

**THE PROFILE OF STUDENTS' CONCEPT MASTERY AND
STUDENTS' PERCEPTION USING SEMANTIC NETWORK
ANALYSIS IN LEARNING GLOBAL WARMING**

RESEARCH PAPER

Submitted as Requirement to Obtain Degree of *Sarjana Pendidikan* in
International Program on Science Education (IPSE) Study Program



Arranged by:

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**INTERNATIONAL PROGRAM ON SCIENCE EDUCATION FACULTY
OF MATHEMATICS AND SCIENCE EDUCATION UNIVERSITAS
PENDIDIKAN INDONESIA
2020**

Almira Rizky Pratami, 2020

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APPROVAL FORM OF RESEARCH PAPER

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PERCEPTION OF GLOBAL WARMING USING SEMANTIC NETWORK
ANALYSIS IN LEARNING GLOBAL WARMING**

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DECLARATION

I do hereby announce that the research paper titled “The Profile of Students’ Concept Mastery and Students’ Perception using Semantic Network Analysis in Learning Global Warming” and all its materials inside are sincerely the product of my original ideas, my determination, my research and my work. That is not copied from other journals or plagiarized with inappropriate forms. The ideas and results expressed in this research paper have been cited and checked in keeping with the academic standards of ethics and ethical science common in scholarly society. This declaration is made with honesty and consciousness. If an infringement of scientific ethics is found, or if there is a claim of any other to the originality of this research paper, I am therefore determined to accept responsible and admit academic punishments which align to the procedural laws.

Bandung, July 2020

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ABSTRACT

Students' concept mastery is one of the most essential elements in learning science. Since capability to master the subject can be seen through the concept of mastery. Another essential element that needs to be addressed in science education is students' perception as a learner. In order to ensure successful and substantive process of learning, it will be easier for the teacher to understand how the students perceive a specific concept in science. However, this research aims to investigate the profile of students' concept mastery and students' perception in learning global warming. For answering the research problem, 241 students from an Islamic-based junior high school were participated in this research. Students' concept mastery was analyzed by using 30 number of test items which consist of six level of cognitive domains. Meanwhile students' perception was determined through students' response from an open-ended essay test which questioning how the students define global warming topic. And the responses from the students were examined using semantic network analysis method. As the result, students' concept mastery showed diversity based on the level of cognitive domain, and the subtopic of global warming. For students' perception, there three statements obtained from the students' answer to represent how the students perceive the global warming topic.

Keywords: students' concept mastery, students' perception, semantic network analysis, and global warming.

**PROFIL PEMAHAMAN KONSEP SISWA DAN PERSEPSI SISWA
MENGUNAKAN ANALISIS JARINGAN SEMANTIK DALAM
MEMPELAJARI TOPIK PEMANASAN GLOBAL**

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ABSTRAK

Pemahaman konsep siswa adalah salah satu elemen penting dalam pembelajaran sains. Karena kemampuan siswa untuk memahami suatu konsep dapat diukur menggunakan pemahaman siswa. Elemen penting lainnya yang perlu untuk ditekankan dalam pembelajaran sains adalah persepsi siswa. Untuk dapat mewujudkan pembelajaran yang sukses dan efektif, langkah lebih baiknya apabila guru dapat memahami persepsi siswa terhadap satu sains konsep. Jadi, penelitian ini bertujuan untuk menginvestigasi pemahaman konsep siswa, dan persepsi siswa dalam topik pemanasan global. Untuk dapat menjawab pertanyaan dari penelitian ini, 241 jumlah siswa dari salah satu sekolah yang berbasis agama islam terlibat dalam penelitian ini. Pemahaman konsep siswa dianalisa menggunakan 30 soal yang mengandung enam level kognitif. Sementara persepsi siswa ditentukan oleh satu pertanyaan terbuka yang menanyakan bagaimana siswa mendefinisikan pemanasan global. Dan respon yang didapat dari siswa untuk menjawab pertanyaan terbuka tersebut diuji menggunakan analisis jaringan semantik. Sebagai hasilnya, pemahaman konsep siswa menunjukan hasil yang beragam setelah ditinjau dari level kognitif dan subtopik dari topik pemanasan global. Sementara hasil dari persepsi siswa, ditemukan tiga pernyataan yang didapat dari jawaban siswa untuk mendefinisikan arti pemanasan global.

Kata kunci: pemahaman siswa, persepsi siswa, analisa jaringan semantik, pemanasan global.

