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Development of a Field Laboratory to Social Science Education Pre-Service Teacher

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Abstract: This study aims 1) to describe the physical, social, economic, and cultural potential of the Social Science Education field laboratory object on the slopes of Mount Tengger and 2) to produce a product in the form of a manual for the Social Science Education field laboratory. The Dick and Carey model was used in this development with simplified stages. Qualitative data are in the form of 1) a description of the object of research and (2) suggestions for product improvement from the validator of learning and design experts. Quantitative data are in the form of response scores from expert validators and students during limited trials. The instruments in this study were observation sheets, interview guidelines, documentation, and questionnaires. The data analysis used in this study is a descriptive analysis to examine the relevance of various subjects in the Social Science Education Department with the objects that are scattered in the study area. Furthermore, descriptive statistical analysis is used to process the questionnaire data with a Likert scale of 1 (very poor) to 4 (very good). The results showed that first, the physical, social, economic, and cultural potential in the research object supported the feasibility of developing a social science education field laboratory. Second, the manual for the Social Science Education field laboratory is suitable for use in outdoor social studies learning with a feasibility value of 87.25 (very feasible).

Keywords: *development; field laboratory; social science education; pre-service teacher*

INTRODUCTION

The realization of integrative higher education in combining science and Islam with international reputation is the vision of Maulana Malik Ibrahim State Islamic University (UIN) Malang. This vision can be further elaborated by the Lembaga Penjamin Mutu -Quality Assurance Agency- (LPM) of UIN Maulana Malik Ibrahim Malang in a simple way, which is related to the tridharma (three principles) of higher education such as the implementation of tridharma, the implementation of higher education to develop science, innovative research to support the development of relevant and competitive science and technology and arts, as well as transforming the quality management system in the field of tridharma to achieve standards and reputation

(LPM UIN Malang, 2017).

One of the faculties that carries out the vision and mission of the university is the Faculty of Tarbiyah and Teacher Training (FITK). This vision is the realization of an integrative Tarbiyah and Teacher Training Faculty in combining science and Islam with international reputation. The vision of the faculty is in line with the university's vision, which is to excel in implementing the three principles of higher education at national and international levels (LPM UIN Malang, 2017).

Social Science Education, is a department under the auspices of the FITK that helps realize the vision of the university and faculty, namely holding the tridarma of college. These tasks include the implementation of 1) superior education, 2) research and community service programs; 3) establish cooperation with stakeholders in the ASEAN region (LPM UIN Malang, 2017).

The Social Science Education Department in the implementation of teaching, research, and community service needs to be supported by supporting facilities for learning, research and community service activities. One of them is a laboratory facility as a place for implementing a learning process that combines theory and practice (Astina et al., 2016). The laboratory can be used as a support tool in improving student skills through practical activities, especially on social science materials that are not concrete in nature and require media in their explanations. The social science laboratory is a means for students to find and collect information in understanding social and environmental knowledge.

Social studies are a scientific discipline that combines economics, history, geography, and sociology. Sumantri explained that social studies is a discipline that does not stand alone (Sumantri, 2001). Sumantri added that social studies is a simplification of social sciences that are studied and researched. Social Science Education in learning is rooted in the social sciences that study society and its relation to its environment (Darsono & Achmad, 2017). Further explained the objectives of social studies learning, namely to develop the ability to provide solutions to social problems in society.

The simple functions and benefits of the laboratory are as a place for scientific research, measurement, experimentation, and scientific training related to science (Friady, 2018). Not only indoors, a laboratory can also be in the field according to its scientific field. Social studies are practically more appropriate in studying social problems (Sumaatmadja, 1996). This is based on the nature of social problems requiring direct solutions. Therefore, the Social Science Education laboratory has functions other than in the classroom, but functions in the field in assessing the physical, social, and economic aspects of society.

Based on the observations, that the learning conditions in the Social Science Education Department, UIN Malang have been classroom-centered. Several courses that require field studies to run independently of lecture activities. On the other hand, not all subjects in the Social Studies Department require a field to complement the lecture. The choice of location for the object of field study is limited to only relevant for certain subjects. It becomes ineffective and inefficient. In addition, the essence of unified and integrated social studies learning is not conveyed to students.

