Analysis Feasibility Level of Practical Guidance Semiriset Based Guided Inquiry on BSNP for Senior High School

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***Abstract*— This type of research is research and development (R & D). The purpose of this study is determine the level of feasibility of practical guidance semiriset based guided inquiry on BSNP for Senior High School. This research was a descriptive analysis study. The sample are 3 lecturer of chemistry and 20 teachers of chemistry. The Instrument used BSNP questionnaire. The results of the study show that (1) aspect of feasibility the content in practical guidance semiriset based guided inquiry have an average of 4,61 and used school subject have an average of 3,14 (2) The aspect feasibility of language in practical guidance semiriset based guided inquiry have an average of 4,63 and used school subject average of 3,03 (3) The aspect feasibility of presentation in practical guidance semiriset based guided inquiry have an average of 4,63 and used school subject have an average of 3,21 (4) The aspect feasibility of graphing in practical guidance semiriset based guided inquiry have an average of 4,62 and used school subject have an average of 3,09. Based on the aspect of feasibility the content, language, presentation, and graphing in practical guidance semiriset based guided inquiry on BSNP for Senior High School and used school subject have an average of 4.62 (valid that meaning decent and doesn't need revision) and 3,12 (valid that meaning sufficient and doesn't need revision (sufficient)).**

Keywords*— *Analysis; Practical guide book; Questionnaire.

I. INTRODUCTION

The main purpose of science education is to help students become scientific and educated (Turkmen & Usta, 2007). Education is intended to humanize humans. Through education, the realm and objectives of national ideals will be achieved so that intellectuals are born who uphold the truth and live noble morals and morals. In order to achieve these objectives, several components of cooperation are needed. Among other things to create competent human qualities so as to be able to compete in the eyes of the world. The component includes facilities and completeness of learning in schools.

Derlina (2013) states that the low level of thinking ability of students can be caused by learning activities carried out by the teacher does not facilitate students to practice developing their formal thinking skills. Based on observations through the CFIT test (Cultural Fair Intelligence Test) in several schools, data were obtained that there were still many students who had not reached the stage of formal thinking in high school. Science learning seems boring because it is partly abstract in nature which makes it difficult for students to understand the science lesson. These problems can be overcome by pleasant learning and include the activity of students in learning, one of which is by doing practical activities. Most students' knowledge is built by conducting experiments / research in the laboratory. Educational institutions in America recommend that learning time should be emphasized in laboratory activities (Campbell & Bohn, 2008).

Practical activities can provide opportunities for children to practice reasoning skills, the ability to think rationally, apply scientific attitudes and methods to find truth rather than what they learn (Hofstein, 2004; Jahro, 2009; Kurniati, 2011). The right practicum activity will play an effective role in honing cognitive, metacognitive, ability to do practicum and students' interest in chemistry lessons. Laboratory activities are carried out through practical methods, namely methods that involve students directly by doing it themselves, following a process, observing an object, analyzing, proving and drawing conclusions themselves. Demircioğlu & Yadigaroğlu (2011) suggested that practicum methods are more effective in gaining student understanding because they have a lot of experience in measuring, interpreting, drawing conclusions and making generalizations. Azhar (2016) in his research showed that giving students the opportunity to conduct experiments had a huge influence in the learning process.

II. LITERATURE

A. Research And Development

According to Borg & Gall (1989) development research is a process used to develop and validate educational products. This step of research or development process consists of a study of product research findings that will be

developed, developing products based on these findings, conducting field trials according to the background in which the product will be used, and revising the results of field tests.

B. Practicum in Chemical Learning Process

The laboratory approach in teaching was motivated by Pestalozzi who argued that education must take place by doing as a substitute for the words learning methods must be analytical, real objects, and initiatives (ideas) must precede symbols and words (Hamalik, 1994). Good learning achievement will be obtained if students are able to manifest the knowledge gained by direct observation and experience (Dale, 1969).

C. Practical Guidance Semiriset

Semiriset practicum guide in this research is a practical guide which is compiled by adopting the existing practical guide from the available guidebook. The practical guide is emphasized more on efforts to improve science process skills through more detailed work procedures, containing questions that encourage student curiosity and improve problem solving skills.

D. Inquiry Learning

The National Research Council (2000) defines inquiry as follows: Inquiry is a multi-faceted activity that includes observation, making questions, examining books or other sources of information to see what has been known, planning investigations, re-examining what is known according to experimental evidence , using tools to collect, analyze and interpret data, submit answers, explanations and predictions, and communicate results. Syntax or overall pattern in Guided Inquiry. According to Shah (2004) in applying the Guided Inquiry method in the classroom, there are several procedures that must be implemented in teaching and learning activities in general as follows : Stimulation, Problem statement , Data collection ,Data processing, Verification and Generalization.

E. Science Process Skills

According to Karsli & inahin (2009) science process skills are basic facilities that help students to be active and learning is experienced directly. Dahar (2011) says that science process skills are the ability of students to apply scientific methods in understanding, developing and discovering science.

According to Warianto (2011) science skill indicators consist of eleven indicators equipped with subindicators, among others : Observing, grouping, interpreting, predicting, asking questions, hypothesizing, planning experiments, using tools / materials, applying concepts, and communicating.

