1. Masalah Demografi
   a. Besarnya jumlah penduduk.
   b. Peningkatan pertumbuhan penduduk.
   c. Persebaran penduduk yang tidak merata.
   d. Mobilitas penduduk
2. Masalah Non Demografi
   a. Rendahnya tingkat kesehatan.
   b. Pendidikan rendah.
   c. Banyaknya jumlah penduduk miskin.
   d. Banyaknya pengangguran.
   e. Pendapatan rendah.

D. Langkah-langkah Kegiatan Pembelajaran

Pertemuan ke-I

No	Tahapan Kegiatan	Kegiatan	Pendidikan Karakter	Waktu
1	Pendahuluan	• Siswa diajak berdoa terlebih dahulu dan	Disiplin	15’

		dicek kehadirannya melalui presensi. • Siswa diberikan penjelasan terkait garis besar cakupan materi sekaligus langkah-langkah pembelajaran dengan model *Project-Based Learning* (PjBL) yang ditampilkan melalui slide *powerpoint*. • Siswa dibagi menjadi 6 kelompok yang di lakukan secara heterogen berdasarkan nilai UAS semester lalu yang kemudian ditayangkan melalui slide *powerpoint*. Selanjutnya siswa diminta berkumpul bersama kelompoknya dan duduk sesuai denah yang ditampilkan melalui slide *powerpoint*. • Setiap kelompok diberi lembar panduan kegiatan PjBL beserta pedoman rencana penelitian dan lembar kegiatan rencana penyelidikan.	Bersyukur Peduli	
2	Inti	**Mengorientasi Siswa Pada Masalah** • Siswa ditayangkan video tentang permasalahan kependudukan di Indonesia. Selanjunya siswa diminta mengidentifikasi masalah yang ada dalam video tersebut. • Mengacu pada video yang telah ditayangkan, siswa diberi tiga topik permasalahan kependudukan yang ada di Kota Batu. **Menanya (Mengoorganisasikan Siswa Untuk Belajar)** • Melalui undian, setiap kelompok diberi salah satu topik permasalahan kependudukan dari tiga permasalahan kependudukan yang ada di Kota Batu. • Siswa secara berkelompok berdiskusi mengenai topik yang telah diberikan. Selanjutnya setiap kelompok diminta mengidentifikasi permasalahan, membuat rumusan masalah dan merumuskan hipotesis. **Mencoba (Membimbing Penyelidikan Kelompok)** Siswa secara berkelompok membuat rancangan penyelidikan dan membagi peran/tugas untuk setiap anggota	Tanggung jawab Mandiri Kerja sama	60’

		kelompok dalam penyelidikan. Selanjutnya hasilnya dituliskan pada lembar kegiatan penyelidikan dan panduan PjBL yang sudah disediakan		
3	Penutup	• Setiap perwakilan kelompok melaporkan rencana penyelidikan yang akan dilakukan. • Guru menutup pembelajaran dan mengakhiri dengan salam.	Toleransi	15’

Pertemuan ke -II

No	Tahapan Kegiatan	Kegiatan	Pendidikan Karakter	Waktu
1	Pendahuluan	• Siswa diberi ucapan salam dan dicek kehadirannya melalui presensi. Siswa diminta duduk bersama kelompok masing-masing. Selanjutnya setiap kelompok diminta menyampaikan kesulitan-kesulitan yang ditemui ketika melakukan penyelidikan di lapangan dan data apa saja yang sudah diperoleh.	Disiplin Bersyukur Peduli	15’
2	Inti	**Membimbing penyelidikan** • Setiap kelompok memperhatikan penjelasan singkat mengenai langkah-langkah pengolahan data yang ditampilkan melalui slide *powerpoint.* • Setiap kelompok melakukan pengolahan data hasil penyelidikan berdasarkan langkah-langkah yang sudah dijelaskan guru sebelumnya. • Setiap kelompok menganalisis hasil pengolahan data untuk membuktikan hipotesis yang sebelumnya sudah dibuat.	Tanggung jawab Mandiri Kerja sama	60’

		Mengkomunikasi (Mengembangkan Hasil Penyelidikan Dan Menyajikan Hasil Kerja) • Setiap kelompok memperhatikan penjelasan guru mengenai penyusunan laporan yang ditampilkan melalui slide *powerpoint.* • Setiap kelompok diminta membuat laporan berdasarkan hasil penyelidikan. Laporan dikumpulkan di pertemuan selanjutnya.		
3	Penutup	**Menganalisis Dan Mengevaluasi Proses Pemecahan Masalah** • Siswa diminta melakukan refleksi diri dengan cara menuliskan pada selembar kertas mengenai materi yang sudah diperoleh dengan melakukan kegiatan PjBL, perasaan siswa dalam mengikuti kegiatan PjBL dan komentar serta saran mengenai kegiatan pembelajaran yang sudah dilakukan selama beberapa pertemuan. Selanjutnya kertas tersebut dikumpulkan dan diberikan kepada guru • Siswa bersama guru menyimpulkan hasil pembelajaran yang telah dilakukan. Guru menutup pembelajaran dan mengakhiri dengan salam.	Toleransi	15’

E. Penilaian

1. Teknik Penilaian

No	Jenis	Teknik	Bentuk Instrumen
1.	Kemampuan memecahkan masalah	Tes	Soal esay berjumlah 3
2.	Proses	Non tes	Rubrik penilaian laporan kerja kelompok (terlampir)

2. Instrumen Penilaian

a) **Pertemuan Pertama**

Tema : Ketahanan pangan, penyediaan bahan industri dan energi alternatif

1) Sikap

Nama Satuan pendidikan : MAN BATU
Tahun Pelajaran : 2017/2018
Kelas/Semster : XI / 2
Mata Pelajaran : Geografi

No	Waktu	Nama	Kajadian/ Perilaku	Pos/Neg	Tindak Lanjut

2) Pengetahuan:
Tes Tertulis (terlampir)

3) Keterampilan
Mata Pelajaran : Geografi
Nama Produk : Makalah permasalahan penduduk
Kelompok : ……..