The development of an integrated social studies field laboratory is a solution to the conditions of conducting field courses that have been running independently in the Social Science Education Department, UIN Malang. The Social Science Education field laboratory was developed as a place for training or practicum with great potential to

support students so they can have experience, insight, and special skills, so that students can become professionals in the field of social studies (Kenna, 2019). The field laboratory of the Social Science Education Department is an area that is used as a location for implementing the Tri Dharma of Higher Education. This field laboratory is used as a location for learning, research, and community service activities for the academic community of the Social Science Education Department. A location for the various activities of the Tri Dharma of Higher Education is called a field laboratory (Astina et al., 2016).

Field studies that are packaged in the form of field lectures by each social studies course are very important to do, because they are a form of contextual learning. Contextual learning starts from the activation of pre-existing knowledge (Astina et al., 2016). This means that the material learned in learning is inseparable from the knowledge possessed, so that there is a relationship with each other. The linkage is between knowledge in the classroom and phenomena in the environment (Nurhadi et al., 2004). Contextual learning has 7 components, namely constructivism, asking questions, inquiries, learning societies, modeling, and meaningful assessments. (Trianto, 2007). This is all possible in a field laboratory.

The development of this Social Science Education field laboratory requires an assessment of the physical, social, economic and cultural potential on the slopes of Mount Tengger, Malang Regency. All potential, both physical and social, is very complex on the slopes of Mount Tengger. It is proven by the many developments in tourism which are used as a reference for the community, both as a place for recreation and learning. Rosyidi's research results explained that tourism in the TN-BTS (Taman Nasional Bromo Tengger Semeru -Bromo Tengger Semeru National Park-) has many impacts on economic, social and environmental aspects. (Rosyidi, 2018). Other studies have identified the potential of districts around the TN-BTS area as having great potential in the form of tourist villages, waterfalls, natural landscapes in the form of mountains, and lakes. (Wahono et al., 2017).

Based on the above background, the Social Science Education field laboratory needs to be developed in the slopes of Mount Tengger, Malang Regency. It is necessary to study and map the subjects in the Social Science Education Department which require a field to complement their studies. Furthermore, the relevance of the course is carried out with objects in the field which are scattered on the slopes of Mount Tengger, Malang Regency. The following questions guided this investigation First, what is the physical, social, economic and cultural potential of the Social Science Education field laboratory object on the slopes of Mount Tengger? Second, how the feasibility of the manual product for the field laboratory of Social Science Education?

METHOD

This study aims to produce a product in the form of a field laboratory lecture guide book. Dick and Carey model (Dick & Carey, 2001) is used in this development with the stages that have been simplified into 1) needs analysis, 2) product design, 3) product development, and 4) evaluation and revision.

The types of data used in this study consisted of qualitative and quantitative. Qualitative data is in the form of 1) a description of the object of research and (2) suggestions for product improvement from the validator of learning and design experts. Quantitative data is in the form of response scores from expert validators and students during limited trials.

The instruments in this study were observation sheets, interview guidelines, documentation, and questionnaires. Observation sheets, documentation, and interview guidelines were used to assess the physical, social, economic and cultural potential of the research location. Consultation sheets are used to revise the results of product development by experts. Furthermore, a questionnaire is used to assess the feasibility of product development.

The data analysis used in this research is descriptive analysis. Descriptive analysis is used to examine the relevance of the various subjects in the Social Science Education Department with objects scattered in the study area (field laboratories). The objects in the study area include physical, social, economic and cultural aspects that are scattered in the slopes of Mount Tengger, Malang Regency, Indonesia.

Furthermore, descriptive statistical analysis was used to process the questionnaire data with a Likert scale of 1 (very poor) to 4 (very good). The product development was tested for its feasibility through 1) validation of learning and design experts, and 2) limited trials on students of the Social Science Education Department, UIN Maulana Malik Ibrahim Malang. The response score that has been obtained was then managed into percentage using the following formula (Arikunto, 2010). Making qualification decisions for the development of field laboratories can be seen in table 1.

Table 1. Product Eligibility Criteria

Value (%)	Qualification	Information
≥86	Highly Feasible	No Revision
≥71 – <86	Feasible	No Revision
≥56 – <71	Enough	Revision
≥41 – <56	Not Feasible	Revision
<41	Very Less Feasible	Revision

RESULTS AND DISCUSSION

Potential of Field Laboratory

Candi Jago in Tumpang

Candi (temple) Jago is located in Jago Village, Tumpang Village, Tumpang District, Malang Regency, East Java. This temple is located at coordinates -8°00'22" and 112°45'53"E. The location of Candi Jago is ± 22 km from Malang City (Wikipedia, 2019).

