**PENINGKATAN KEMAMPUAN PENALARAN MATEMATIS DAN KEMANDIRIAN BELAJAR SISWA SMP MELALUI MODEL PEMBELAJARAN *DISCOVERY LEARNING* BERBASIS *E-LEARNING* DITINJAU BERDASARKAN GENDER**

**TESIS**

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**Peningkatan Kemampuan Penalaran Matematis Dan Kemandirian Belajar Siswa Smp Melalui Model Pembelajaran *Discovery Learning* Berbasis *E-learning* Ditinjau Dari Perbedaan *Gender***

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# ABSTRAK

Kemampuan penalaran matematis sangat diperlukan siswa dalam menyelesaikan permasalahan matematika. Namun kemampuan penalaran matematis siswa ternyata masih rendah. Guru dalam menyampaikan materi terasa monoton, sehingga siswa kurang aktif dan kurang dapat menyampaikan ide-ide mereka, sehingga daya nalar siswa tidak dapat berkembang dengan baik. Salah satu alternatif pembelajaran yang diharapkan dapat meningkatkan kemampuan penalaran matematis adalah pembelajaran *discovery learning.* Penelitian ini bertujuan untuk:1)Mengkaji peningkatan kemampuan penalaran matematis siswa yang memperoleh pembelajaran *Discovery Learning* dibandingkan dengan siswa yang memperoleh pembelajaran ekspositori berbasis *e-learning* ditinjau berdasarkan gender;2)Mengkaji peningkatan kemampuan penalaran matematis siswa yang menggunakan *Discovery Learning* berbasis *e-learning* ditinjau berdasarkan gender;3)Mengkaji kemandirian belajar siswa setelah mendapatkan pembelajaran menggunakan *Discovery Learning* dibandingkan siswa yang memperoleh pembelajaran ekspositori berbasis *e-learning* ditinjau berdasarkan gender;4)Mengkaji korelasi antara kemampuan penalaran matematis siswa dengan kemandirian belajar siswa yang memperoleh pembelajaran menggunakan model *Discovery Learning* berbasis *e-learning* ditinjau berdasarkan gender. Menurut metodenya, penelitian ini menggunakan metode *mix method* tipe *embedded design* dan desainnya menggunakan quasi-eksperimen. Populasi penelitian ini adalah semua kelas VIII SMP Islam Al Azhar 36 Bandung tahun ajaran 2020/2021. Berdasarkan analisis data hasil penelitian, diperoleh kesimpulan:1)Kemampuan penalaran matematis siswa yang mendapatkan pembelajaran *discovery learning* lebih baik dibandingkan dengan siswa yang mendapatkan pembelajaran matematika dengan model ekspositori berbasis *e-learning* ditinjau berdasarkan gender; 2)Terdapat peningkatan kemampuan penalaran matematis siswa yang menggunakan model *discovery learning* berbasis *e-learning* ditinjau berdasarkan gender;3)Kemandirian belajar siswa yang mendapatkan pembelajaran menggunakan *discovery learning* lebih baik dibandingkan dengan siswa yang mendapatkan pembelajaran matematika dengan model ekspositori berbasis *e-learning* ditinjau berdasarkan gender; 4)Terdapat korelasi antara kemampuan penalaran matematis dan kemandirian belajar siswa yang memperoleh pembelajaran menggunakan *discovery learning* dengan yang memperoleh pembelajaran ekspositori berbasis *e-learning* berdasarkan gender.

***Kata kunci: Penalaran Matematis, Discovery Learning, Kemandirian Belajar, E-learning, Gender.***

***Improving Mathematical Reasoning Ability and Self Regulated Learning of Junior High School Students Through E-learning-Based Discovery Learning Model Based On Gender***

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***ABSTRACT***

*Mathematical reasoning ability is needed by students in solving problems in mathematics. However, the students' mathematical reasoning ability was still low. The teacher in delivering the material feels monotonous, so students are less active and less able to convey their ideas, so that students' reasoning power cannot develop properly. One alternative learning that is expected to improve mathematical reasoning skills is learning using discovery learning. This study aims to: 1) Assess the improvement of mathematical reasoning abilities of students who receive learning using the Discovery Learning model better than students who receive expository learning based on e-learning in terms of gender; 2) Assessing the improvement of students' mathematical reasoning skills using the Discovery Learning model based on e-learning in terms of gender; 3) Assessing student learning independence after receiving learning using the Discovery Learning model compared to students receiving expository learning based on e-learning in terms of gender; 4) To examine the correlation between students' mathematical reasoning abilities and the independent learning of students who receive learning using the Discovery Learning model based on e-learning in terms of gender. According to the method, this research uses a mix method method of embedded design type and the design uses a quasi-experimental design. The population of this study were all class VIII SMP Islam Al Azhar 36 Bandung in the academic year 2020/2021. Based on the analysis of the research data, the conclusions are: 1) The mathematical reasoning ability of students who receive learning using Discovery Learning is better than students who receive mathematics learning using an expository model based on e-learning in terms of gender; 2) There is an increase in the mathematical reasoning ability of students who use the Discovery Learning model based on e-learning in terms of gender; 3) The learning independence of students who get learning using Discovery Learning is better than students who get learning mathematics with an expository model based on e-learning in terms of gender and the learning independence of students who get discovery learning is positive because the percentage results still show students who get learning using discovery learning is high compared to students who get learning using the expository model; 4) There is a correlation between mathematical reasoning ability and independent learning of students who receive learning using discovery learning and those who receive expository learning based on e-learning based on gender.*

***Keywords: Mathematical Reasoning, Discovery Learning, Self Regulated Learning, E-learning, Gender.***

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