Comparison of Indonesian History Learning Model
Science Class and Social Class in Senior High School

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Abstract—Psychological patterns and learner classroom condition in science classes and social classes have some differences and similarities in intelligence. This pattern influences the use of historical learning model which applied in SMA Angkasa, Indonesia. This study aims to determine (1) the way teachers use the approach, strategies, methods, and learning media of Indonesian history in science and social science classes, (2) to know the suitability of learning models, based on the characteristics (intelligence) of students, learning styles, and classroom conditions (3) learners opinions about the learning model of Indonesian history (compulsory) that has been applied by teachers for X class of IPA and class X IPS of SMA Angkasa. This type of research is qualitative descriptive, comparing the model of learning history, by conducting interviews and observations in science and social Science class. The results show that history learning in dominant Science classes uses mathematical, linguistic, and intrapersonal logical intelligence, appropriate models (assignments, problem solving, causal relationships in historical material). The learning model corresponding to the social classes is interpersonal, visual, and kinesthetic intelligence (cooperative, discussion, question and answer, role play, and visual image). This result is consistent with Gardener’s 1986 intelligent theory of multiple Intelligence theory.

Keywords—learning model, indonesian history, science-social class, multiple intelligence

I. INTRODUCTION

The interest of student to learning history subject in science classes and social science classes can be caused by elements such as approaches, strategies, methods, and media used in historical learning. These elements are contained in the learning model. In addition, the infrastructure and intelligence review of student characteristics also be a support success in learning history. Learning history a process of cooperation between teachers and students in utilizing all the potential that exists, can be interpreted for example to find the source of history together and then review it into an interesting historical facts [1]. Learning history that is only implied as a story of the past will certainly cause a sense of saturation among learners in both science and social science classes. Sense of saturation in learning styles will lead to a reluctance to study history [2].

Teachers and learners have same position to add their knowledge continuously in learning [3]. To realize the high level of effectiveness of history learning, it is necessary to choose the effective strategy and process of contextual learning approach. It can be done by bringing closer to the reality and experience of the learners in science and social science class. Through these approaches according to Sudrajat [4], the learning model is basically a form of learning illustrated from beginning to end that unique which presented by the teacher. Learning approach can also be done by observing aspects of individual intelligence. The intelligence approach has been achieved and the students’ intelligence capacity in the science and social science class emerges, there is no obligation for the capacity to be tied to a single charge of the learning model that uses. As Gardner's in [5] statement suggests that the capacity of learning includes intelligence [5]. This means that the level of student learning ability should be considered to the learning model, adjusted with the dominant intelligence capacity for students of science and social science classes.

Fundamentally, intelligence is the psychological idea that uses by people to approach a set of materials. Teachers should have knowledge about the importance of managing intelligence in learners, in order to create a harmony between the objectives and the learning process. From that approach, learners are placed as a subject of learning processes and activities, then effective and efficient learning should take into the characteristics of students [6]. Here the relevance support of the research: (1) Thesis with title Comparison of Scoring Model Based on Response Theory Item Problem National Exam Subject Mathematics SMA / MA IPA program by Nuril Huda from Postgraduate Program of Yogyakarta State University 2015. From that research, about the comparison of a model seen from the characteristics of the value. (2) Thesis with title Comparative Study of History Learning Model at SMA Taruna Nusantara and SMA Negeri 4 Magelang, by Muhammad Fendy Aditya, from the Graduate Program of Yogyakarta State University 2016. From this research, explained that the two schools studied have different in determining history learning model. The relevance to the characteristics of historical learning model can be seen from school policy, history learning curriculum, teacher activity in particular with students' opinions about history learning model used by teachers.

Students in the science class have tendency of linguistic intelligence, while in the social class shows strong interpersonal intelligence. This condition become the based that used by researcher to create the scheme of comparative learning model history in science and social class. Historical learning model will lead learners to achieve the competence to be achieved. One of the theoretical schemes which studied Suranto’s book in [7] is the Hull scheme, said that learning as a single phenomenon (unitary).
This can be seen from the achievement of test. Formative assessment indicates that the science class has an average value (reached the KKM), while in the social class tends to be lower than that of the science class. There are several factors become the obstacle in learning process, such as atmosphere, peers, perseverance, and focus of learning between science and social science classes. There is a discrepancy between the learning model used in science and social science classes. Factors that affect to the positive emotions such as hope and pride, negative emotions such as anxiety and shame. That factors have affect to the student performance and achievement, this has been supported through many studies [8].