Candi Jago architecture is arranged like a terrace of stepped pyramid. The total is 23.71 m long, 14 m wide and 9.97 m high (Soebroto, 2012). Candi Jago building composed of andesite rock. Currently, the Candi Jago building consists of a foot and a small part of the temple body. The temple body is supported by three terraces. The front of the terrace protrudes and the body of the temple is located on the third terrace. The roof and part of the temple body have been opened. The exact shape of the roof is not yet known, but there are allegations that the shape of the roof of Candi Jago resembles Meru or Pagoda (Munandar, 2004).

Candi Jago according to the Nagarakertagama Book, its real name is Jajaghu which means "greatness" (Afida et al., 2014). This temple was founded during the Singhasari Kingdom in the 13th century. Candi Jago was built during the reign of King Kertanegara to honor King Sri Jaya Wisnuwardhana (1248 - 1268), the 4th king of the Singasari kingdom. (Primadia, 2018a). In accordance with the religion adhered to by King Wisnuwardhana, namely Syiwa Budhha Tantrayana, the reliefs on Candi Jago

contain Hindu and Buddhist teachings. (Purwanto, 2005). The principle of tolerance of life between Hindus and Buddhists has been reflected in the form of reliefs and statues of Candi Jago (Primadia, 2018a). The Amoghapasa statue in Candi Jago is the highest deity in Tantrayana Buddhism (Perpustakaan Nasional Republik Indonesia, 2014a). The narrative reliefs on the terrace walls of Candi Jago include: 1) the first level contains stories from Tantri Kamandaka related to animal stories; 2) the second level shows the story of Kunjarakarna; 3) the third level describes the Parthayajna featuring five Pandava brothers; 3) the fourth level describes the Arjunawiwaha story; and 5) the fifth level specifically for Krisnayana stories, which focuses on Krisna (Soebroto, 2012).



Figure 1. Jago Temple, Tumpang, Indonesia

Candi Jago is suitable to be used as the location for the field laboratory for the Social Science Education Department, UIN Maulana Malik Ibrahim Malang. This is based on several reasons, namely first, the object of Candi Jago has a strong history of the power of the Singhasari kingdom. Second, the location of Candi Jago is very strategic because it is located close to the center of settlements, markets, and the administrative center of Tumpang District, so that it can be used for observation of cultural history, community economy, rural sociology, and physical geography related to rock types in the temple. Third, Candi Jago is located on the side of the road so that it has easy access to the location. Fourth, Candi Jago is unique about religious tolerance because it contains Hindu and Buddhist teachings.

Candi Kidal in Tumpang

Candi (temple) Kidal is located in the valley of Mount Bromo, precisely in the village of Kidal, Sub-district of Tumpang, Malang Regency, East Java. Candi Kidal is located at coordinates $-8^{\circ}01'33''$ and $112^{\circ}42'30''$ E. This temple is about 20 km east of the city of Malang (Wikipedia, 2020a).

Candi Kidal is a temple building that developed in the XII-XIII centuries in East Java, which measures 10.8 meters long, 8.36 meters wide. The building height is now 12.26 meters (Perpustakaan Nasional Republik Indonesia, 2014b). The Candi Kidal building is made of andesite stone with an irregular tidal pattern. According to the structure of the building, Candi Kidal is divided into three parts, namely the foot, body and top of the temple. It is because the building structure of Hindu and Buddhist temples refers to a sacred mountain image, namely meru (Kristian, 2016).

Candi Kidal is one of the temples of legacy of Singasari kingdom, and is estimated to have been built in 1248 AD (Primadia, 2018b). This temple was built to

honor the second king of the Singhasari Kingdom, namely Raja Anusapati and as a place of prayer to Ken Dedes (Mother of Anusapati).

In the *Negarakeragama* book, Anusapati's name is Anusanatha, who ruled in the Singhasari Kingdom from 1227-1248 (Nafi'ah et al., 2018). Anusapati died in 1248 and was prayed at Kidal. Then this shrine is called Temple Kidal because it is located in Kidal Village, Tumpang District. In various views, the meaning of Kidal has many versions, some argue that Kidal means left and south, some mean left only, some mean just south (Utami et al., 2018).

