

**PENGEMBANGAN *SERIOUS GAME* BERBASIS INKUIRI TERBIMBING
PADA POKOK BAHASAN KPK DAN FPB UNTUK SISWA KELAS 4
SEKOLAH DASAR**

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ABSTRAK

Penelitian ini bertujuan mengembangkan *serious game* untuk materi KPK dan FPB kelas 4 Sekolah Dasar. *Serious game* yang dikembangkan dinamai “*Math Snake*” bersifat *single player game* di mana pemain diarahkan memiliki kompetensi pengetahuan dan keterampilan menentukan KPK dan FPB dua bilangan melalui proses bermain. Pencapaian kompetensi diperoleh melalui implementasi metode inkuiri yang diintegrasikan ke dalam skenario permainan. Pemain yang berhasil menyelesaikan seluruh tantangan dalam *game* dikategorikan sebagai pemenang, namun pemain yang kehabisan nyawa atau waktu dalam *game* akan mengalami *Game Over*. Prosedur pengembangan *game* menerapkan model penelitian 4D namun hanya sampai tahap ketiga. Kelayakan *game* dinilai oleh seorang ahli media dan seorang ahli materi. Hasil penilaian ahli menunjukkan bahwa *game* sudah terkategori baik dan merekomendasikannya untuk digunakan sebagai media pembelajaran. Uji coba terbatas dilakukan terhadap empat siswa Sekolah Dasar kelas 4 menunjukkan bahwa mereka termotivasi dan antusias dalam menggunakan *Math Snake*. Dari hasil tersebut dapat disimpulkan bahwa *Math Snake* dapat digunakan sebagai media pembelajaran yang motivatif dan menyenangkan.

Kata kunci: *serious game*, *single player game*, KPK, FPB, metode inkuiri

**DEVELOPMENT OF SERIOUS GAME BASED ON GUIDED INQUIRY ON
THE SUBJECT OF LEAST COMMON MULTIPLE AND GREATEST
COMMON FACTOR FOR 4TH GRADE STUDENTS OF ELEMENTARY
SCHOOL**

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ABSTRACT

This study aimed at developing a serious game for the least common multiple and greatest common factor of 4th grade students of elementary school. This game is called "Math Snake", that is a single player game where players are guided having the competence of knowledge and skills for determining the least common multiple and greatest common factor of two numbers through playing. Achievement of competencies is obtained through the implementation of the inquiry method that is integrated into the game scenario. The players who successfully complete all challenges in this game are stated as winners, but players who run out of lives or time are stated failed (Game Over). The author implemented the 4D model of game development which is practically conducted only until the third step. Games are rated by a media expert and a material expert. Expert is rating showed that game already has a good category and they recommend that Math Snake is suitable to be used as a learning media. A limited trial was conducted involving four students of the 4th grade of elementary school. All children were motivated and enthusiastic in using Math Snake. Those results concluded that Math Snake can be used as a motivational and fun learning media.

Keywords: serious game, single player game, least common multiple, greatest common factor, inquiry method.