Aspek yang dinilai	Skor			
	1	2	3	4
Hasil Produk a. Kelengkapan data yang diperoleh b. Ketepatanwaktu pengumpulan c. Kerapian				

Keterangan : Diisi dengan cek(√)

4 = sangat baik,
3 = baik,

2 = cukup,
1 = kurang
Petunjuk Penskoran :
Perhitungan skor akhir menggunakan rumus :

$$\frac{Skor\ diperoleh}{Skor\ maksimal} x\ 100 = skor\ akhir$$

A. Media, alat, bahan dan Sumber

Media : - Slide *powerpoint* materi permasalahan kependudukan
- Slide *powerpoint* langkah-langkah pembelajaran PjBL
- Slide *powerpoint* pembagian kelompok
- Slide *powerpoint* denah tempat duduk kelompok
- Slide *powerpoint* langkah-langkah pengolahan data
- Slide *powerpoint* langkah-langkah penyusunan laporan
- Video permasalahan kependudukan di Indonesia

Alat : LCD, laptop dan speaker

Bahan : - Panduan kegiatan *Project-Based Learning*
- Lembar rencana penyelidikan
- Lembar hasil diskusi

Sumber : Pabundu, Tika., Amin., & Rahayu, Endang Puji. 2017. *Jelajah Dunia Geografi SMA/MA Kelas XI*. Jakarta: PT Bumi Aksara

Batu, 9 Februari 2018

Kepala MAN Batu	Guru Mata Pelajaran
H. Sudirman, S.Pd, MM	**Novita Selviana, S.Pd**
NIP. 196004041985031005	NIP. -

Lampiran

1. Instrumen dan pedoman skor Penilaian sikap

a. Lembar pengamatan sikap spiritual

No	Nama	Aspek yang dinilai	
		Berdoa sebelum melakukan kegiatan pembelajaran	Mengucapkan syukur setelah melakukan kegiaatan pembelajaran
1			
2			

b. Lembar Pengamatan Sikap Sosial

No	Nama	Aspek yang diukur						Jumlah Skor
		Sungguh-sungguh Mengikuti pembelajaran	Mengerjakan soal tidak menyontek	Mengerjakan tugas tepat waktu	Bekerja dengan kelompoknya	Menghargai pendapat temannya	Berani berpendapat	
1								
2								

$$Nilai = \frac{\text{Jumlah Skor}}{20} \text{x} 100$$

PREDIKAT	NILAI
SangatBaik (SB)	80 ≤ AB ≤ 100
Baik (B)	70 ≤ B ≤ 79
Cukup (C)	60 ≤ C ≤ 69
Kurang (K)	<60

c. Lembar Pengamatan Unjuk Kerja

No	Nama	kerjasama			Ketepatan menjawab			Keaktifan			Jumlah Skor
		1	2	3	1	2	3	1	2	3	
1											
2											

Rubrik

No	Keterampilan yang dinilai	Skor	Rubrik
1	Kerjasama	1	kurang dalam bekerjasama
		2	Cukup dalam bekerjasama
		3	Baik sekali dalam bekerjasama
2	Ketepatan menjawab	1	Kurang tepat
		2	Cukup tepat
		3	Sangat tepat
3	Keaktifan	1	Kurang aktif
		2	Cukup aktif
		3	Sangat aktif

Lampiran Materi

BAHAN AJAR
DINAMIKA DAN MASALAH KEPENDUDUKAN

A. PENGERTIAN PENDUDUK

Penduduk adalah orang yang tinggal di suatu wilayah atau orang yang secara hukum berhak tinggal di sautu wilayah. Penduduk juga dapat diartikan sebagai setiap orang atau kumpulan orang yang berada di suatu wilayah dan terikat oleh aturan-aturan yang berlaku serta saling berinteraksi.

Kajian tentang penduduk dipelajari dalam disipln ilmu demografi dan ilmu kependudukan. Demografi adalah ilmu yang mempelajari analisis statistik terhadap jumlah, distribusi, komposisi penduduk, dan komponen perubahannya. Sedangkan ilmu kependudukan mengkaji antar variabel demografi dengan ilmu lainnya yang menunjang.

Sebagai salah satu unsur dari sebuah negara, penduduk menjadi modal utama bagi pembangunan suatu negara. Oleh karena itu perlu diketahui jumlah, komposisi, dan sebaran penduduk yang bersumber dari data kependudukan.

B. SUMBER DATA KEPENDUDUKAN

1. Sensus penduduk

Sensus penduduk adalah keseluruhan proses pengumpulan, penyusunan, pengolahan, dan penerbitan data yang bersifat demografis, ekonomis, dan sosial

dari suatu wilayah atau negara tertentu dan dalam waktu tertentu. Di Indonesia, sensus penduduk dilakukan setiap 10 tahun. Sensus memiliki tiga dimensi, yaitu:

a. Pencatatan yang menyeluruh terhadap semua orang, artinya semua orang yang tinggal di suatu wilayah atau negara wajib dicatat dan didata tanpa terkecuali.
b. Dilaksanakan pada jangka waktu tertentu, artinya sensus hanya dilaksanakan pada suatu waktu tertentu, dan pada umumnya dilaksanakan setiap 10 tahun sekali.
c. Mencakup suatu wilayah tertentu, artinya ruang lingkup sensus harus meliputi suatu wilayah administratif tertentu. Hal ini dilakukan dengan menggungakan batasan administratif negara.

Berdasarkan tempat tinggal penduduk, sensus dibedakan menjadi:

a. Sensus *de jure*, yaitu pencacahan jiwa yang dilakukan di tempat penduduk tersebut tinggal secara resmi.
b. Sensus *de facto*, yaitu pencacahan jiwa di tempat mereka ditemukan oleh petugas lapangan.