Candi Kidal is suitable to be used as the location for the field laboratory for the Social Science Education Department, UIN Maulana Malik Ibrahim Malang. This is based on several reasons, namely first, the object of Candi Jago has a strong history of the power of the Singhasari kingdom. Second, Candi Kidal is located close to the center of the settlement so that it can be used for observation of cultural history, rural sociology, and physical geography (lithology) related to the type of rock in the temple. Third, Candi Kidal is located in the center of the sub-district so that it has easy access to the location. Fourth, Candi Kidal is unique, since there is a Medallion Ornamentation Relief which can be used for entrepreneurship learning through community empowerment in making batik with the Medallion motif (Nafi'ah et al., 2018).

Gubugklakah Village, Poncokusumo

Gubugklakah is the name of a village that is included in the Poncokusumo District, Malang Regency, East Java. The village, which is the entrance to the Bromo and Semeru areas, is about 23 km from Malang City. Gubugklakah village is located on the slopes of Mount Bromo with an altitude of 900-1,100 asl with an average temperature of 20-22 degrees Celsius. The hilly terrain and rainfall of 1,500-2,000 mm for about 6 months make this area has a lot of fertile land for vegetable commodities (Kartika, 2020).

Geomorphologically, Gubugklakah Village has reliefs in the form of mountains and valleys surrounded by rivers. The geology of this village is an area with many faults, waterfalls, and lithology in the form of igneous rocks from volcanic eruptions so that it has fertile soil. The total area of Gubugklakah Village is 384 Ha, which is bordered by four villages, namely (Faqih et al., 2018):

North: Duwet Krajan Village, Tumpang;

East: Ngadas Village, Poncokusumo;

South: Poncokusumo Village, Poncokusumo;

West: Wringinom Village, Poncokusumo.

At first the village of Gubugklakah consisted of 2 hamlets, namely Dukuh Kerto Ayu and Dukuh Kerto Sari. Due to several reasons the hamlet was eliminated, then divided into several RWs (Rukun Warga -group of neighborhood-) and now has 7 RWs. Currently the population of Gubugklakah Village is $\pm 3,645$ people. The everyday language used by the villagers is Tengger Javanese (Sukma, 2017).

The entire population of Gubugklakah Village is Muslim. Like the people of ancient Java, the people of Gubugklakah Village initially embraced Hindu and Buddhist religions. Some of these villagers believe that their ancestors are also the Tengger Tribe, but the emergence of new beliefs and modernization has made the culture and beliefs that the Tengger tribe usually adhere to. The existence of Islam in Gubugklakah Village is getting stronger with the existence of the Darussa'adah Islamic Boarding School.

The livelihoods of the population in Gubugklakah Village are mostly in the fields of agriculture and animal husbandry (62.6%) the rest are engaged in services, entrepreneurship, and government (Kholil & Khoirunnisa, 2018). Since the announcement of Gubugklakah Village as a tourism village, most residents have additional professions in the tourism sector. This change has brought the village community of Gubugklakah to have additional income and increased welfare. People who are members of LADESTA (Lembaga Desa Wisata -Tourism Village Institution-) provide tourism services and facilities, such as home stay, vehicle rental, opening a restaurant business, vegetable and fruit traders, food processing industry, and tour guides around Gubugklakah to Mount Bromo.

The social conditions of the people of Gubugklakah Village highly uphold the teachings of the Islamic Religion and tolerance between communities. The explanation of the cultural system of Gubugklakah Village refers to the 7 elements of universal culture (Hayat, 2017), namely as follows 1) language system (Javanese with Tengger dialect) 2) art system (hadrah, flying jidor, Kuda Lumping and Bantengan dance, and dangdut music orchestra); 3) technological systems (developed as did modern Javanese society); 4) religious system (originally Hindu-Buddhist, but now the entire village community of Gubugklakah adheres to Islam); 5) marriage system (endogamous marriage pattern with Javanese customs and permanent customs after marriage / neolocal); 6) social system (regulated by a village government led by the village head); and 7) a system of livelihoods (farmers) with a knowledge system (still traditional and oriented to the old culture, but now starting to refer to a modern knowledge system).