This study will show the elements of the learning model is the approach, strategy, methods, media, and preparation of teachers in determining and implementing the model of learning.

The rest of this paper is organized as follow: Section II describes the proposed method. Section III presents the obtained results and following by discussion. Finally Section IV concludes this work.

II. PROPOSED METHOD

This research was descriptive qualitative method, by using comparative approach. Formulating a comparative problem guides the researcher to compare one context or domain to another. For example, Sugiyono in [9] says "Is there a difference in class dynamics taught by lectures and demonstration methods?" In comparison analysis usually through three stages: first stage was a descriptive activity for searching information, the second stage was sorting information based on certain classification, and the third stage was analyses the classification results to see the relationship between the various variables.

A. Identify Subsections

Comparative studies has an objective to examines the phenomenon of educational variation in many backgrounds (quality) comparisons [10], (1) comparative methods in education concerning aspects or elements of education in schools in a broad sense that affects student achievement (2) characteristics of students, including learning patterns, intelligence, and learning styles (3) classroom environment includes policy, approaches, learning strategies, methods, media and students' view of the school.

B. Participant (Subject) Characteristics

SMA Angkasa has two classes in both of classes, science and social. It is interesting to study because it were balanced, so it can be a benchmark of the tendency and success of learning model used for science and social science classes. To succeed learners, achieving maximum results in learning requires appropriate learning models by teachers

C. Sampling Procedures

The principal characteristics in this qualitative research were; (1) Qualitative research has a natural setting, data collected from the source directly, and researchers as an instrument (2) qualitative research was a descriptive (3) researchers pay attention to meaningful processes and products (4) researchers analysed data inductively, data collected not to support or reject the hypothesis, but abstractions are arranged as collected and grouped specificities (5) "meaning" is an essential matter. To obtaining the meaningful data, observations were not just once, but as long as the data collection [11].

a) Sample Size, Power, and Precision

This research used purposive sampling technique. In this research technique used to take the sample selectively namely: (1) source triangulation, the researcher explores the truth of certain information through various methods and sources of data acquisition (2) triangulation of researchers, conducted by using more than one person in data collection and analysis (3) method triangulation, done by comparing information or data in different ways (4) triangulation theory, is the final result of qualitative research in the form of an information formulation.

b) Measures and Covariates

The information extracted from the various data sources, and the types of data sources to be utilized in this study include: (1) Interviews, were: (a) Vice Principal of the Curriculum Section, (b) Indonesian History Teacher (mandatory), (c) Students in Science and Social Science classes with four main interviews, and ten supporting interview data for each class (2) Observation, were (a) Lesson Plans (RPP) (b) data archives covering teacher lists, number of students, daily and recurring grades, progress books, number and types of library books, instructional media used, and school facilities and infrastructure (c) places, events, and activities

![Fig. 1. Relationship of Terms in the Learning Model [13](Image)](image)

c) Research Design

Research resource was the object of research are teachers and learners in running the model of learning in the classroom and observed naturally. The researcher looks at
whether; history learning - in science classes and IPS classes have been used - learning approaches, learning strategies, learning methods, and learning media in creating and defining - Historical Learning Models for Science Class and Social Class as - Successful Historical Learning. The successfulness of student has the positive relation to the frequency in learning [12].

d) Experimental Manipulations or Interventions

The conclusions of this study used the verification of data, but it was still temporary, and become changed if the strong evidence which support the data collection stage not found. If the data conclusion which presented at the initial stage, supported by valid and consistent returns of evidence when the researcher returned to the field to collect data, the conclusion presented was a credible conclusion. Here is the scheme (position) of learning model in teaching elements (as described in Figure 1 above).

III. RESULT AND DISCUSSION

This section presents the results obtained and following by discussion.

A. Result

a. Comparison History Learning Approach in Science and Social Science Classes

Learning approaches which made in IPA 2 and IPS 2 classes were easier because the classroom circumstances allow a comfortable and enjoyable learning environment. This condition allow students to focus their thoughts and attention to what is being learned. The specific questions, such as: (1) Do students learn faster? (2) Is that a more effective answer to national education standards? (3) Does it give deeper meaning, more enjoyable learning, and a better social experience? [14]. Therefore, meaningful and fun learning was associated with new information on relevant concepts contained in the cognitive structure.

Enrichment activities in the learning approach are used to develop their potential, optimally in a fun way to encourage students to done their tasks. Standardization and concepts are required both science and social science class because the competence of each student were different. The goal is that students become experts in their respective fields. Contextual learning used as an approach system to express meanings that are close to daily life [15]. Learning approach can be interpreted as a starting point in viewing the learning process that is still common and can accommodate, inspire to strengthen certain theories [16].

