PEMAHAMAN, KOMUNIKASI DAN SIKAP MATEMATIK PELAJAR TERHADAP PEMBELAJARAN KOPERATIF *TEAMS-GAMES-TOURNAMENT* (TGT) DI MADRASAH ALIYAH

SITIE CHAIRHANY

IJAZAH DOKTOR FALSAFAH
UNIVERSITI UTARA MALAYSIA
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Kebenaran Mengguna

Tesis ini adalah sebagai keperluan untuk mendapatkan Ijazah Doktor Falsafah daripada Universiti Utara Malaysia. Saya bersetuju membenarkan Perpustakaan Universiti Utara Malaysia untuk membuat salinan tesis ini bagi tujuan rujukan. Saya juga bersetuju membenarkan salinan tesis ini dibuat sebahagian atau keseluruhan, bagi tujuan akademik melalui kebenaran daripada penyelia saya atau semasa ketiadaan beliau, oleh Dekan Awang Had Salleh Graduate School of Arts and Sciences. Sebarang penyalinan, penerbitan atau penggunaan ke atas keseluruhan atau sebahagian daripada tesis ini untuk perolehan kewangan tidak dibenarkan tanpa kebenaran bertulis daripada saya. Pengiktirafan yang sewajarnya haruslah diberikan kepada saya dan Universiti Utara Malaysia.

Bagi sebarang penggunaan bahan daripada tesis ini untuk tujuan penulisan, permohonan untuk mendapat kebenaran membuat salinan atau lain-lain kegunaan secara keseluruhan atau sebahagian haruslah dibuat dengan menulis kepada:

Dekan Awang Had Salleh Graduate School of Arts and Sciences
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Abstrak

Proses pengajaran dan pembelajaran matematik kurang menekankan kebolehan pemahaman dan komunikasi matematik. Pengajaran dan pembelajaran matematik dengan menggunakan koperatif Pertandingan-Permainan-Berpasukan (TGT) dapat meningkatkan sikap, kerjasama dan perkongsian ilmu matematik dalam kalangan pelajar. Kajian ini bertujuan untuk menilai pemahaman, komunikasi, pencapaian dan sikap matematik serta meneroka persepsi pelajar dan guru terhadap pembelajaran koperatif TGT. Kajian ini menggunakan kaedah kuantitatif dan kualitatif yang melibatkan ujikaji, soal selidik dan temu bual. Kajian ini melibatkan seramai 64 orang pelajar Tingkatan 11 Madrasah Aliyah Riau, Indonesia. Pengumpulan data dilakukan sebanyak tiga kali melalui ujian pra, ujian pasca 1 dan ujian pasca 2 yang mengambil masa selama lima minggu antara ujian pra dan ujian pasca. Ujian matematik terdiri daripada 10 item iaitu pemahaman matematik dan komunikasi matematik yang diadaptasi daripada Ujian Nasional Indonesia. Sikap matematik diukur dengan menggunakan 19 item yang diadaptasi daripada Arsaythamby dalam tahun 2006, manakala 20 item digunakan untuk mengukur sikap terhadap TGT yang diadaptasi daripada Slavin dalam tahun 1995. Temu bual separa berstruktur dan pemerhatian digunakan untuk mendapatkan pandangan pelajar dan guru tentang aktiviti dan pembelajaran koperatif TGT. Dapatan kajian menunjukkan bahawa penilaian pembelajaran koperatif TGT dapat meningkatkan pemahaman, komunikasi, sikap dan pencapaian matematik. Hasil temu bual juga menunjukkan pembelajaran koperatif TGT menambahkan lagi minat, motivasi dan perkongsian ilmu matematik dalam kalangan pelajar berbanding dengan pembelajaran konvensional. Hasil kajian ini menyumbang kepada pengetahuan tentang pengajaran guru yang lebih efektif, aktiviti kumpulan yang aktif, pertandingan meningkatkan sikap pelajar sesama sendiri dan saling membantu dalam pengajaran matematik. TGT menggalakkan pelajar dan guru bersikap inovatif dan kreatif dalam meningkatkan pengajaran dan pembelajaran matematik di dalam bilik darjah dan ini dapat memanfaatkan pelajar Madrasah Aliyah bersaing dengan pelajar sekolah umum.