Gubugklakah Village is suitable to be used as the location for the field laboratory for the Social Science Education Department, UIN Maulana Malik Ibrahim Malang. This is based on several reasons, namely first, Gubugklakah Village is an area with hilly morphology, many faults in the form of waterfalls, active volcanoes, igneous rock lithology, and fertile soil so that it can be used for learning physical geography and disasters. Second, Gubugklakah Village has a high level of religiosity, so it can be used for observations of religious sociology, rural sociology, anthropology, Pancasila education, and cultural history. Third, Gubugklakah Village has access to asphalt roads, making it easy to reach them. Fourth, Gubugklakah Village is a tourism village that can be used for learning entrepreneurship, micro and macro economics, social/human geography.



Figure 2. One homestay business in Gubugklakah Village, Poncokusumo

Mount Bromo - Ngadas Village, Poncokusumo

Mount Bromo comes from Sanskrit, that is Brahma or in Tengger language spelled "Brama" (Wikipedia, 2020c). Mount Bromo is an active volcano on East Java which has an altitude of 2,329 meters above sea level. Mount Bromo is an active volcano included in the area of Bromo Tengger Semeru National Park (TNBTS) (Haliim, 2018). Mount Bromo is in four regions of district, that is Probolinggo Regency, Pasuruan Regency, Lumajang Regency, and Malang Regency. The focus of this research is Mount Bromo which is located in Ngadas Village, Malang Regency.

Mount Bromo's body shape interlocks between valleys and canyons with a caldera or sea of sand covering an area of about 10 square kilometers. This mountain has a crater with a diameter of ± 800 meters (north-south) and ± 600 meters (east-west). The danger area is a circle with a radius of 4 km from the center of the Bromo crater. During 20th century and 21st century, Mount Bromo has erupted several times, with regular time intervals of 30 years. The biggest eruption occurred in 1974, while the last eruption occurred on 2015-now (Hendratno, 2005).

The residents around Mount Bromo in Ngadas Village are Tengger tribe. Most of the Tengger tribe in Ngadas Village work as farmers with religious beliefs of Java Buddha by 50%, Islam by 40% and Hindu by 10% (Wikipedia, 2020b). The Tengger tribe believes that Mount Bromo is a sacred mountain. Every year the Tenggerese hold a ceremony Yadnya Kasada or Kasodo (Mubarok, 2019). This ceremony takes place at a temple under the foot of Mount Bromo and continues to the top of Bromo. The ceremony is held at midnight to early morning every full moon around the 14th or 15th of the month Kasodo (tenth) according to Javanese calendar (Trilaksono, 2015).

Mount Bromo in Ngadas Village is suitable for use as a field laboratory location for the Social Science Education Department, UIN Maulana Malik Ibrahim Malang. This is based on several reasons, namely first, Mount Bromo is an active volcano that has geological and disaster studies as learning materials for physical geography and disaster geography. Second, the inhabitants of Mount Bromo, Ngadas Village are the Tengger Native Tribe who still adhere to local culture and local wisdom, so that it can be used for learning social / human geography, rural sociology, Pancasila, anthropology, and social sciences. Third, Mount Bromo in Ngadas Village is a national tourism site, so it can be used for learning entrepreneurship, economics, and marketing management.



Figure 3. One of the locations for geological and geomorphological studies in Ngadas Village, Poncokusumo

Social Science Education Subject, UIN Maulana Malik Ibrahim Malang

After analyzing the field observations, the field laboratory areas for the Department of Social Science Education, UIN Malang are Candi Jago, Candi Kidal, Gubugklakah Village, and Ngadas Village-Mount Bromo. Subjects relevant to field laboratories can be seen in table 2 below.