Berdasarkan metode pengisiannya, sensus dibedakan menjadi:

a. Metode *Canvasser*, yaitu pelaksanaan sensus di mana petugas mendatangi tempat tinggal penduduk dan mengisi daftar pertanyaan. Keunggulan metode ini, data yang diperoleh lebih terjamin kelengkapannya dan penduduk sulit untuk memalsukan data. Sedangkan kekurangannya adalah waktu yang diperlukan lebih lama karena jumlah petugas yang terbatas dan wilayah yang luas.
b. Metode *Householder*, yaitu pelaksanaan sensus di mana pengisian daftar pertanyaan dilakukan oleh penduduk sendiri. Kelebihan cara ini adalah waktu yang diperlukan lebih cepat karena petugas tidak harus mendata satu per satu penduduk. Daftar pertanyaan dapat dikirimkan atau dititipkan pada aparat desa. Sedangkan kekurangannya adalah data yang diperoleh kurang terjamin kebenarannya karena ada kemungkinan penduduk tidak mengisi data sesuai dengan kondisi sebenarnya.

Sensus penduduk sangat berguna untuk:

a. Mengetahui keseluruhan jumlah penduduk
b. Mengetahui persebaran penduduk
c. Memperoleh informasi mengenai migrasi penduduk
d. Mengetahui karakteristik penduduk, seperti tingkat pendidikan, agama, jenis kelamin, dan umur.

Sensus penduduk memiliki beberapa ciri khas, antara lain:

a. Bersifat individu, artinya informasi demografi dan sosial ekonomi yang dikumpulkan berasal dari individu penduduk
b. Bersifat universal atau menyeluruh
c. Pencacahan diselenggarakan serentak di seluruh wilayah negara
d. Sensus penduduk dilaksanakan secara periodik

Perserikatan Bangsa-Bangsa (PBB) menetapkan informasi yang harus ada dalam sensus penduduk adalah sebagai berikut:

a. Geografi dan migrasi penduduk. Informasi ini meliputi lokasi daerah pencacahan, jumlah penduduk secara *de jure* dan *de facto*.
b. Kondisi rumah tangga. Informasi yang harus diperoleh meliputi hubungan anggota keluarga dengan kepala keluarga, jumlah anggota keluarga, dan jenis kelamin anggota keluarga.
c. Kelahiran dan kematian. Berisi informasi mengenai jumlah anak yang lahir maupun jumlah anggota keluarga yang meninggal.
d. Karakteristik pendidikan. Dalam bagian ini, informasi yang harus diperoleh adalah tingkat pendidikan tiap penduduk yang ada di suatu wilayah.
e. Karakteristik ekonomi. Informasi yang harus diperoleh adalah jenis mata pencaharian penduduk yang ada di suatu wilayah, serta tingkat pendapatan penduduk yang diperoleh di wilayah tersebut

Ada beberapa faktor lain yang ikut menentukan kualitas hasil sensus penduduk, terutama yang berkaitan dengan pelaksanaan pencacahan di lapangan, yaitu sebagai berikut.

a. Kerja sama atau partisipasi dari masyarakat
   Penduduk harus diyakinkan bahwa hasil sensus penduduk berguna untuk perencanaan pembangunan ekonomi, sosial, dan politik.
b. Kondisi geografis dan topografis
   Mudah dan sulitnya situasi geografis dan topografis wilayah sensus mempengaruhi kelengkapan cakupan sensus penduduk.
c. Kualitas petugas
   Petugas harus berkualitas dan mempunyai dedikasi tinggi terhadap pekerjaannya. Hal ini dapat dibentuk dengan persiapan, perencanaan, dan pelatihan yang sempurna.
d. Kualitas penduduk sebagai responden sensus
   Responden perlu mengetahui dengan benar maksud dari pertanyaan yang diajukan dan diharapkan dapat menjawab dengan jujur.
e. Perencanaan dan pelaksanaan
   Pelaksanaan di lapangan sesuai dengan rencana dan ketentuan, serta ditunjang dengan peralatan yang dibutuhkan.

Dalam melakukan sensus dengan jumlah penduduk yang tidak sedikit, besar kemungkinan terjadi kesalahan. Hal ini disebut kesalahan sensus. Penjelasan untuk jenis-jenis kesalahan sensus adalah sebagai berikut.

a. Kesalahan cakupan. Kesalahan ini terjadi ketika tidak seluruh penduduk tercacah, atau ada sebagian penduduk yang tercacah dua kali. Hal ini biasanya terjadi pada negara-negara dengan jumlah penduduk yang besar.
b. Kesalahan isi pelapor. Kesalahan ini terjadi akibat adanya kesalahan pelaporan oleh responden. Contohnya adalah penduduk yang tidak tahu usia sebenarnya, atau penduduk yang menutupi kondisi sebenarnya.
c. Kesalahan ketepatan pelaporan. Kesalahan ini terjadi akibat adanya kelalaian petugas sensus atau penduduk yang disensus.

2. Registrasi penduduk

Registrasi penduduk berkaitan dengan komponen penduduk yang dinamis, seperti kelahiran, kematian, migrasi penduduk, perkawinan dan perceraian. Komponen-komponen ini cepat berubah, sehingga diperlukan registrasi penduduk yang dapat diperbarui setiap saat.