PREFACE

Assalamu'alaikum, wr. wb.

All the praises and thanks to the most merciful Allah SWT who has graced us with his blessings. The author can complete this investigative paper because of Him. Not just to the Allah SWT, but also shalawat and salaam to our prophet Muhammad SAW and his family.

This research paper entitled “The Profile of Students’ Concept Mastery and Students’ Perception in Learning Global Warming” is submitted to fulfill one of the requirements in accomplishing S1 Degree in International Program on Science Education FPMIPA Universitas Pendidikan Indonesia.

The author expects this research paper can bring advantages and new insight for the readers. Amin.

Wassalamu'alaikum wr. wb.

Bandung, July 2020

Author

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LIST OF CONTENTS

APPROVAL FORM OF RESEARCH PAPER	3
DECLARATION	4
ABSTRACT.....	5
PREFACE.....	7
ACKNOWLEDGMENT.....	8
LIST OF CONTENTS	10
LIST OF TABLES	12
LIST OF FIGURES	13
LIST OF APPENDIX	14
CHAPTER I INTRODUCTION	Error! Bookmark not defined.
1.1 Background	Error! Bookmark not defined.
1.2 Research Problem.....	Error! Bookmark not defined.
1.3 Research Question.....	Error! Bookmark not defined.
1.4 Limitation of Problem	Error! Bookmark not defined.
1.5 Research Objectives	Error! Bookmark not defined.
1.6 Research Benefit	Error! Bookmark not defined.
1.7 The Organization of Research Paper	Error! Bookmark not defined.
CHAPTER II LITERATURE REVIEW	Error! Bookmark not defined.
2.1 Students' Concept Mastery.....	Error! Bookmark not defined.
2.2 Students' Perception.....	Error! Bookmark not defined.
2.3 Semantic Network Analysis	Error! Bookmark not defined.
2.4 Global Warming Topic.....	Error! Bookmark not defined.
2.4.1 The Greenhouse Effect	Error! Bookmark not defined.
2.4.2 The Cause of Global Warming	Error! Bookmark not defined.
2.4.3 The Effect of Global Warming	Error! Bookmark not defined.
2.4.4 Human Effort in reducing global Warming	Error! Bookmark not defined.
2.5 Relevant Research	Error! Bookmark not defined.
CHAPTER III RESEARCH METHODOLOGY	Error! Bookmark not defined.
3.1 Research Method.....	Error! Bookmark not defined.
3.2 Research Subject	Error! Bookmark not defined.
3.3 Operational Definition.....	Error! Bookmark not defined.
3.4 Research Instrument.....	Error! Bookmark not defined.
3.4.1 Objective Test	Error! Bookmark not defined.
3.4.2 Essay Test.....	Error! Bookmark not defined.

Almira Rizky Pratami, 2020

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3.5	Instrument Validation Result.....	Error! Bookmark not defined.
3.6	Data Analysis Technique.....	Error! Bookmark not defined.
3.6.1	Students' Concept Mastery Data Analysis.....	Error! Bookmark not defined.
3.6.2	Students' Perception Data Analysis.....	Error! Bookmark not defined.
3.7	Research Procedure	Error! Bookmark not defined.
3.7.1	Preparation Stage.....	Error! Bookmark not defined.
3.7.2	Implementation Stage	Error! Bookmark not defined.
3.7.3	Completion Stage	Error! Bookmark not defined.
CHAPTER IV RESULT AND DISCUSSION.....		Error! Bookmark not defined.
4.1	The Result of Student's Concept Mastery	Error! Bookmark not defined.
4.1.1	Students' Concept Mastery Based on Cognitive Domain	Error! Bookmark not defined.
4.1.2	Students' Concept Mastery Based on Sub-topic of Global Warming.....	Error! Bookmark not defined.
4.2	The Result of Student's Perception	Error! Bookmark not defined.
4.2.1	7 th Grade Students' Perception	Error! Bookmark not defined.
4.2.2	8th Grade Students' Perception	Error! Bookmark not defined.
4.2.3	9th Grade Students' Perception	Error! Bookmark not defined.
4.2.4	All Grades students' perception.....	Error! Bookmark not defined.
CHAPTER V CONCLUSION AND RECOMMENDATION		Error! Bookmark not defined.
5.1	Conclusion	Error! Bookmark not defined.
5.2	Recommendation.....	Error! Bookmark not defined.
REFERENCES		Error! Bookmark not defined.
APPENDIX.....		Error! Bookmark not defined.
A. RESEARCH INSTRUMENT		Error! Bookmark not defined.
B. RESULT OF RESEARCH DATA		Error! Bookmark not defined.
C. ADMINISTRATION		Error! Bookmark not defined.
AUTOBIOGRAPHY		Error! Bookmark not defined.

