

ABSTRAK

Hartatiana (2017). Penalaran Spasial, Komunikasi Geometris dan *Habits of mind* siswa SMP melalui pembelajaran *model eliciting activities* dengan cabri 3D.

Penelitian ini bertujuan untuk mengkaji pencapaian dan peningkatan kemampuan penalaran spasial, kemampuan komunikasi geometris, dan *habits of minds* (HOM) siswa melalui pembelajaran *model eliciting activities* dengan cabri 3D. Penelitian ini menggunakan metode quasi eksperimen. Sampel penelitian adalah siswa kelas VII Salah satu SMP di Palembang sebanyak 173 orang. Berdasarkan faktor pembelajaran, sampel penelitian dibedakan menjadi dua kelompok. Satu kelompok mendapat pembelajaran model eliciting activities (MEA) dan kelompok lainnya mendapat pembelajaran *model eliciting activities* dengan cabri 3D (MEAC). Berdasarkan pengetahuan awal matematis (PAM) setiap kelompok dibedakan menjadi tinggi, sedang dan rendah. Selain itu juga dibedakan berdasarkan jenis kelamin. Instrumen dalam penelitian ini adalah tes kemampuan penalaran spasial, tes kemampuan komunikasi geometris dan butir skala HOM. Analisis Data yang digunakan adalah uji t , uji t' , uji Mann-Whitney, Anova 2 Jalur, serta analisis grafik interaksi. Berdasarkan hasil penelitian diperoleh 1) pencapaian dan peningkatan kemampuan penalaran spasial siswa yang memperoleh pembelajaran MEAC lebih baik daripada siswa yang memperoleh pembelajaran MEA ditinjau secara keseluruhan, PAM sedang serta siswa pria; 2) Secara keseluruhan dan berdasarkan PAM serta untuk siswa pria pencapaian dan peningkatan kemampuan komunikasi geometris siswa yang memperoleh pembelajaran MEAC lebih baik daripada siswa yang memperoleh pembelajaran MEA; 3) Secara keseluruhan dan berdasarkan PAM pencapaian HOM siswa yang memperoleh pembelajaran MEAC lebih baik daripada siswa yang memperoleh pembelajaran MEA. 4) tidak terdapat interaksi pembelajaran dan PAM, pembelajaran dan jenis kelamin terhadap pencapaian dan peningkatan kemampuan penalaran spasial, komunikasi geometris dan HOM.

Kata Kunci : Penalaran Spasial, Komunikasi Geometris, *Habits of mind*, *Model eliciting activities*, cabri 3D

ABSTRACT

Hartatiana (2017). Spatial Reasoning, Geometric Communication, and Habits of Mind of Junior High School Students through Model-Eliciting Activities with Cabri 3D.

The research aims to examine the attainment and improvement of spatial reasoning ability, geometric communication ability, and habits of minds (HOM) of students through model-eliciting activities with Cabri 3D. It used a quasi-experimental method. The sample included 173 seventh grade students of one junior high school in Palembang. Based on learning factors, the research sample was divided into two groups. One group was taught with model-eliciting activities (MEA) and the other group was taught with model-eliciting activities with Cabri 3D (MEAC). Based on the early mathematical knowledge (EMK), the groups were classified into high, medium, and low. In addition, they were also classified based on gender. The instruments in this research consisted of spatial reasoning ability test, geometric communication ability test, and HOM scale. Data were analyzed with t test, Mann-Whitney test, two-way ANOVA, and interaction graph. Based on the results of the research, it is found that: 1) The attainment and improvement of spatial reasoning ability of students taught with MEAC was better than that of students taught with ME as a whole, of students with medium EMK level, and male students; 2) In general and based on EMK, the attainment and improvement in geometric communication ability of male students taught with MEAC was better than that of students taught with MEA; 3) As a whole and based on EMK, the attainment of HOM of students taught with MEAC was better than that of students taught with MEAs; and 4) there was no interaction between teaching and learning and EKM, teaching and learning and gender to the attainment and improvement of spatial reasoning ability, geometric communication, and HOM.

Keywords: Spatial Reasoning, Geometric Communication, Habits of mind, Model-Eliciting Activities, Cabri 3D