Head of curriculum, Kristiantora revealed class X has used the learning approach through lecture method, that is still not eliminate the lecture method either directly or planned. Therefore, the principle teacher will not eliminate the lecture method either directly or indirectly. It simply summarizes and adds with other usable methods. Contextual method used by teacher in learning history by collecting identity from elementary

b. Comparison History Learning Strategy in Science and Social Science Class

The curriculum 2013 in high school, Indonesian history subjects including in social science and natural sciences has an important role in shaping the character and personality of the students. Personality tests are used to distinguish the integrity and personality of learners [17]. A curriculum will be structured on the basis of this theory, will also focus the purpose, content, educational status, and facilitate the evaluation section. Students will play as an active role in the process of individual evaluation [18].

Science and social students differs in analysing the matter, social student can give the strong opinion, but the science student give a brief and solid opinion. Conceptual learning by linking past events to contemporary realities draws learners' interest in historical learning. Differences in attitudes and thoughts in analysing are influenced by environments that support brain development in response to lessons. Education is closely related to a strategy defined as a plan, method, or series of activities designed to achieve a particular educational goal, so that learning strategy can be defined as a plan that contains a series of activities to achieve educational goals. [19].

Learning strategies are not stagnant or fixed, including in processing time to be effective and efficient, requires precision in understanding students before and after the lesson progresses. The teacher creates a special diary to evaluate the strategy that has been done. The results of the task can be observed to evaluate a strategy that has not been perfect.

Monitoring students' progress in learning not only falls into the category of sustainability strategies, but also enters into targets and results that must be met each day. Projecting strategy as a plan or schedule guide should also be known to students for the next activity target to be encouraged to read some material to be learned. Characteristics of students actually all different both in science and social science class so that there is no difference between science and social science class in particular but can be said to dominate the strategy in memami intellectual dominance that can be used to determine what questions can provoke students to argue, analyse the material. The dominance of intelligence that appears in the science class is the closeness of thought and logic, while the social class is of kinaesthetic intelligence, and the more dominant attitude. The learning strategy includes of approaches, methods, techniques, forms of media, learning resources, and grouping of students to realize educational interaction to their learning environment that will result in learning experience [13].

c. Comparison History Learning Methods in Science and Social Science Classes

Literally, method comes from the Greek language, consists of two vocabulary. Metha have meaning through and hodos can be defined path (Noor Syam 1986) Janawi [20] in this case. Direct learning methods are needed in every history lesson either directly or planned. Therefore, the principle teacher will not eliminate the lecture method either directly or indirectly. It simply summarizes and adds with other usable methods. Contextual method used by teacher in learning history by collecting identity from elementary
school, junior high school, high school or in the form of photographs as source of history in research. The expressive history in education is crucial in cultivating expressive liberation and spontaneous individuality to students [21]. Contextual methods are very relevant to be used as historical lessons that are wide open and can be learned in science and social science classes.

Diedrich in [22] lists a variety of student activities including: Visual activities, such as reading, watching: pictures, demonstrations, experiments, other people's work and so on. Oral activities, such as: stating, formulating, asking, giving advice, issuing opinions, making coverage, discussion, interruption, and so forth. Listening activities, such as listening to descriptions, conversations, discussions; music, speech, and so on. Writing activities, such as writing stories, essays, reports, tests, questionnaires, copying and so on. Drawing activities, such as drawing, graphics, maps, diagrams, patterns, and so on. Motor activities, such as experimenting, constructing, modelling, refit, play, gardening, raising animals, and so on. Mental activities, such as responding, remembering, solving problems, analysing, looking at relationships, making decisions, and so forth. Emotional activities, such as interest, boredom, joy, courage, calm, nervousness, and so on.

Question and answer methods that have been done outside the classroom by providing a way to find questions and answers to students in the science class and social class. The question and answer method that is planned will be better to give the students an opportunity to think analytically. As the concept is a question and answer method is easier to use in the classroom because it is more focused and audible in the room. In this case ramu opinion techniques can also take place which is a fusion of question and answer techniques and discussion techniques to develop creative minds. Interpret it, relate it to existing knowledge, make notes, think it critically. Just as questioning does not give much opportunity for various activities [23].