Table 2. Social Science Education Subject

No.	Object	Social Science Education Subject
1.	Candi Jago	<ul style="list-style-type: none"> • <i>Pengantar Ilmu Sejarah</i> (Introduction to History) • <i>Sejarah Kebudayaan Indonesia</i> (Indonesian Cultural History) • <i>Geografi Sosial/Manusia</i> (Social / Human Geography) • <i>Pendidikan Kewirausahaan</i> (Entrepreneurship Education) • <i>Pengembangan Sumber dan Media Pembelajaran IPS</i> (Development of Social Studies Learning Resources and Media)
2.	Candi Kidal	<ul style="list-style-type: none"> • <i>Pengantar Ilmu Sejarah</i> (Introduction to History) • <i>Sejarah Kebudayaan Indonesia</i> (Indonesian Cultural History) • <i>Geografi Sosial/Manusia</i> (Social / Human Geography) • <i>Pengembangan Sumber dan Media Pembelajaran IPS</i> (Development of Social Studies Learning Resources and Media)
3.	Gubugklakah Village - Poncokusumo	<ul style="list-style-type: none"> • <i>Ekonomi Koperasi</i> (Cooperative Economics) • <i>Teknopreneur</i> (Technopreneur) • <i>Pendidikan Kewirausahaan</i> (Entrepreneurship Education) • <i>Sosiologi Agama</i> (Sociology of Religion) • <i>Geologi</i> (Geology) • <i>Geografi Sosial/Manusia</i> (Social / Human Geography) • <i>Demografi</i> (Demographics) • <i>Metode Penelitian Sosial</i> (Social Research Methods) • <i>Pengembangan Materi dan Metodologi Pembelajaran IPS</i> (Development of Social Studies Learning Materials and Methodology)
4.	Mount Bromo - Ngadas Village	<ul style="list-style-type: none"> • <i>Antropologi</i> (Anthropology) • <i>Sosiologi Agama</i> (Sociology of Religion) • <i>Teori Sosiologi</i> (Sociological Theory) • <i>Kartografi</i> (Cartography) • <i>Geologi</i> (Geology) • <i>Metode Penelitian Sosial</i> (Social Research Methods) • <i>Pengembangan Materi dan Metodologi Pembelajaran IPS</i> (Development of Social Studies Learning Materials and Methodology)

Course Activity Routes in Field Laboratories

The lecture activities in this field laboratory were carried out jointly in a batch of Social Sciences Education students, UIN Maulana Malik Ibrahim Malang. Learning in the field is adjusted to the courses that students take in one batch. This activity is also accompanied by lecturers who teach courses or a representative of allied lecturers.

The time for conducting lectures in this field laboratory is taken during the hours outside of lecture. Lecturers and students can take the weekend or the quiet week after the midterms. The lecture time in this field needs to be planned properly so that its implementation runs smoothly and is in accordance with the learning objectives.

There are 4 areas of the Social Science Education field laboratory, namely Candi Jago, Candi Kidal, Gubugklakah Village, and Ngadas Village - Mount Bromo. These objects are reached by bus / minibus transportation from the UIN Malang campus to Tumpang District. Furthermore, to go to the village of Ngadas-Mount Bromo, transportation can use the hardtop available at the Gubugklakah Village object. This

field study activity is carried out for 2-3 days, so it is necessary to stay at a homestay available in the object of Gubugklakah Village. After that, the journey was continued to Ngadas Village - Mount Bromo by using the hardtop transportation provided by the residents of Gubugklakah.

