ABSTRAK

Ririn Nuraini, NIM 4181111043 (2022). Pengembangan E-LKPD Berbasis RME Dalam Mendukung Kemampuan Penalaran Matematis Siswa Pada Topik Koordinat Kartesius di Kelas VIII SMP IT Al Hijrah.

Penelitian ini bertujuan untuk mengembangkan E-LKPD yang valid, praktis, dan efektif dalam mendukung kemampuan penalaran matematis siswa SMP. Penelitian ini dilaksanakan pada bulan Juli-November 2022 di SMP IT Al Hijrah. Subjek penelitian ini adalah 25 orang siswa kelas VIII. Penelitian ini merupakan jenis penelitian penelitian dan pengembangan dengan menggunakan model penelitian *Design Research* yang terdiri atas empat tahap: (1) *Preiliminary Design* (Menganalisi), (2) *Prototyping Stage* (Merancang dan Mengembangkan), (3) *Formative Evaluation* (Mengimplementasikan), dan (4) *Restrospective Analysis* (Mengevaluasi). Teknik analisis data yang digunakan dalam penelitian ini adalah analisis deskriptif kuantitatif dan kualitatif. Hasil penelitian menunjukkan bahwa E-LKPD valid, praktis dan efektif dalam mendukung kemampuan penalaran matematis siswa SMP. E-LKPD dinyatakan valid ditinjau dari validitas materi dan validitas media dengan skor masing-masing 3,61 dan 3,43. E-LKPD dinyatakan praktis berdasarkan respon siswa dengan persentase 89% dalam memfasilitasi siswa belajar matematika sehingga dapat mendukung kemampuan penalaran matematis siswa SMP. Selain itu, E-LKPD ini juga dinilai efektif berdasarkan skor efektivitas sebesar 77,33 sehingga efetif dalam mendukung kemampuan penalaran matematis siswa SMP.

Kata Kunci: E-LKPD, *Realistic Mathematics Education* (RME), Kemampuan Penalaran Matematis Siswa.

ABSTRACT

Ririn Nuraini, NIM 4181111043 (2022). Development of RME-Based E-LKPD in Supporting Student's Mathematical Reasoning Abilitiyon Cartesian Coordinate Topics in Class VIII SMP IT Al Hijrah.

This study aims to develop digital worksheets that are valid, practical, and effective in supporting junior high school students's mathematical reasoning ability. This research was conducted in July-November 2022 at SMP IT Al Hijrah. The subject of this research were 25 students of class VIII. This research is a type of research and development research using the Design Research research model which consists of four stages: (1) Preiliminary Design (Analyzing), (2) Prototyping Stage (Designing and Developing), (3) Formative Evaluation (Implementing), and (4) Retrospective Analysis (Evaluate). The data analysis technique used in this research is descriptive quantitative and qualitative analysis. The results of the study show that the E-LKPD is valid, practical and effective in supporting junior high school students' mathematical reasoning abilities. E-LKPD was declared valid in terms of material validity and media validity with respective scores of 3.61 and 3.43. The E-LKPD was stated to be practical based on student responses with a percentage of 89% in facilitating students' learning mathematics so that it could support the mathematical reasoning abilities of junior high school students. In addition, this E-LKPD is also considered effective based on an effectiveness score of 77.33 making it effective in supporting junior high school students' mathematical reasoning abilities.

Keywords: E-LKPD, *Realistic Mathematics Education* (RME), Student's Mathematical Reasoning Ability.