**ABSTRAK**

**EFEKTIVITAS PENERAPAN MODEL PEMBELAJARAN GENERATIF TERHADAP KEMAMPUAN PEMECAHAN MASALAH DAN PENALARAN MATEMATIS SISWA**

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Penelitian ini bertujuan untuk mengatahui efektivitas model pembelajaran generatif dalam meningkatkan kemampuan pemecahan masalah dan penalaran matematis siswa. Penelitian ini dilaksanakan di MAN 1 Deli Serdang. Penelitian ini merupakan penelitian kuantitatif dengan jenis penelitian *Pre-experimental* menggunakan desain penelitian *One Group* *Pretest-Posttest Design.* Populasi dalam penelitian ini adalah seluruh siswa kelas XI MAN 1 Deli Serdang tahun pelajaran 2019/2020 yang terdiri dari 5 kelas dan dipilih 1 kelas secara acak sebagai sampel penelitian, yaitu kelas XI MIPA 1 yang berjumlah 24 siswa. Teknik pengumpulan data yang digunakan adalah berupa metode tes. Sebelum tes tersebut diberikan, terlebih dahulu tes diuji validitas, reliabilitas, daya pembeda, dan tingkat kesukaran pada kelas uji eksperimen. Teknik analisis data yang digunakan adalah teknik analisis statistika deskriptif dan inferensial menggunakan uji t satu sampel yang terlebih dahulu tes tersebut diuji prasyarat dengan uji normalitas. Hasil analisis statistika deskriptif kemampuan pemecahan masalah menunjukkan: (1) Rata-rata hasil belajar *posttest* siswa sebesar 92 (diatas KKM yakni 80), (2) Hasil *posttest* menunjukkan bahwa ketuntasan klasikal tercapai yakni sebesar 87,5% mencapai ketuntasan individu (lebih dari 85%) (3) Rata-rata gain ternormalisi sebesar 0,84 (kategori tinggi). Sedangkan pada hasil analisis statistika deskriptif kemampuan penalaran matematis menunjukkan: (1) Rata-rata hasil belajar siswa *posttest* sebesar 92,08 (diatas KKM yakni 80), (2) Hasil *posttest* menunjukkan bahwa ketuntasan klasikal tercapai yakni sebesar 95,83% mencapai ketuntasan individu (lebih dari 85%) (3) Rata-rata gain ternormalisi sebesar 0,86 (kategori tinggi). Hasil analisis inferensial kemampuan pemecahan masalah menggunakan uji t dengan taraf signifikansi 5 % diperoleh yaitu sehingga Ho ditolak dan Ha diterima, artinya penerapan model pembelajaran generatif efektif dalam meningkatkan kemampuan pemecahan masalah siswa ditinjau dari ketuntasan belajar pemecahan masalah siswa. Sedangkan Hasil analisis inferensial kemampuan penalaran matematis menggunakan uji t dengan taraf signifikansi 5 % diperoleh dan yang berarti yaitu sehingga Ho ditolak dan Ha diterima, artinya penerapan model pembelajaran generatif efektif dalam meningkatkan kemampuan penalaran matematis siswa ditinjau dari ketuntasan belajar penalaran matematis siswa. Dengan demikian dapat disimpulkan bahwa model pembelajaran generatif efektif dalam meningkatkan kemampuan pemecahan masalah dan penalaran matematis siswa

**Kata Kunci:** Efektivitas,Model Pembelajaran Generatif, Kemampuan Pemecahan Masalah, Kemampuan Penalaran Matematis

***EFFECTIVENESS OF APPLICATION OF GENERATIVE LEARNING MODELS TO THE STUDENTS PROBLEM SOLVING ABILITIES AND MATHEMATICAL REASONING***

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***ABSTRACT***

*This objective of the research was to determine the effectiveness of generative learning models in improving students problem solving abilities and mathematical reasoning. This research was conducted at MAN 1 Deli Serdang. This research was a quantitative research with a type of pre-experimental research using the One Group Pretest-Posttest Design of research design. The population in this research were all students of class XI MAN 1 Deli Serdang in the academic year 2019/2020 which consisted of 5 classes and 1 class was randomly selected as a research sample, namely class XI MIPA 1, amounting to 24 students. The data collection technique used was a test method. Before the test was given, the test was first tested for validity, reliability, distinguishing power, and the level of difficulty in the experimental test class. The data analysis technique used was descriptive and inferential statistical analysis techniques using one sample t-test, which firstly tested the prerequisites with the normality test. The results of descriptive statistical analysis of problem solving abilities showed: (1) The average student learning outcomes of posttest was 92 (above KKM which is 80), (2) Posttest results showed that classical completeness was achieved, that was 87,5% achieving individual completeness (more than 85%) (3) The average normalized gain was 0,84 (high category). While on the results of descriptive statistical analysis mathematical reasoning ability showed: (1) The average student learning outcomes of posttest was 92,08 (above KKM which was 80), (2) Posttest results showed that classical completeness was achieved that was equal to 95,83% achieving completeness individuals (more than 85%) (3) Average normalized gain of 0,86 (high category). The results of the inferential analysis of problem solving abilities using a t test with a significance level of 5% were obtained 9,302 > 2,069 so that Ho was rejected and Ha was accepted, meaning that the application of a generative learning model was effective in improving students problem solving abilities in terms of completeness of students problem solving learning. While the results of inferential analysis of mathematical reasoning abilities using t test with a significance level of 5% obtained = 11,29 and = 2,069 which meant 11,29 > 2,069 so that Ho is rejected and Ha is accepted, meaning that the application of generative learning models was effective in improving students mathematical reasoning ability in terms of mastery learning students mathematical reasoning. It could be concluded that the generative learning model was effective in enhancing students problem solving abilities and mathematical reasoning*

*Keywords: Effectiveness, Generative Learning Model, Problem Solving Ability,* *Mathematical Reasoning Ability*