The method is not differentiated between science and social science class except in its approach. The application of the method should be adjusted to the conditions of the dominant intelligence aspects contained in the class, including in the science and social science class. Teachers do not distinguish methods between science and social science class. Methods relating to student acceptance in learning. The following are the comparisons implemented in both science and social science class: In general, the use of problem based learning method has characteristic of real problems as context of critical thinking and problem solving skills, to gain knowledge. A good learning method is one that can foster learning activities for students, coupled with teacher's efforts in selecting appropriate methods as an effort to enhance the quality of teaching or education that can be accounted for [24]. No demonstration methods were found in SMA Angkasa, whereas things like history were more appropriate to be experienced than learned, or more precisely trained by examples rather than through school lessons "technic could not be exposed in word, wether spoken or written; it could only be demonstrated [25].

Demonstration learning method is very effective, because it can help learners to see directly the process of the occurrence of historical events. The method of discovery aspect changes the passive learning conditions into active and creative or the teacher oriented to the student oriented so that the students find their own information independently. The method of the exercise task is done in a fun way so that students are not saturated. There is no historical learning model that is said to be most appropriate for use in science and social science class. In using the model, teachers should not be focused on a single theory, because students' self-understanding can be achieved through personal models, group co-operation, information processing skills can be approached by information processing models, and skills acquisition can be trained through behaviour modification [26].

A good learning model can only be measured by the quality of selection of a good learning model to be used in science and social science classes at least there are 4 components that must be considered, namely teachers, pesera students, facilities and teaching materials. In its use by doing variations so that students are not bored and saturated.

d. Comparison History Learning Media in Science and Social Science Class

Media comes from the Latin word, medius has a meaning "middle", "introduction", or "intermediary". In Arabic the media is referred to as the wasail, the plural of the wasilah which means also "middle" or is between the two sides [27]. Audio-visual media is most commonly used. The use of complete media can be tailored to the needs that can touch the various senses then the use of multimedia is one of the best alternative choice for teaching and learning memorable. Audio-visual media is more feasible than posters, pictures. Audio visuals can draw attention briefly to attract large numbers of viewers with powerful information (experts) and then it can save time to see objects by presenting in the classroom. Students are more understanding and interested in learning history that is delivered with audio-visual media compared with the lecture method only. Audio visuals can be captured with more than one sense.

Learning media is defined as an integral component of the learning system positioned as a communication component in learning [28]. There is no specific difference in responding to media between students in science and social science class so that teachers do not use strategy. The learning media can overcome the difficulties and clarify the difficult subject matter and one of them is able to understand and make the lesson more lively and interesting. Of course, each class will have different understandings related to media responses.

The right media is what attracts students and makes students enthusiastic. The right media can provide the same incentive to experience, perception and motivation. The media is enough because there is an IPS lab containing rocks, LCDs in each class. Unlike in particular the history laboratory as a source of learning replica models of past related things that can also be used as a class of practicum, museum, and display. The use of media is limited by the teacher's busyness. The use of media should also be tailored to the objectives, materials, and learning strategies. The selected media must be in accordance with the three things.
e. Comparison History Learning Intelligence in Science and Social Science Class

Problem solving intelligence is used for learners' learning in the form of controversial material. One's intelligence will be seen when arguing, intelligence in argument is determined by the ability to understand students' opinions. There is no special portion in Science and Social Science Class on this subject.

Students learn to analyse the text critically, this skill does not have to be transferred in full [29]. Methods in the form of intelligence in analysing is still limited to knowledge, not on communication, evaluation. Critical thinking as the process of analysis, the process of connecting positional and negative understandings, and combining conclusions or decisions.

Teacher leads students to think critically in science and social critical thinking as a process of analysis, the process of connecting positional and negative understandings, and incorporating conclusions or a decision. Spatial visual intelligence of students based on the direction of the individual who has the pleasure to describe things that they imagine, in science and social class there is no dominant criterion but owned by individuals.

The result of experimental studies, show that the left hemisphere is specialized for verbal and computational expression, but not for reasoning skills [30]. Reflection methods are used in science and social science class to understand the concept of values in the material. It is used to refresh the brain after learning is not limited to science and social science class students. In addition, the mandatory methods applied are cooperative learning, problem based learning, project based learning. Based on the application and analysis of the teacher's RPP use the model suggested by the history teacher's deliberations.

Assess intelligence is done through written assessment and spoken language spoken. The dominance of intelligence between science class can be observed by trying to provide an appropriate learning model through observation and evaluation. The example, a child is only high in mathematics, or language, or chemistry, while in other subjects it is just quite even low [31]. Social class also has students who are smart. Measuring better intelligence is not measurable in any one of intelligence because intelligence has its various types. The teacher understands the characteristics of students as private schools. Teachers play an important role in the development of talent from their students, while schools become a means of talent development.

