INTRODUCTION

Social Study or *Ilmu Pengetahuan Sosial* (IPS) is one of the lessons which are started from SD/MI/SDLB to SMP/MTs/SMPLB. The IPS learning discusses a list of events, facts, concepts, and generalizations those related with social issues so that the IPS learning scope is so wide those consists of place, time, social system, and behavior. Hence, one of the IPS learning goal formulations is to have a basic skill on logical and critical thinking, curiosity, inquiry, problem solving, and skill in the social life. (Government Regulation Number 22 Year 2006 about Standard Contents). The consequence of the learning implementation is the teacher should involve the students to be active. It is in line with shifting and changing in the education paradigm, from the old paradigm that emphasize on behavioristic in the teaching-testing form into the new paradigm that emphasize on the constructivistic process in the form of learning-continuous improvement.

Learning process is directed on the learning experience to arrange and make a work or to create a new idea through the application of a set of events, facts, concepts, and generalizations on the social issues in the social environment, so the basic competence can work effectively. Thus, the students will feel the learning directly, by examining the environment, formulating the problem, doing the environment observation (nature and social), using the technology or by doing interview with the society, so they will have unforgettable learning experience. This learning experience provides an essential meaning on encouraging the students to be curious and doing an activity, thus will discover (inquiry) something and stimulate the students’ creativity which is extraordinary on the learning.

Creativity will encourage students to have certain idea/concept towards a social phenomenon which they saw. The variety of idea/concept shows the variation of the students’ thoughts (creativity) in recognizing and solving social problems. This fact indicates the relationship between IPS learning and creativity.

Munandar (1990:50), defines creativity is an ability that reflects on fluency, flexibility, and originality in thinking, and an ability to elaborate (to develop, to enrich, to specify) an idea. Furthermore Guilford (in the Munandar, 2009) states the characteristics of creativity which are:

a. **Fluency of thinking**, an ability to create a lot of ideas from an individual thought rapidly.

b. **Flexibility of thinking**, an ability to produce variety of ideas, answers, and questions

c. **Elaboration of thinking**, an ability to develop ideas and to add or to specify details from an object, to make it more interesting.

d. **Originality of thinking**, an ability to initiate a unique or original idea.

Later, the ability is translated by Sukmadinata (2004:104), to make a new combination based on the available information data, so it will discover many possible answers towards a problem which is emphasized on its quality, effectivity, and variety of answers. Regarding to National Advisory committee on creative and culture education which is translated by Craft (2005:291), “Illustrates creativity as a form of an imaginative activity that can produce something original, pure, genuine and valuable. “ In a line with the above concept, Torrance (1998) affirmed that creativity is a process to feel and to observe a problem, to make a hypothesis, to assess and to test a hypothesis, to modify and to test the hypothesis again and to show the results. The results of creativity are new, original and valuable things. In order to know how much the creativity level of an individual is, a measurement is conducted by Torrance (1968:13) that the creativity measurement is stated similar with the steps on the scientific method, which are …… the process of (1) sensing difficulties, problems, gaps in
information, missing elements, something asked; (2) making guesses and formulating hypothesis about these deficiencies; (3) evaluating and testing these guesses and hypotheses; (4) possibly revising and retesting them; and finally; (5) communicating the result.

Subsequently, Torrance (1998) in the Abdul Kamil Marisi (2007), states that in the implementation of creativity measurement develops seven activity which are done by the test participant, those are making question, guessing causal effect, predicting cause of an event, developing a value of an object, using an object extraordinarily, asking an extraordinary question and making a guess.

Consequently, to measure creativity, there are 4 indicators:

1. The fluency measures aspect on making questions consist of making problem identification and making question;
2. The flexibility measures aspect on guessing causal effect will discover the relationship between two variables and aspect on predicting the cause of an event produces a framework of thinking;
3. The originality measures aspect on developing the value of an object those are making hypothesis formulation, determining work procedure, conducting experiment, and processing data.
4. The elaboration measures aspect on asking extraordinary question those are proving evidence, using an object extraordinarily, doing interpretation, and making prediction which are making and presenting a report.

Creativity is carried out on the IPS learning that is arranged as scientific inquiry, which stimulates the ability of thinking, working and acting scientifically as well as communicates it as an important aspect in the life skills. This kind of learning is a learning that is using inquiry approach.