Kata kunci: Pemahaman matematik, Komunikasi matematik, Sikap, Pencapaian matematik, Koperatif Pertandingan-Permainan-Berpasukan

Abstract

The mathematics teaching and learning processes place less emphasis on the ability of understanding and communication in mathematics. Teaching and learning mathematics with cooperative Team-Games-Tournament (TGT) can improve the attitude, cooperation and sharing of knowledge of mathematics among students. This study aims to evaluate the understanding, communication, mathematics achievement and attitude of students and teachers on TGT cooperative learning and explore their perceptions of it. This study used quantitative and qualitative methods involving experiments, questionnaires and interviews. The participants of this study involve 64 Form 11 students of Madrasah Aliyah Riau, Indonesia. Data collection was conducted three times, i.e., the pretest, posttest 1 and posttest 2, which lasted for five weeks each after the pre and posttest. Mathematics test consists of 10 items for comprehension and communication, which were adapted from the Indonesian National Examination (INE). Mathematics attitude was measured using 19 items adapted from Arsaythamby in 2006 while the 20 items used to measure students' attitudes towards TGT were adapted from Slavin's in 1995. Semi-structured interviews and observations were used to obtain students' and teachers' views on TGT cooperative activities and learning. The findings show that the assessment of TGT towards comprehension, communication and mathematics attitude can improve mathematics achievement. Interviews show that TGT cooperative learning increases interest, motivation and mathematics knowledge sharing among students as compared with conventional learning. This study contributes to knowledge about enhancing effective teaching, active group activities, competition which improves attitudes among students, and mutual help in the teaching of mathematics. TGT encourages students and teachers to be innovative and creative in improving the teaching and learning of mathematics in the classroom, and this can be advantageous to Madrasah Aliyah students when they compete with public schools' students in mathematics.

Keywords: Mathematics understanding, Mathematics communication, Attitude, Mathematics achievement, Cooperative Team-Games-Tournament

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BAB SATU
PENDAHULUAN

1.1 Latar Belakang Kajian

Kebarangkalian dan fungsi merupakan topik matematik yang paling sering mendapat perhatian di Madrasah Aliyah. Pembelajaran kebarangkalian dan fungsi matematik diperlukan untuk menjelaskan maklumat atau mengkomunikasikan idea dalam pemahaman matematik, menjelaskan perkaitan antara konsep dan menerapkan konsep secara sistematik, tepat dan berkesan dalam menyelesaikan masalah serta memilih sikap menghargai kegunaan matematik dalam kehidupan (Ulya, 2007).

Erlina (2009) berhujah dalam kurikulum matematik memerlukan kebolehan untuk mengembangan pemahaman dan komunikasi matematik. Kebolehan pelajar hanya dinyatakan dari segi hasil, tidak menggambarkan strategi dalam menyelesaikan masalah matematik. Dalam pengajaran topik kebarangkalian dan fungsi matematik proses translasi dari bentuk perwakilan ke pelbagai bentuk perwakilan lain yang bertujuan mengembangkan pemahaman dan komunikasi matematik kurang diberikan kepada pelajar (Hudiono, 2005).

Salah satu tujuan yang ingin dicapai dalam pembelajaran kebarangkalian dan fungsi matematik adalah memberikan kesempatan seluas-luasnya kepada para pelajar untuk mengembangkan dan mengintegrasikan pengetahuan, kemahiran dan amalan dalam pemahaman matematik (Elizabeth & Conroy, 2009). Dalam meningkatkan kebolehan pemahaman matematik pelajar juga turut ditingkatkan kebolehan komunikasi matematik. Sebagaimana yang dinyatakan oleh Supriyono (2011) bahawa dengan kebolehan komunikasi dapat membawa pelajar pada kefahaman

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