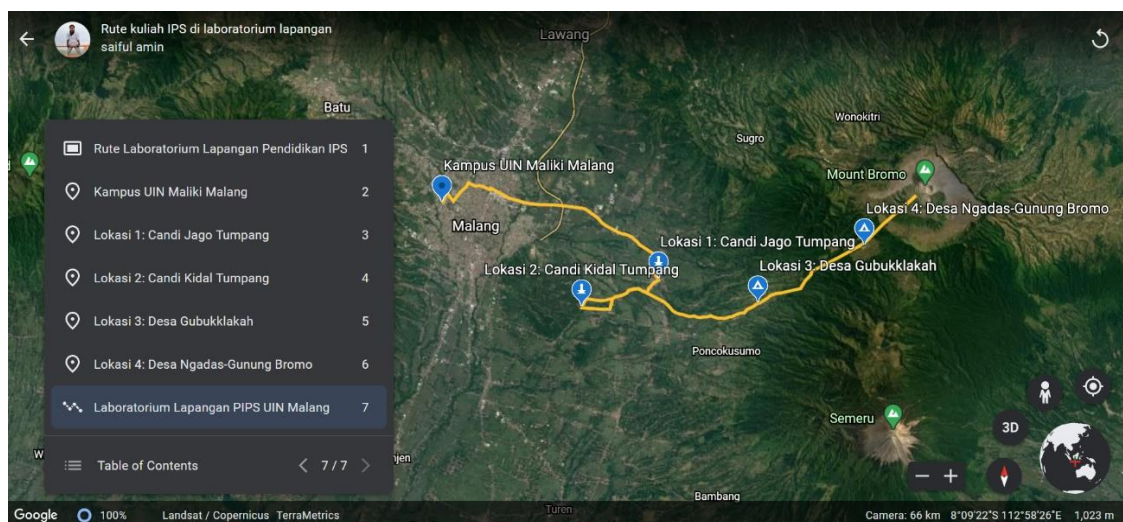


Figure 4. Objects and Routes of the Social Science Education Field Laboratory

The lecture route in this field laboratory is the first, starting from visiting the Jago Temple area, Tumpang. In this Candi Jago area, students can learn about the history of Indonesian culture and the lithology of the rocks that make up the temple. Besides that, because the Candi Jago site is located close to the market and the center of government, students can also learn about economics and political sociology.

Second, the route is continued in the Candi Kidal area, Tumpang. Candi Kidal site is located not far from Candi Jago, about 8 km away. Based on historical records, the Candi Kidal site still has a historical relationship with Candi Jago, so that students can continue information about the history of Indonesian culture and the history of the kingdoms in Indonesia, especially Malang (East Java). Candi Kidal is located in the middle of a rural settlement, so that students can also study sociology material in rural communities. In addition to studying the lithology of the rocks used in the temple.

Third, the field lecture route is continued to Gubugklakah Village, Poncokusumo District. This village is one of the areas traversed when traveling to Mount Bromo via the Malang route. In the village of Gubugklakah there is a very complex and a variety of information for Social Science Education courses. This village, which invites itself as a tourist village, has many natural tourism objects. Therefore, students can study economics, management and entrepreneurship in this area. In addition, with mountain morphology and there are many faults forming waterfalls, students can study material on rock geology, soil, geomorphology, and hydrology which is packaged in geology courses. The location point in studying this geology is the Coban Pelangi waterfall area. Furthermore, in this village students can also study the sociology of religion and general sociology of rural communities, as well as the cultural anthropology of the Malangan Mask Dance, originally from Gubugklakah.

Fourth, the last route from studying in this field laboratory is Ngadas Village - Mount Bromo. In Ngadas Village, students can explore materials related to the sociology of religion, Pancasila and citizenship, religious tolerance, cultural

anthropology of society, and social / human geography, then lectures can be continued to Mount Bromo. Students can study volcanic geology, rock geology, soil, geomorphology, climate, and the distribution of the biosphere. In addition, students can also study management and entrepreneurship in the tourism sector.



Figure 5. Coban Pelangi object in Gubugklakah Village

Manual of Social Science Education Field Laboratory Product Development

The product development in this research resulted in a product in the form of a manual for the Social Science Education field laboratory. This manual product contains descriptions of field laboratory objects and travel routes in learning in field laboratories.

The product developed in the form of a manual for Social Science Education field laboratories received qualitative improvements from the validators of social studies learning experts and learning laboratory design experts. Inputs from social studies learning experts include: 1) instructions for using books should be made clearer; 2) the material should be more integrated with the social studies (multidisciplinary) approach; and 3) the writing and spelling should be more scrutinized. Furthermore, inputs from learning laboratory design experts include: 1) the appearance of the book should be more proportional; 2) added pictures to motivate students; and 3) worksheets are made more able to generate critical thinking skills and solve problems.

Product trials were carried out after the revision process from the social studies learning expert validator and the learning laboratory design expert. Subsequently, a limited trial was carried out on 40 students of semester 5 (high) of Social Science Education. Selection of trials in high semester students is based on the reason that they have taken many social studies courses, so they are considered competent in providing input and assessment of the product being developed. Recapitulation of the test results of all respondents can be seen in table 3.

Table 3. Recapitulation of Test Results for All Respondents

No.	Correspondent	Percentage (%)	Category
1.	Social studies learning expert	88.24	Highly Feasible
2.	Learning laboratory design expert	89.58	Highly Feasible
3.	The trial to social studies students	83.94	Feasible
Rata-rata		87.25	Highly Feasible

Based on table 3, the results of the trial assessment recapitulation of the manual for the IPS field laboratory are 87.25. This shows that the development product is in the highly feasible category. So it can be concluded that the guidebook and field laboratory objects on the slopes of Mount Tengger have met the appropriate standards to be used

as a learning laboratory for the Social Studies Department. Furthermore, the objects in the field laboratory in this study can be used in social studies outdoor learning study.