Inquiry approach gives an opportunity to students in learning to develop their intellectual potency in a set of activities which are arranged to discover something. The students are encouraged to be actively seeking answers of their problems and drawing conclusion individually through the scientific thinking which is critical, logic and systematic. The students will not act and behave passively on accepting and memorizing lesson that is given by their teacher anymore (Hidayati, 2009). Based on Bruce Joyce and Marsha Weil (2008), the learning implementation of using inquiry approach consists of five stages, which are 1) Facing on the problem; 2) Data collection and verification; 3) Experimental data collection; 4) Organizing, formulating and explanation; 5) Inquiry process analysis. Regarding to E. Mulyasa (in the Siti 2009), inquiry approach is an investigation approach that involves mental process with the following activities: 1) Asking questions about natural phenomenon; 2) Formulating discovered problem; 3) Formulating a hypothesis; 4) Arranging and conducting an experiment; 5) Collecting and analyzing data and 6) Drawing conclusion developing scientific attitude. Based on Wina Sanjaya (2008), in general the learning process by using inquiry approach can follow these steps: 1) Orientation; 2) Formulating problem; 3) Formulating hypothesis; 4) Collecting data; 5) Examining hypothesis; and 6) Drawing conclusion.

The three arguments above is similar, so it can be concluded that the stages of inquiry learning are stage of orientation (facing on the problem) is done by teacher; stage of verification (formulating the problem); stage of hypothesis formulation is done by teacher; stage of experiment arrangement (determining the working procedure); stage of data
collection; stage of research process analysis (examining the hypothesis); stage of conclusion formulation. The implementation in the field uses four stages, those are formulating problem, determining work procedure, collecting data, and presenting report.

Next on the research result which was done by Sullivan (2011) found that inquiry approach that was performed collaboratively in the IPA learning about the robotic solving problem encouraged the creativity development of 6th grade elementary students. There were four aspects those were proven important in the inquiry approach to reach the students’ creativity development, which were open ended, goal oriented task, teacher modeling from the inquiry techniques, and the use of media and environment which were packed in the form of games. The use of media and environment made the students could develop the comprehension integrated with their friends through media tools, communication and knowledge interaction those owned by the students.

The research which was carried out by Longo (2010) found that the inquiry method helped students in enhancing their creativity. The students’ ability measurement process through test made a load that discouraged the creativity development of teacher and students during the learning process. In this research the inquiry method was proven on helping the students found their own knowledges, not only by recalling the lesson taught by the teacher. The inquiry learning which was conducted by Longo was proven could enhance the students’ motivation, curiosity, and attractiveness by sticking to the required curriculum.

In the research that was performed by Wardani Naniek Sulistya (2010) entitled “Upaya Meningkatkan Kreativitas Siswa Dalam Pembelajaran IPS SD Dengan Pendekatan Inkuiri Melalui Diskusi Kelompok”. The research finding showed that there was an improvement of students’ creativity in the IPS Elementary School (Sekolah Dasar/SD) learning through discussion group learning method. The creativity was indicated by the dynamic discussion group which consisted of the students’ fluency in discussing the answers of questions given, the students’ ability in predicting causal effect of related events from the struggle materials, and developing the value of related event (from struggle). Hence, the use of discussion group could increase the students’ ability in making category of predicting causal effect from an event, improving cooperative ability, activeness, and enhancing the teachers’ ability on maintaining the relationship with the students.

Based on the three researches above, the learning development in the class especially for SD students is necessary to be conducted by using inquiry learning approach which centered to the students, so that the teachers’ roles in the IPA learning as an advisor, stimulator, and fasilitator. Whereas the students in the inquiry learning develop their creativity to discover the curiosity to an object, dare to take a risk and be open towards their own knowledge and experience.

Based on the observation of IPS learning 5th grade students of SD Negeri Bowongso Wonosobo Central Java showed that the teacher attempted to involve the students in the learning by using question-answer, eventhough it told by the teacher. The teachers’ questions tended to the cognitive ability achievement in the weak level which was on the level of knowledge and comprehension. The level of implementation, analysis, evaluation and creation were rarely concerned by the teacher. This case indicated the weakness of the awareness about the importance of the creativity for the learners which affected to the less optimal of the creativity in the school. Although the learning result of 5th grade students were confirmed not completed just reached 26.4% of 30 students. While the students’ questions
expectation during the learning session just reached 30% of the whole students. This case was probably caused by the learning which could not stimulate the students’ curiosity and affected to their weak motivation. The creativity development was one of the ways to empower students and cannot be avoided anymore, regarding to the science and technology development expectation. Hence, this problem should be solved by designing an education to make the students active and reactive through inquiry approach which performed directly in the society as the social laboratory.

The problem which is formulated in this research is there any effectiveness on the inquiry learning approach in the social laboratory towards the enhancement of learning creativity of the 5th grade social science students at SD Negeri Bowongso Wonosobo Central Java in the Semester I at 2011/2012 period.

**METHODOLOGY**

This research was the developed research for inquiry learning approach model and the enhancement of learning creativity which consisted of application and development model. The research application included the action classroom research (penelitian tindakan kelas/PTK) by using spiral model from Kemmis Stephen and Mc. Taggart, Robin, consisted of 2 cycluses. Each cyclus was composed of action plan, application plan and observation, and reflection. The cyclus step was illustrated in the figure 1 below.