B. Discussion

Naturally human beings have different levels of intelligence, ranging from linguistic intelligence, logical-mathematical, spatial, musical, physical-kinestik, interpersonal, and intrapersonal. In the 1980s and 1990s, several meta-analyses and literature reviews were conducted to determine students' grouping abilities [32]. While grouping more oriented to goal and prospective learners after graduation. Add journals (as a booster) at least. Identical majors to determine intelligence grouping, at least classify the dominance of intelligence among students of science and social science classes, so that the subject matter can be absorbed well by learners using the right model of learning. The development of the 2013 curriculum has opened the opportunity for history subjects to strengthen the sense of nationalism and even get a compulsory label for the history of Indonesia for all students including in science and social science classes.

A direct result in the curriculum that previously placed less hours of lessons in the science class so that this study analyses how the system is applied in making model learning history both in the science classroom and social class with the same hour portion. These findings modify how the learning model is applied on the basis of individual intelligence in the science and social science class so as to create enjoyable learning conditions.

Constructivism, theory of Peaget, assumes that a person's mental image is build when people interact to the environment (media) and the process of acquired knowledge is a process of self-meaning rather than internalization of outside meanings [33]. Historical learning models tailored to individual intelligence groups can be an answer to how learning in social classes sometimes leads to less intelligent stigma when compared to Science classes. Even when supposedly students in social classes are smarter in historical subject matter but the results obtained in science classes are better, this is because intelligence content is not measured as a success. Social classroom conditions have kinetic intelligence, interactive in social, discuss with debate. Building a positive stigma of intercultural understanding can be done when the discussion goes on in class, they gain new knowledge from their own culture simultaneously, in Table I [34], [35].

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<tr>
<th>Essential Characteristic in Science Class</th>
<th>Essential Characteristic in Social Class</th>
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<tr>
<td>Have linguistics understanding and used the concept of numbers (mathematics)</td>
<td>Have honesty and equality of opportunity</td>
</tr>
<tr>
<td>Have an understanding to assess the relationship between the event that precedes the next event, as well as the implications for the resulting causal control</td>
<td>Ability to recognize the life of a society and realize the interdependence in social life</td>
</tr>
<tr>
<td>Able to use science and math in everyday life that occurs in society</td>
<td>Have the ability to speak and pride to the aspects of a superior nation</td>
</tr>
<tr>
<td>Have an interest to obtain education in accordance with work needs and technological developments</td>
<td>Able to develop an understanding of the human interdependence of the environment and the need to protect the heritage of nation</td>
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</tbody>
</table>

Science classes have a tendency to learn independently, play logic, and have a strong analytical concept. Teachers and students can point out that they want to have more ways of explaining the same concept or responding to: I have only a half dozen ways to say things I may say ten times a class. It would be nice to have more than one way to say a lot of things I hear myself say. "What else can you add to this?" (See more interest) "What else do you notice?" [36]. In this study, no students are stupid but the builder's intelligence is used less precisely, consequently is the seriousness in learning is reduced. A fun learning style occurs because of
the suitability of the learning model. Learning styles is a permanent picture of an abstract, abstracted, inner-motivated learner approach as opposed to an extrinsically motivated learner, an impulsive learner the opposite of the reflective learner (brain movement) [37].

IV. CONCLUSIONS

Based on the results of research and discussion of comparison learning model of history in science and social science class in SMA Angkasa Adisutjipto obtained the conclusion that the learning model has an important role for the learning process which is structured by taking into account the characteristics of intelligence in science and social science classes. Structured learning process can be started from the learning approach, learning strategies, learning methods, and learning media. Through these processes the learning model is modelled and can be used in science and social science classes. The application of historical learning model for science and social science class of SMA Angkasa is not differentiated and applied in accordance with the 2013 curriculum recommendation by using student centre active learning model such as cooperative learning, problem based learning, and project based learning.

The most appropriate historical learning model was chosen because of the individual characteristic factors of intelligence within the class. So it can be concluded that giving the task of the group should be based on the purpose and proper carriage for individual performance [38]. The intelligence of each individual cannot be said as class intelligence but the dominance of the intelligence of similar individuals can be grouped in a class. This then makes the problem-based learning model in the science class succeeded in generating special interest, indirectly demanding that they learn independently and apply the logical intelligence. The learning models in the social class succeeded with cooperative learning, forming groups, stimulating them to interact and express opinions widely.

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