Berbeda dengan sensus penduduk, registrasi penduduk lebih bersifat pasif. Registrasi penduduk dianggap pasif karena dilakukan oleh perwakilan keluarga dari kepala keluarga yang tengah mengalami peristiwa tertentu, seperti kelahiran atau kematian. Pelaporan dengan sistem pasif ini menimbulkan beberapa permasalahan, terutama ketidaklengkapan data pelaporan. Beberapa contoh ketidaklengkapan pelaporan tersebut adalah sebagai berikut.

a. Seorang bayi lahir beberapa menit, kemudian meninggal dunia. Seharusnya hal tersebut dicatatkan sebagai peristiwa kelahiran dan kematian, tetapi orang tua bayi tersebut tidak melapor.
b. Jarak kantor desa terlalu jauh dari rumah penduduk yang melahirkan, sehingga tidak dilaporkan.

Dalam registrasi penduduk, penduduk yang boleh mencatatkan peristiwa-peristiwa demografi adalah penduduk *de jure*. Untuk memperoleh data registrasi yang baik dan benar, PBB mensyaratkan beberapa aturan, yaitu sebagai berikut.

a. Ada peraturan yang memaksa penduduk untuk melapor *(compulsory of registration)*.
   Dalam pelaksanaan registrasi ini harus dilandaskan atas dasar hukum, sehingga memaksa penduduk untuk selalu melaporkan setiap kejadian yang dialami keluarganya, baik peristiwa kelahiran, kematian, atau lainnya.
b. Dilaksanakan oleh badan pemeritah.
   Pelaksanaan registrasi penduduk serta penyajian data statistiknya harus dilakukan oleh lembaga pemerintah. Dengan demikian, hasil yang disajikan akan menghasilkan data yang konsisten dan berkesinambungan.
c. Ada sanksi hukum.
   Pelaksanaan registrasi penduduk harus memiliki sanksi hukum. Hal ini dilakukan untuk menjamin bahwa setiap orang mau mendaftarkan diri untuk didata. Begitu juga agar terhindar dari kelalaian dan pelanggaran pendaftaran.
d. Ada petugas yang melaksanakan pendaftaran.
   Tugas dan tanggung jawab petugas harus ditulis dengan jelas untuk menghindari kesalahan dan untuk menjamin keseragaman dalam pelaksanaan registrasi penduduk.
e. Keterangan yang dilaporkan.
   Informasi dasar yang harus dilaporkan meliputi identitas penduduk, seperti nama, tempat tanggal lahir, jenis kelamin, status perkawinan, dan lain-lain.
f. Khusus untuk pelaporan kelahiran dan kematian.

Tanggal kejadian dan tanggal pelaporan, begitu juga tempat kejadian serta tempat pelaporan sangat diperlukan untuk dapat disajikan ke dalam hasil catatan dan tabulasi data statisitik.

g. Proses tabulasi dan penyajian data

Proses pemindahan laporan menjadi suatu data tabulasi adalah hal yang sangat penting, terutama dalam hal keakuratannya. Oleh karena itu, harus ada peraturan mengenai prosedur pelaporan dan penyajian data statistik.

3. Survei penduduk

Survei adalah metode pengumpulan data yang dilakukan melalui pencacahan sampel atau hanya mencacah sebagian penduduk. Survei dapat dilaksanakan kapan saja sesuai kebutuhan. Contoh survei yang dilaksanakan oleh BPS adalah Survei Sosial Ekonomi Nasional (SUSENAS) dan Survei Penduduk Antar Sensus (SUPAS).

Setiap metode pengumpulan data kependudukan tentunya memiliki kelebihan dan kelemahannya masing-masing. Kelemahan metode survei adalah tidak dapat mewakili semua penduduk karena hanya diambil berdasarkan sampel. Sedangkan kelebihan dari metode survei akan diuraikan sebagai berikut.

a. Dapat dilakukan kapan saja.
b. Data yang diambil sesuai kebutuhan survei.
c. Data yang dikumpulkan lebih lengkap dan rinci.
d. Penghematan terhadap waktu, biaya, dan tenaga.

C. KUANTITAS PENDUDUK DAN ANALISIS DEMOGRAFI

1. Kuantitas Penduduk

a. Komposisi penduduk.

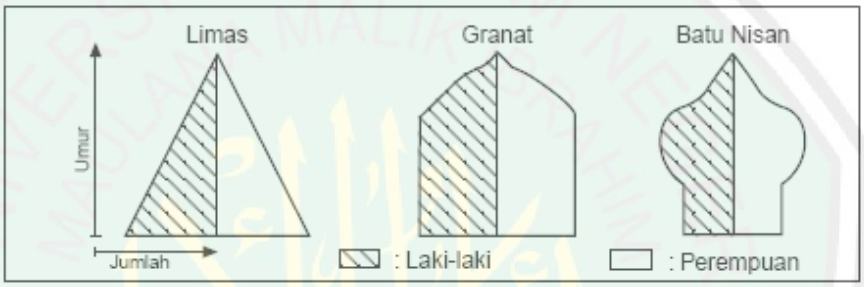
Komposisi penduduk adalah pengelompokan penduduk atas dasar kriteria tertentu. Misalnya, secara geografis, biologis, sosial, atau ekonomi. Komposisi penduduk sangat penting untuk diketahui karena dari berbagai susunan dan perubahannya dari masa ke masa dapat ditarik suatu kesimpulan serta dapat digunakan sebagai dasar pembuatan kebijakan suatu negara terkait peningkatan kualitas sumber daya manusia. Umur penduduk dikelompokkan menjadi tiga yaitu:

1) Umur 0 – 14 tahun dinamakan usia muda/usia belum produktif.
2) Umur 15 – 64 tahun dinamakan usia dewasa/usia kerja/usia produktif.
3) Umur 65 tahun keatas dinamakan usia tua/usia tidak produktif/usia jompo.

Komposisi penduduk menurut umur dan jenis kelamin dapat disajikan dalam bentuk tabel atau dalam bentuk grafik. Grafik susunan penduduk menurut umur dan jenis kelamin pada saat tertentu yang berbentuk piramida disebut piramida penduduk.