The subject of this research was 5th grade of elementary school. The action variable was inquiry learning approach and the related learning creativity variable. Inquiry learning approach was IPS learning approach with basic competence on recognizing the variety of natural and synthetic phenomenon as well as the division of time territory in the Indonesia by using social laboratory media. The learning stages were formulating problem (X1), determining work procedure (X2), collecting data (X3), and presentation (X4). The learning creativity was the total of fluency score (X5) which was the aspect of indentifying problem and making question; flexibility (X6) which was finding the relationship between two variables and frame of thought; originality (X7) which was formulating hypothesis, determining work procedure, doing experiment, processing data; and elaboration (X8) on conducting examination, doing interpretation, making report and presentation. Whereas, the effectiveness of the inquiry learning approach, was the measurement of the accomplishment level of the learning process.

![Figure 1. Action Classroom Research Spiral Model from Stephen Kemmis and Robin Mc. Taggart](image-url)
The data collection techniques used observation. The data analysis method applied Confirmatory Factor Analysis (CFA) approach which was used to analyze the suitability of the measurement model and Structural Equation Modeling (SEM) was used to analyze the suitability of the structural model. The analysis calculation used LISREL 8.51 software. The suitability of the measurement and the structural model was based on the criteria: r-value >0.05, Root Mean Square Error of Approximation (RMSEA) < 0.08, dan Goodness of Fit Index (GFI) > 0.90.

RESULTS

The first stage of this research was the implementation of inquiry learning within basic competence on the IPS lesson of the 5th grade students on the odd semester. Recognizing the variety of natural and synthetic phenomenon as well as the time territory division in Indonesia by using map/atlas/globe and the other media, and the implementation of the learning inquiry was suitable with the required scenario. There was the students’ creativity achievement level through inquiry learning at cyclus 1, was showed in the table 1 below.

Based on the table 1 above, so the creativity level of the 5th grade students tended to be weak. This was showed from the fluency indicator that 40% of the students reached weak level. It meant that to identify problem and make question, the score was less or same with 4. But, on the flexibility, the creativity level tended to increase at 40% in the score 5 or 6, it meant the total score found the the relationship between two variables and frame of thought. The elaboration indicator which most of the students had, the score of the creativity level was below or same with 4. This could be meant, there was a drastic change in the learning, since the students as an object, transformed into subject, thereby was necessary to be adapted before.

<table>
<thead>
<tr>
<th>Score</th>
<th>Fluency</th>
<th>Flexibility</th>
<th>Originality</th>
<th>Elaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤4</td>
<td>10</td>
<td>9</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>5-6</td>
<td>8</td>
<td>10</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>≥7</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>4</td>
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<td>Σ</td>
<td>25</td>
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TABLE 1 The Frequency Distribution of Creativity Score Cyclus 1
Recognizing the variety of natural and synthetic phenomenon in the social laboratory

Although the obtained score was low, there was a big change, thus the inquiry approach could encourage the students greatly to develop their creativity. However, it was necessary to improve the learning so they could achieve the optimal result by did it in the cyclus 2. There was the measured creativity level, showed the result that was provided in the table 2 below.
Table 2  The Frequency Distribution of Creativity Score Cyclus 2  
Recognizing the variety of natural and synthetic phenomenon in the social laboratory

<table>
<thead>
<tr>
<th>Score</th>
<th>Fluency</th>
<th>Flexibility</th>
<th>Originality</th>
<th>Elaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fre</td>
<td>%</td>
<td>Fre</td>
<td>%</td>
</tr>
<tr>
<td>≤4</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>8</td>
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<td>10</td>
<td>40</td>
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<td>≥7</td>
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<tr>
<td>∑</td>
<td>25</td>
<td>100</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

Regarding to the table 2 above, so the creativity level of the students was increased. This was showed from the fluency score, 72% students reached maximum creativity level. It indicated the students could make 3 – 4 problem identifications and 3 - 4 questions. But, in the flexibility, the creativity level reached 52% at the score 5 or 6, meant that the students discovered 2 – 3 relationship between two variables and made a correct frame of thought. The total amount of creativity level in the cyclus 2 was increased. It could be understood because there was found an experience on it.