The results of this study are in line with the results of previous studies conducted by Ratnawati, et al. (2017) (Ratnawati et al., 2017), Citra and Sarmita (2016) (Citra & Sarmita, 2016), Astina, et al. (2016) (Astina et al., 2016), Hissoh (2016) (Hissoh, 2016), Hartono (2014) (Hartono, 2014) regarding the development of field laboratories and the feasibility of development results in the form of books and results of learning experiments in field laboratories.

The western slope of Mount Tengger in Malang Regency has diverse and complex physical, social, economic and cultural potentials, so that it can be developed into an social studies field laboratory. Physical potential to support the feasibility of a field laboratory at the research location, namely: 1) there are types of igneous rock and rock layer structures found in Coban Pelangi, Gubugklakah Village; 2) changes in high air temperature (temple area in Tumpang) to low (Gubugklakah and Ngadas-Mount Bromo) following the altitude of the place; 3) various types of plants, from lowland (Tumpang) to highland (Mount Bromo); 4) soil study and land conservation at the Gubugklakah and Ngadas locations; 5) relief or geomorphology of the research location which is undulating along the Gubugklakah road to Mount Bromo; and 6) study of volcanoes in the Mount Bromo area and mitigate its disaster.

Social potential as a support for the feasibility of field laboratories at the research location, namely: 1) demographic and social geography studies in the Candi Jago and Candi Kidal areas; 2) study of political sociology in the past through the history of the kingdoms in Candi Jago and Candi Kidall; 3) social life of rural communities in Gubugklakah and Ngadas villages; 4) religious communities around the Darussaadah Islamic Boarding School Gubugklakah; and 5) study of community religious tolerance in Ngadas Village.

The economic potential to support the feasibility of field laboratories at the research location, namely: 1) study of the law on supply and demand and market materials around Candi Jago, Tumpang; 2) study of tourism economy in Coban Pelangi and Mount Bromo; 3) study of entrepreneurship and marketing management in Gugukklakah Village.

The cultural potentials to support the feasibility of field laboratories at the research location are: 1) a study of the art of making batik with medallion motifs in Candi Kidal; 2) Islamic art culture in the village of Gubugklakah; 3) Malangan and Jaranan Mask Dance in Gubugklakah Village; 4) Kasodo ceremony in Ngadas Village - Mount Bromo.

Various physical, social, economic, and cultural potentials that exist in this research location are supporting as a field laboratory for the Social Science Education Department, UIN Maulana Malik Ibrahim Malang. In addition to a relatively reachable distance from the UIN Maulana Malik Ibrahim Malang campus. In addition, with the existence of a field laboratory on the slopes of Tengger in Malang Regency, students of Social Science Education, UIN Malang can explore the potentials in the surrounding environment. This makes social studies learning more meaningful and contextual for students because they can solve social problems in the field.

The manual for the social studies field laboratory as a learning medium has several advantages and disadvantages. The advantages of this social studies field laboratory manual include 1) presenting material that is really close to students (contextual), 2) this field laboratory can be used by various campuses and various

departments whose material is available in the field, especially the slopes of Mount Tengger, 3) presents examples of various problems, 4) uses a grammar that is communicative and easy to understand, and 5) a description of the activities invites students to be active in learning in the field. Some of these things are in line with Bruner's opinion that the learning process will run well and creatively if educators provide opportunities for learners to actively discover a concept, theory, rule, or understanding through examples found in everyday life. (Ratnawati et al., 2017). In addition, the weakness of this manual for the Social Science Education field laboratory is that it is still in the category of visual media, so it needs to be further developed in accordance with current technological advances so that it can be read anytime, anywhere, and by anyone.

CONCLUSION

The results showed that first, the physical, social, economic, and cultural potential in the research object supported the feasibility of developing a social science education field laboratory. Second, the manual for the Social Science Education field laboratory is suitable for use in outdoor social studies learning with a feasibility value of 87.25 (very feasible). Recommendations for further research are; first, conducting experimental research to determine the effect of learning in field laboratories on learning outcomes and other variables. Second, carry out further development of virtual field laboratories.

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