Piramida penduduk dapat dimanfaatkan untuk mengetahui perbandingan antara jumlah laki-laki dan perempuan, jumlah tenaga kerja, jumlah penduduk menurut kelompok umur tertentu dan struktur penduduk suatu negara secara cepat. Piramida penduduk dapat digolongkan ke dalam 3 macam, yaitu piramida penduduk muda, stasioner dan tua.

1) Piramida penduduk muda.
   Menunjukkan usia penduduk muda lebih banyak daripada penduduk dewasa, jumlah penduduk bertambah dengan cepat. Contoh: Indonesia, Mesir, Filipina dan negara-negara berkembang lainnya.
2) Piramida penduduk stasioner.
   Yaitu jumlah penduduk muda hampir sama jumlahnya dengan penduduk dewasa. Pertambahan penduduknya kecil. Contoh: Inggris, Denmark, Belanda, dan negara-negara di Eropa.
3) Piramida penduduk tua.
   Menunjukkan penduduk usia muda lebih sedikit dibanding dengan usia dewasa, jumlah penduduk mengalami penurunan, contohnya: Jerman, Rusia, Swedia, Hongaria.



Gambar 1. Piramida penduduk
Sumber : rizkyfz.wordpress.com

Menurut umur dan jenis kelamin, ada beberapa konsep dan ukuran yang bisa kita pelajari, antara lain:

1) *Sex ratio* (Rasio Jenis kelamin)
   Rasio jenis kelamin adalah perbandingan banyaknya penduduk laki-laki dengan banyaknya penduduk perempuan pada suatu daerah pada waktu tertentu. Biasanya dinyatakan dalam banyaknya penduduk laki-laki per 100 perempuan.
   Rumus:
   $SR = \frac{M}{F}$ x k
   Keterangan :
   SR = rasio jenis kelamin
   M = jumlah penduduk laki-laki di suatu daerah pada waktu tertentu
   F = jumlah penduduk perempuan di suatu daerah pada waktu tertentu
   k = konstanta, nilainya 100
   Contoh :
   Pada tahun 2000 di Indonesia jumlah penduduk laki-laki sebesar 109.613.519, dan jumlah penduduk perempuan sebesar 108.472.769. Hitung *sex ratio* penduduk Jawa Barat pada tahun tersebut!
   Jawaban:
   SR = $\frac{109.613.519}{108.472.769}$ x 100 = 101,05

Jadi pada tahun 2000 rasio jenis kelamin penduduk Indonesia sebesar 101, berarti tiap 100 penduduk perempuan ada 101 penduduk laki-laki.

Besar kecilnya Rasio Jenis Kelamin di suatu daerah dipengaruhi oleh:

a) Rasio Jenis Kelamin pada saat Kelahiran *(Sex Ratio at Birth)* Dibeberapa negara besarnya *sex ratio at birth* umumnya berkisar antara 103 – 105 bagi laki-laki per 100 perempuan.
b) Pola mortalitas antara penduduk laki-laki dan perempuan
c) Pola migrasi antara penduduk laki-laki dan penduduk perempuan.

2) Angka *Beban* Tanggungan *(Dependency Ratio)*

Angka beban tanggungan atau angka ketergantungan adalah angka yang menyatakan perbandingan antara banyaknya penduduk yang tidak produktif dengan banyaknya penduduk yang produktif.

Secara kasar angka ini dapat digunakan sebagai indikator ekonomi suatu negara.

Rumus :

$$DR = \frac{\text{Jumlah penduduk tidak produktif}}{\text{Jumlah penduduk produktif}} \times k$$

Keterangan:

DR = Angka beban tanggungan

Penduduk tidak produktif = penduduk umur 0 – 14 th dan 65 th ke atas

Penduduk produktif = penduduk umur 15 – 64 tahun

k = konstanta, nilainya 100

Contoh :

Diketahui jumlah penduduk kecamatan Suka Makmur yang berumur kurang dari 15 tahun sebesar 40.560 jiwa, yang berumur antara 15 – 64 tahun sebesar 53.370 jiwa, dan berumur 65 tahun ke atas sebesar 2.390 jiwa. Berapa angka beban tanggungan di Kecamatan Suka Makmur tersebut?

Jawaban:

$$DR = \frac{P\,(0-14)+P\,(65+)}{P\,(15-64)} \times 100$$

$$= \frac{40.560+2.390}{53.370} \times 100 = 80{,}47$$

DR sebesar 80 berarti di Kecamatan Suka Makmur tiap 100 penduduk kelompok produktif harus menanggung 80 penduduk kelompok yang tidak produktif.

Appendix 9. Scientific Papers of Students

Keterkaitan antara Kasus Kriminalitas dengan Kepadatan Penduduk di Kota Batu

Disusun oleh :

Elva Venesia Ochalisa Crisandra.

Hani Fatu Rohmah Oktafiani.

Hanifuddin,

Rahmadi Jaya Saputra.

Silvi Intan Lestari.

Kementrian Agama Republik Indonesia

Madrasah Aliyah Negeri Kota Batu

XI – IPS III Tahun 2018

Halaman Pengesahan

Makalah penelitian sederhana yang berjudul "Keterkaitan antara Kasus Kriminalitas dengan Kepadatan Penduduk". Di buat untuk memenuhi kurikulum smester genap, penelitian sederhana ini telah diperiksa dan disetujui oleh :

Menyetujui

Guru Geografi Madrasah Aliyah Negeri Kota Batu,

NOVITA SELVIANA S.pd.

Kata Pengantar

Puji syukur kami panjatkan kepada ALLAH SWT yang telah memberikan rahmatnya sehingga kami dapat menyelesaikan karya penelitian sederhana yang berjudul "Keterkaitan antara Kasus Kriminalitas dengan kepadatan Penduduk di Kota Batu". Atas dukungan secara moral dan bimbingan yang telah diberikan dalam menyusun makalah ini, maka kami mengucapkan terimakasih kepada :

1. Ibu Novita Selviana,selaku guru pembimbing kami,yang memberikan dorongan dan bimbingan kepada penulis.

2. Teman-teman kelas XI IPS 3 yang telah mendukung penyusunan penelitian sederhana ini sehinga dapat terselesaikan tepat pada waktunya.