The Suitability of the Inquiry Learning Approach

The effectiveness of the IPS inquiry learning approach could be recognized through the suitability of the measurement model by using CFA and SEM approach to analyze the suitability of the structural model based on the criteria: \( r-value > 0.05 \), \( RMSEA < 0.08 \), dan \( GFI > 0.90 \). The result was obtained as follow:

LISREL Estimates (Maximum Likelihood) Measurement Equations

\[
X_1 = 0.715* \text{Inquiry}, \text{Errorvar.}=0.551, \ R^2 = 0.481 \\
\text{RM} = 4.245 \\
(0.168) \\
X_2 = 0.622* \text{Inquiry}, \text{Errorvar.}=0.651, \ R^2 = 0.372 \\
\text{RM} = 3.698 \\
(0.168) \\
X_3 = 0.424* \text{Inquiry}, \text{Errorvar.}=0.877, \ R^2 = 0.170 \\
\text{RM} = 4.245 \\
(0.168) \\
X_4 = 0.358* \text{Inquiry}, \text{Errorvar.}=0.877, \ R^2 = 0.128 \\
\text{RM} = 2.048 \\
(0.175) \\
X_5 = 0.845* \text{Fluency}, \text{Errorvar.}=0.483, \ R^2 = 0.597 \\
\text{RM} = 5.255 \\
(0.161) \\
X_6 = 0.771* \text{Flexibility}, \text{Errorvar.}=0.460, \ R^2 = 0.564 \\
\text{RM} = 5.086 \\
(0.152) \\
X_7 = 0.761* \text{Originality}, \text{Errorvar.}=0.509, \ R^2 = 0.532 \\
\text{RM} = 5.075 \\
(0.150) \\
X_8 = 0.809* \text{Elaboration}, \text{Errorvar.}=0.401, \ R^2 = 0.620 \\
\text{RM} = 5.608 \\
(0.144) \\
\]
From the output that was resulted above, it showed that there was the lowest indicator was 0.128 at X4; 0.170 at X3 which was the inquiry indicator for presentation and data collection that had the small contribution towards the latent inquiry indicator. Whereas the other indicators (X2, X1, X7, X6, X5 dan X8) were proven good enough to present latent variable. X3 and X4 indicator were not significant and had the lowest of R2 score, and the validity of both indicators was the weakest, so it was dropped from the indicator. The most reliable indicator for inquiry indicator was X1, for creativity indicator was X5 (fluency), because it had the best loading score which was X1 at 0.715 and X5 at 0.845.

The model was the most suitable because it had probability score that not significant (p-value = 0.00128 and Chi-Square 50,335 with df=24). Chi-Square at 50.335 exceeded 0.05, so Chi-Square was not significant to check whether the data was suitable with the model or not, hence it rejected an alternative hypothesis and affirmed null hypothesis.

The CFA analysis used 5 latent variables (inquiry, fluency, flexibility, originality, and elaboration) with 8 indicators. The LISREL output would produce also the path diagram which was provided in the appendix. The path diagram output resulted on the same estimation score as the LISREL output. The loading between X1 and the inquiry was at 0.71. Whereas the relationship between latent variable of inquiry and fluency was 0.66; the relationship between latent variable of fluency and elaboration was 0.97. This relationship was a correlation not a covariance. It was caused by the latent variable that had not the same of the measurement unit with the one of its indicator. The path diagram output produced also the score t. path diagram output t-value in the figure, showed the significant relationship between the indicator and the latent variable. It showed from the output above that all of the indicators were significant at the level 5 % (default) which was indicated on the black color of the t-value score. Regarding to the figure path diagram output showed that all of the indicators were significant, because the t score higher than 1.96 (number on the leftmost arrow). In order to know the confirmatory model was suitable, it was necessary to notice GIF output with Degrees of Freedom = 24 and minimum Fit Function Chi-Square = 50.335 (P = 0.00628).

The requirement of the suitable model had the P score that was not significant, it was the P score was higher than 0.005. Chi-Square at 50.335 with 24 freedom degree kebebasan and significant P score because P score = 0.00628 higher than 0.005. It indicated that the model was suitable and matched with the data. So did the suitability of the measurement and the structural model which based on the criteria: P-Value >0.05, RMSEA ≤ 0.08, dan GFI > 0.90. From the LISREL output showed that P-value was obtained at 0.3398 > 0.05. RMSEA = 0.021 ≤ 0.08 and GFI at 0.925> 0.90. Thus, the structural model was suitable and compatible to be used.

**CONCLUSION**

This research concluded that the potency of the creativity of the 5th grade students through IPS learning with the inquiry learning scenario was high. From the four creativity indicators were proven fluency creativity (X5) was the highest creativity, and the inquiry indicator was X1 and X4 (formulating problem and presentation) were the most reliable inquiry learning.

CFA analysis showed the same estimation score. The loading between X1 (formulating problem) and inquiry was at 0.71. The Lisrel output indicated P-value at 0.3398 > 0.05. \( RMSEA = 0.021 \leq 0.08 \) and \( GFI \) at 0.925> 0.90. Hence, the structural model was suitable and compatible to be used, and it could conclude that the effectiveness of the inquiry learning
approach in the social laboratory towards the enhancement of the IPS learning creativity of 5th grade students was proven.

**Policy Implication**

Teachers are expected to modify a learning that is concerned to the students by designing innovative learning, especially on using inquiry approach that encourages the students’ creativity.

**REFERENCES**