LIST OF TABLES

Table 2.1 Six Level of Cognitive Domain	Error! Bookmark not defined.
Table 2.2 Elements of Semantic Network Analysis	Error! Bookmark not defined.
Table 2.3 Core and Basic Competency of Global Warming Topic	Error! Bookmark not defined.
Table 3.1 Subject of the Research.....	26
Table 3.2 Blueprint of Global Warming Topic.....	27
Table 3.3 The Interpretation of Validity Value.....	28
Table 3.4 Interpretation Value of Reliability.....	29
Table 3.5 Interpretation Value of Difficulty Level.....	30
Table 3.6 Interpretation of Discriminating Power	Error! Bookmark not defined.
Table 3.7 The Accepted Number of Test Items	Error! Bookmark not defined.
Table 4.1 Result of Students' Concept Mastery.....	37
Table 4.2 The Achievement of 7th Grade Students.....	38
Table 4.3 The Achievement of 8th Grade Students.....	39
Table 4.4 The Achievement of 9th Grade Students.....	40
Table 4.5 The Achievement of All Grade Students.....	41
Table 4.6 The Accomplishment of 7th Grade Students' Concept Mastery.....	44
Table 4.7 The Accomplishment of 8th Grade Students' Concept Mastery.....	45
Table 4.8 The Accomplishment of 9th Grade Students' Concept Mastery.....	Error! Bookmark not defined.
Table 4.9 The Accomplishment of All Grade Students' Concept Mastery.....	47
Table 4.10 The Result of Students' Perception.....	48
Table 4.11 The Recapitulation of the Most Frequent Words from 7 th Grade.....	49
Table 4.12 The Recapitulation of the Most Frequent Words from 8 th Grade.....	50
Table 4.13 The Recaptulation of the Most Frequent Words from 9 th Grade.....	52
Table 4.14 The Recapitulation of the Most Frequent Words from All Grades.....	55

Almira Rizky Pratami, 2020

*THE PROFILE OF STUDENTS' CONCEPT MASTERY AND STUDENTS' PERCEPTION USING
SEMANTIC NETWORK ANALYSIS IN LEARNING GLOBAL WARMING*

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LIST OF FIGURES

Figure 2.1 Bloom's Cognitive Domain	Error! Bookmark not defined.
Figure 2.2 Example of Semantic Network Analysis	Error! Bookmark not defined.
Figure 2.3 The Greenhouse Effect	Error! Bookmark not defined.
Figure 2.4 Carbon Emission from Factories	Error! Bookmark not defined.
Figure 2.5 Melting of Ice Affect the Habitat of a Polar Bear	Error! Bookmark not defined.
Figure 3.1 Research Procedures.....	38
Figure 4.1 Network Map of Words from 7th Grade Students.....	50
Figure 4.2 The Network Map of Words from 8th Grade Students' Perception..	52
Figure 4.3 The Network Map of Words from 9th Grade Students' Perception...	54
Figure 4.4 The Network Map of Words from All Grades Students' Perception..	58

Almira Rizky Pratami, 2020

*THE PROFILE OF STUDENTS' CONCEPT MASTERY AND STUDENTS' PERCEPTION USING
SEMANTIC NETWORK ANALYSIS IN LEARNING GLOBAL WARMING*

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LIST OF APPENDIX

APPENDIX A

Appendix A.1 Initial Form of Research Instrument **Error! Bookmark not defined.**

Appendix A.2 Result of Judgment from Experts... **Error! Bookmark not defined.**

Appendix A.3 Result of Research Instrument Validation **Error! Bookmark not defined.**

Appendix A.4 Final Form of Research Instrument **Error! Bookmark not defined.**

Appendix A.5 Expert Judgement Forms **Error! Bookmark not defined.**

APPENDIX B

Appendix B.1 Result of Students' Concept Mastery..... 212

Appendix B.2 Result of Students' Perception.....218

Appendix B.3 Result of Students' Answer in Google Form.....262

APPENDIX C

Appendix C.1 Research Permission Letter..... 275

Appendix C.2 Research Implementation Letter..... 276