F. Problem solving skill

According to Gagne (1970) problem solving skills are a form of skill that requires thinking by using and connecting with various rules that we already know according to different combinations. Likewise in learning, students will find various kinds of problems, where in order to be able to solve the problems they face they certainly need a process that must be passed. Problem solving can occur suddenly when the problem becomes a light for someone called insigth

III. RESEARCH METHOD

This research uses research and development (R & D) method.The population in this study were all high school chemistry teachers and all XI IPA students in Brigadier General Katamso I Medan High School 2018/2019 and used the revised 2013 curriculum. Sampling is done by purposive sampling technique so that the experimental class is obtained. Validator in this study was a lecturer in Unimed chemistry and chemistry teacher who was selected by purposive sampling. (1) The selected lecturers are 3 people with minimum education criteria for S2, currently actively teaching and mastering Basic Chemistry material relevant to high school material. (2) Chemistry teachers as many as 20 people who have academic qualifications S1 chemistry education. The design of this st diagram in Figure 3.1.

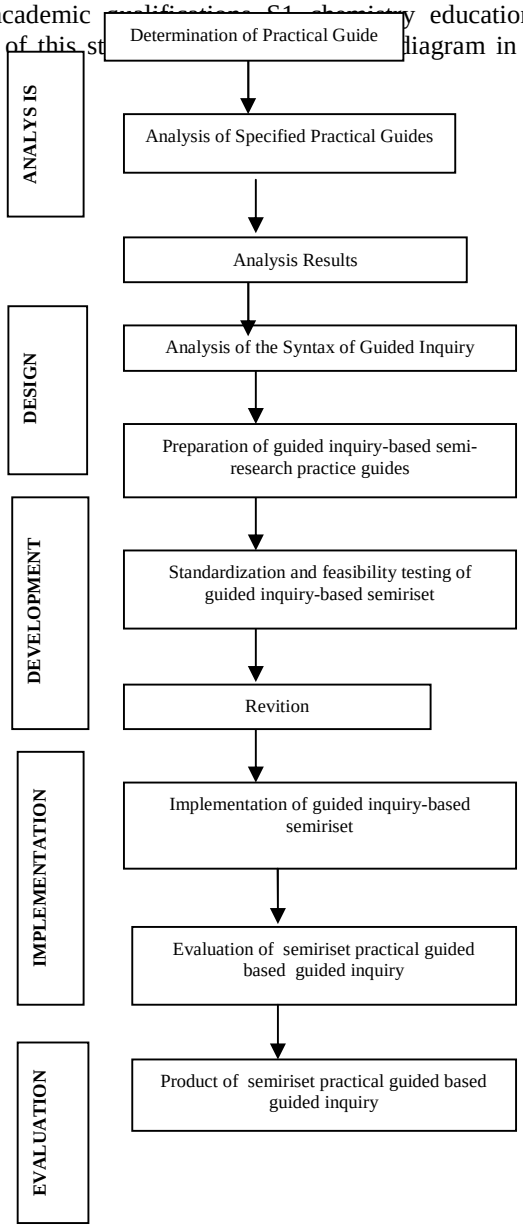

Fig. 1 Flow of Development of Semiriset Practical Guides

IV. RESULT AND DISCUSSION

This research was conducted on a practical guide used by schools and practical guidance semiriset based guided inquiry. Feasibility analysis is carried out on aspects of content, language, presentation and graphics.

A. Aspect of Feasibility Content

In the aspect of feasibility content, there are 11 components related to it, among others: (1) practicum suitability, (2) practicum objectives, (3) work harmony (4) material coverage, (5) experimental tools, (6) experimental material, (7) work procedures, (8) observation tables, (9) discussion of observations (10) conclusions and (11) questions.

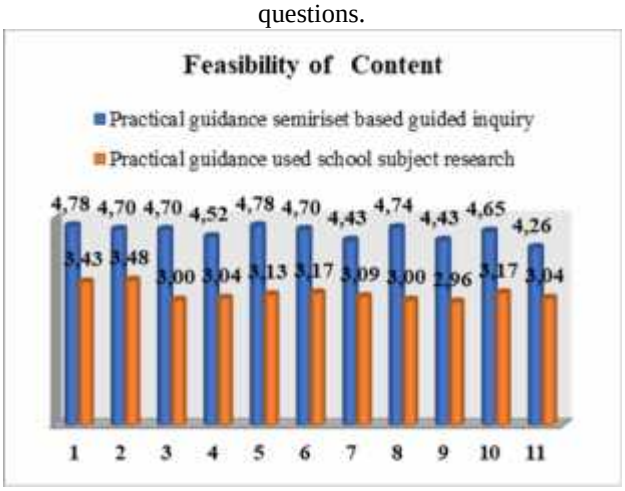

Fig.2. The Feasibility in Practical Guidance Semiriset Based Guided Inquiry and Practical Guidance Used School Research is Based on the Aspect of Feasibility Content.

B. Aspect of Feasibility Language

In terms of language feasibility, there are five components related to it, among others: (1) according to student development, (2) communicative, (3) conformity with correct Indonesian rules, (4) and symbols.