Penulis menyadari bahwa penelitian sederhana ini masih memiliki banyak kekurangan. Oleh karena itu, saran dan kritik yang membangun sangat diharapkan guna menghasilkan laporan yang lebih baik.

Batu, 24 Februari 2018.

Mengidentifikasi Masalah

“Mengidentifikasi Masalah Kriminalitas di Kota Batu”.

I. Latar Belakanng.

Kota Batu adalah sebuah kota di provinsi Jawa Timur,Indonesia. Kota ini terletak 90 km sebelah barat daya kota Surabaya atau 15 km sebelah barat laut Malang. Kota ini dahulu merupakan bagian dari kabupaten Malang, yang kemudian ditetapkan menjadi kota Administratif pada 6 maret 1993. Pada tanggal 17 oktober 2001, Batu ditetapkan sebagai kota otonom yang terpisah dari kabupaten malang.

Batu dikenal sebagai satu kota wisata terkemuka di Indonesia karena potensi keindahan keindahan alam yang luar biasa. Kekaguman bangsa belanda terhadap keindahan dan keelokan alam Batu membuat wilayah kota Batu disejajarkan dengan sebuah negara di Eropa Swiss dan dijuluki sebagai *De Kleine Zwitserland* atau Swiss kecil di Pulau Jawa bersama dengan Kota Malang dan Kabupaten Malang, Kota Batu merupakan bagian dari kesatuan wilayah yang dikenal dengan Malang Raya.

Namun dibalik keindahan dan terkenalnya Kota Batu sebagai destinasi wisata,Kota Batu memiliki berbagai masalahh yang dianggap umum di alami di kota-kota besar lainya dan masalah ini sampai saat ini masih belum menemui titik terang penyelesaiannya. Masalah-masalah ini terdiri dari : *pertama* Kota ini di kenal sebagai Kota wisata terkenal di Indonesia sehingga tak jarang kota ini setiap harinya didatangi wisatawan yang berasal dari berbagai kota maupun mancanegara hal ini menyebabkan pemerintah Kota Batu haru bertindak dua langkah kedepan bukan tanpa alasan karena setiap hari Kota Batu harus berinovasi lebih maju agar tidak kalah saing dengan kota lain yang juga mengunggulkan sektor Wisata sebagai sumber pendapatan APBD, *kedua* banyaknya wisatawan yang keluar masuk ke kota Batu menyebebabkan tidak sedikit pula kendaraan yang hilir mudik masuk ke kota Batu dan hal ini menyebabkan kemacetan yang parah dikala waktu libur tiba, *ketiga* majunya kota Batu di bidang wisata menyebabkan naiknya APBD kota Batu, dari naiknya APBD ini warga Batu merasa mendapatkan banyak keringan seperti digratiskanya biaya pendidikan di Kota Batu dari tingkat SD sampai SMA selain itu masih banyak lagi kemudahan-kemudahan yang dirasakan warga batu dari naiknya APBD ini, hal ini menyebabkan banyak warga dari luar kota Batu berbondong-bondong pindah ke kota Batu karena dirasa hidup di kota Batu itu enak sehingga dari tahun ke tahun penduduk di kota batu mengalami peningkatan yang signifikan, *keempat* banyaknya warga atau penduduk yang pindah ke kota Batu menyebabkan kepadatan penduduk semakin meningkat imbas dari meningkatnya kepadatan penduduk ini menyebabkan masalah-masalah batu munculseperti masalah Kriminalitas, oleh karena itu kami akan mengidentifikasi masalah kriminalitas dalam penelitian sederhana yang berjudul “Keterkaitan antara Kasus Kriminalitas dengan Kepadatan Penduduk di Kota Batu”.

II. Rumusan Masalah.

1. Apa keterkaitan antara Kasus Kriminalitas dengan Pertumbuhan Penduduk ?.

2. Apa yang menyebabkan kasus Kriminalitas di kota Batu dari tahun ke tahun meningkat?.

3. Bagaiman upaya untuk meminimalisir kasus Kriminalitas di Kota Batu?.

III. Tujuan.

1. Untuk mengetahui Keterkaitan antara kasus Kriminalitas dengan Pertumbuhan Penduduk di Kota Batu.

2. Untuk mengetahui penyebab kasus Kriminalitas di Kota Batu meningkat dari tahun ke tahun.

3. Untuk mengetahui bagaimana upaya untuk meminimalisir kasus Kriminalitas di Kota Batu.

IV. Manfaat.

1. Dapat mengetahui Keterkaitan antara kasus Kriminalitas dengan Pertumbuhan Penduduk di Kota Batu.

2. Dapat mengetahui penyebab kasus Kriminalitas di Kota Batu meningkat dari tahun ke tahun.

3. Dapat mengetahui bagaimana upaya untuk meminimalisir kasus Kriminalitas di Kota Batu.

IV.Hipotesis.

Hipotesis atau dugaan sementara dari kelompok kami tentang kasus Kriminalitas di Kota Batu :

1. Adanya keterkaitan antara kasus Kriminalitas dengan Pertumbuhan Penduduk di Kota Batu.
2. Banyaknya pengangguran yang disebabkan karena rendahnya pendidikan.
3.

V. Analisis Data.

Dalam langkah analisis data ini kelompok kami melakukan beberapa prosedur penelitian di antaranya yakni :

1. Informasi atau jenis data yang akan di kemuakakan dalam peneletian sederhana.
   Kami akan mengumpulkan informasi dari artikel yang tersedia di internet dan beberpa artikel surat kabar yang berhubungan dengan kasus Kriminalitas di kota Batu.
2. Sumber data .
   Dalam penelitian sederhana ini kami menggunakan data sekunder yang bersumber dari internet dan beberapa artikel tentang kasus kekerasan dan data kependudukan kota Batu.
3. Metode Pengumpulan Data.
   Dalam penelitian sederhana ini kami menggunakan metode kualitatif dan kuantitatif,pada metode kualitatif kami menggunakan beberapa artikelyang berhbungan dengan kasus Kriminalitas di Kota Batu dan pada metode kuantitatif kami menggunakan data kependudukan di kota Batu dan Data jumlah kasus Kriminalitas di Kota Batu.

VI. Pembahasan.

1. **Keterkaitan antara kasus Kriminalitas dengan Pertumbuhan Penduduk.**
   - Data kependudukan yang kami peroleh dari Badan Pusat Statistik Kota Batu.

Jumlah Penduduk (ribu) Laju Pertumbuhan Penduduk

Kecamatan 2010 2015 2016 2010-2015 2015-2016

(1)	(2)	(3)	(4)	(5)	(6)
1.Batu	88 178	93 227	94 132	5,73	0,97
2.Junrejo	46 382	49 505	50 079	6,73	1,16
3.Bumiaji	**55 624**	**57 753**	**58 108**	**3,83**	**0,61**
KOTA BATU	**190 184**	**200 485**	**202 319**	**5,42**	**0,91**

Dari data kependudukan diatas dapat kita lihat bahwa dari tahun-ke tahun pertumbuhan penduduk di kota Batu semakin meningkat, dan di bawah ini kami akan sajikan data angka Kriminalitas di kota Batu :

TAHUN	JENIS KRIMINALITAS	JUMLAH
2014	CURAT	**294 KASUS**
2015	CURAS	**379 KASUS**
2016	CURANMOR	**497 KASUS**

Dikutip dari SURYA MALANG.

Dari kedua data diatas dapat kita simpulkan bahwa kasus Kriminalitas dengan Pertumbuhan Penduduk memang memiliki keterkaitan satu sama lain. Jadi semakin meningkatnya Penduduk di kota Batu maka kasus Kriminalitas semakin banyak.

Beberapa artikel yang relevan dengan materi kami

BATU- Polres Batu berhasil melakukan ungkap 37 kasus atensi dalam Operasi Sikat II Semeru tahun 2017. Dalam operasi yang dilaksanakan pada 11 desember hingga 20 desember, Polres Batu berhasil Curat, Curas, Narkoba, Miras dan Razia Preman.

Wakapolres Batu, Kompol Nurmala mengatakan bahwa jumlah kasus yang berhasil diungkap adalah pencurian dan pemberatan (curat) 5 kasus, pencurian dan kekerasan (curas) 1 kasus, premanisme 3 kasus, miras 3 kasus, narkoba 4 kasus.

Sementara tu, polisi juga melakukan razia prman, dimana banyak laporan masyarakat dan wisatawan yang langsung ditindaklanjuti dengan mengamankan beberapa orang yang melakukan premanisme.Termasuk didalamnya beberapa pengamen yang memaksa masuk kedalam bus pariwisata serta beberapa orang yang melakukan tindakan meresahkan warga masyarakat dan wisatawan yang sedang berlibur.

Selain itu, masyarakat juga dihimbau agar lebih waspada dalam menjaga asset mereka dan menggalakan Pam Swarkasa di lingkungan tempat tinggal mereka, agar tempat tinggal mereka terjaga dan aman.

****Dikutip dari Radar BATU.***

2. Penyebab kasus Kriminalitas di kota Batu meningkat dari tahun ke tahun.

Beberapa penyebab kasus Kriminalitas di kota Batu meningkat dari tahun-ke tahun antara lain :

1. Pertumbuhan Penduduk yang cepat.
   a. Secara sadar pertumbuhan penduduk dari tahun-ketahun semakin meningkat hal ini dapat dilihat dari data

kependudukan kota Batu sehingga angka kasus Kriminalitas juga ikut meningkat.

b. Faktor Ekonomi

*. Kondisi bangsa Indonesia yang perekonomiannya semakin merosot menimbulkan banyak penderitaan bagi rakyat Indonesia .

*. Banyaknya pengangguran yang terjadi dimana-mana, dikarenakan kurangnya keterampilan atau pendidikan seseorang atau dikarenakan masih terbatasnya lapangan pekerjaan Indonesia.

c. Faktor Sosial

Banyaknya terjadi pertikaian, pembunuhan karena akibat konflik yang terjadi didalam lingkungan masyarakat.

4. Pengaruh Minuman Keras.

Seseorang yang tadinya mempunyai kondisi psikis yang baik maka selanjutnya orang juga akan mempunyai dampak psikis yang mengarah pada perilaku kriminal jika meminum minuman keras. Biasanya minuman beralkohol akan membuat orang menjadi lebih sensitif dan mudah marah.Minum minuman keras (miras) merupakan kebiasaan buruk yang dapat merusak kesehatan, menimbulkan suatu tindak pidana serta menyebabkan kecelakaan lalu lintas.

5. Tingkat Pengagguran yang tinggi.

Dikarenakan tingkat pengangguran yang tinggi maka pendapatan pada suatu daerah sangat rendah dan tidak merata. Hal ini sangat memicu seseorang atau kelompok untuk melakukan jalan pintas dalam memenuhi kebutuhannya dan mungkin dengan cara melakukan tindak kriminalitas dan kekerasan.