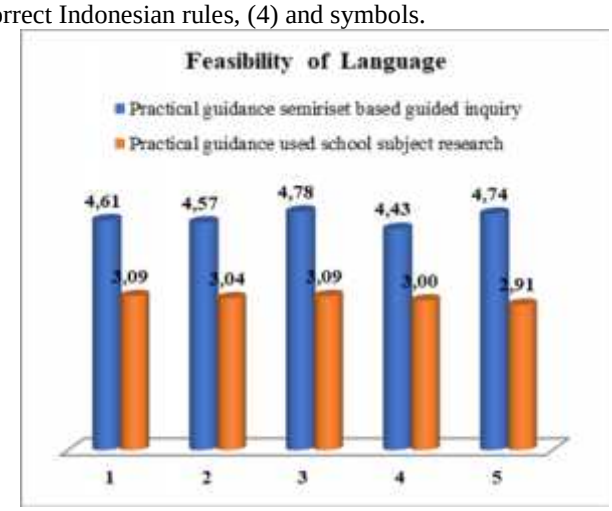

Fig.3. The Feasibility in Practical Guidance Semiriset Based Guided Inquiry and Practical Guidance Used School Research is Based on the Aspect of Feasibility Language.

C. Aspect of Feasibility Presentation

In the aspect of presentation feasibility, there are 4 components related to it, among others: (1) systematic consistency of the presentation in each experiment, (2) bibliography, (3) general guidelines in the laboratory (4) Glossary.

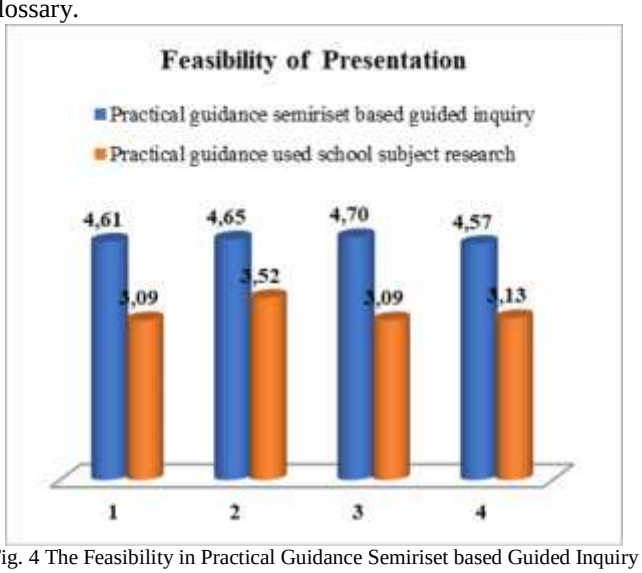

Fig. 4 The Feasibility in Practical Guidance Semiriset based Guided Inquiry and Practical Guidance Used School Research is Based on the Aspect of Feasibility Presentation.

D. Aspect of Feasibility Graphing

In the aspect of feasibility of graphics, there are 3 components related to it, among others: (1) the size of a practical guide book, (2) skin typography practical guide book (3) typography of the contents of the practical guidebook.

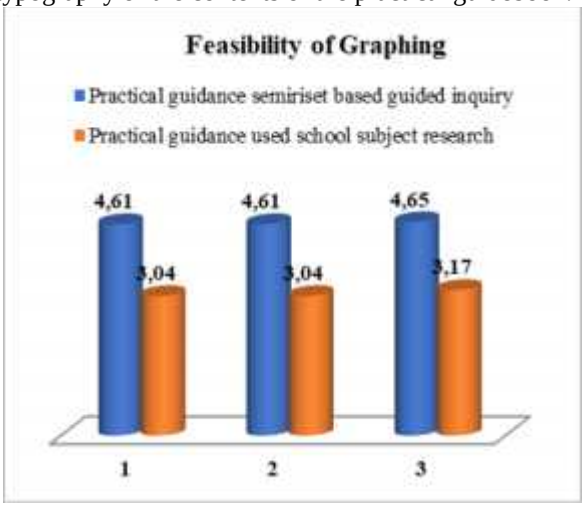

Fig. 5. The Feasibility in Practical Guidance Semiriset Based Guided Inquiry and Practical Guidance Used School Research is Based on the Aspect of Feasibility Graphing.

V. CONCLUSION

Based aspect of feasibility the content in practical guidance semiriset based guided inquiry have an average of 4,61 and used school subject have an average of 3,14 (2) The aspect feasibility of language in practical guidance semiriset based guided inquiry have an average of 4,63 and used school subject average of 3,03 (3) The aspect feasibility of presentation in practical guidance semiriset based guided inquiry have an average of 4,63 and used school subject have an average of 3,21 (4) The aspect feasibility of graphing in practical guidance semiriset based guided inquiry have an average of 4,62 and used school subject have an average of 3,09.

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Acknowledgment

This research was supported by thesis supervisor Dr. Iis Siti Jahro, M.Si. And Prof. Dr. Ir. Retno Dwi Suyanti, M.Si that have given the suggestion in order to complete this research.

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