3. Cara mengatasi kriminalitas.

a. Memberlakukan sanksi hukum yang sangat tegas terhadap tindak pelaku kejahatan atau kriminalitas.
b. Melakukan penjagaan terhadap pelestarian dan kelangsungan dari nilai ataupun norma-norma yang telah ada didalam suatu masyarakat.
c. Memberlakukan hukum kepada semua orang, yaitu tanpa pandang bulu.
d. Peran orang tua dalam pola pendidikan dan pengasuhan anak.
e. Peran lembaga pendidikan dalam mendidik dan melakukan pengasuhan terhadap anak-anak.
f. Menjaga budaya asing yang masuk kedalam negeri.
g. Melakukan tindakan sortir atau menyeleksi mengenai budaya luar negeri yang masuk kedalam negeri apakah menyebabkan kerusakan nilai pada bangsa atau tidak.

h. Melakukan pelatihan training kepada para penegak hukum supaya siap ketika ada tindak kriminalitas yang terjadi. Artinya cepat tanggap dan segera untuk di hukum.

SARAN

Sebaiknya masyarakat juga bisa membantu dalam pencegahan tindakan kriminalitas. Manusia juga harus sadar dan bisa berfikir lebih maju agar tidak terjadi kriminalitas.

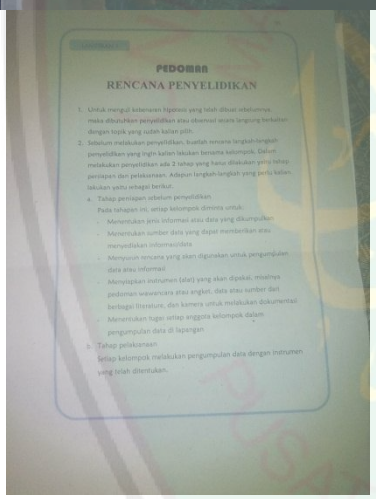
Upaya untuk meminimalisir kasus Kriminalitas di Kota Batu.Ada beberapa cara yang dapat membuat tindakan kriminalitas di kota Batu semakin berkurang, antara lain :

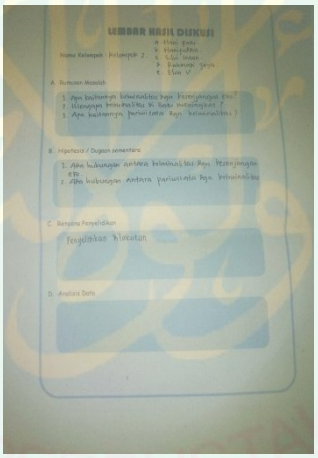
1. Pemerintah dan pihak swasta bekerja sama untuk membuat dan menciptakan suatu lapangan pekerjaan yang melimpah, sehingga dengan adanya lapangan pekerjaan tersebut orang-orang yang tak memiliki pekerjaan dapat bekerja. Namun, lapangan pekerjaan yang ada atau yang diciptakan oleh pihak pemerintah tersebut dapat membuat prasyarat yang dapat memudahi masyarakat kecil dapat masuk kedalam lapangan pekerjaan.
2. Memberikan pelatihan-pelatihan secara gratis kepada masyarakat yang kurang mampu, karena dengan adanya pelatihan-pelatihan ini dapat membuat kualitas seseorang itu dapat menjadi lebih baik sehingga lapangan pekerjaan yang tadinya telah ada dan diciptakan tidak dengan sia-sia diciptakan. Karena orang-orang yang melakukan tindakan kriminal tersebut mungkin bisa jadi bukanlah orang-orang yang tidak bisa bekerja dengan baik, tetapi bisa jadi orang-orang yang melakukan tindakan kriminal tersebut tidak mempunyai kualitas yang baik untuk mendapatkan suatu pekerjaan atau lapangan pekerjaan.

KESIMPULAN.

Jadi dari penelitian sederhana diatas dapat kita simpulkan bahwa kasus Kriminalitas di kota Batu memiliki kaitan erat dengan pertumbuhan Penduduk yang terus meningkat dari tahun ke tahun. Dan dari penilitian diatas maka Hipotesis atau dugaan sementara yang kami tekankan dalam penelitian ini TERBUKTI.

Appendix 10. Documentation


PEDOMAN
RENCANA PENYELIDIKAN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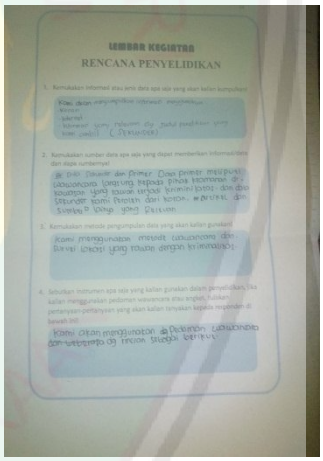
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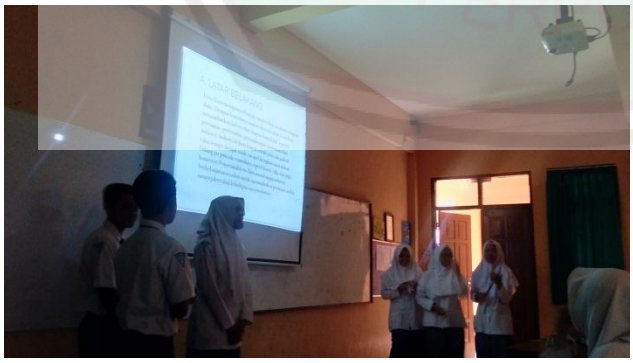

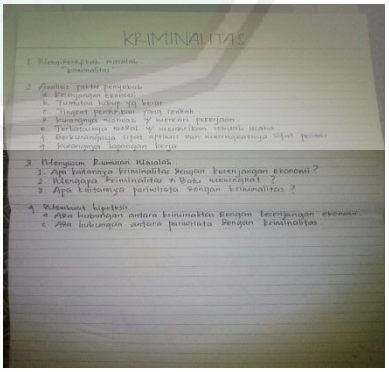
KRIMINALITAS

Appendix 11. Curriculum Vitae

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