ABSTRACT

Wita Tri Yanti. 2021. Development Of Learning Based Topic Recognizing Numbers On Mathematical Cognition For Slow Learner In Primary School. Thesis. Postgraduate Program, Faculty Of Education Padang State University.

This research is motivated by the learning design used by the teacher is not optimal for slow learners in elementary school. The design of learning to recognize the numbers of slow learners in the class used has not met the needs, so slow learners do not have good number sensitivity skills. This study aims to develop a mathematical cognition-based learning design on the topic of recognizing valid, practical, and effective numbers.

This was a developmental research using the Design research proposed by Gravemeijer& Cobb which this design consists of three phases: *preparing for the experiment*, *experimenting in the classroom*, and *conducting retrospective analyses*. The subject of the trial was the slow learners in SD N 06/III Ambai Atas. The research was supported by the data collection techniques in the form of document analysis, observation, interviews, questionnaires, and tests. The data of this study were analyzed by using the descriptive statistics.

The results of the HLT validation showed that LIT was valid as seen from the aspect of content, didactic language, and presentation in accordance with the principles seen in terms of the ease of use, the readability of the students, and the availability of time so that the slow learners can carry out a series of LIT learning activities. Learning design has an impact on students' *number sense*. The*number sense* ability of the students in the baseline phase A with an average score 3.3 was that the *slow learners* have not been able to assess the number 0-9. In the intervention phase, they got an average 54. The *number sense*ability of the students was able to assess the large numbers, but it was not accurate in estimating many objects. The condition of the students in the Baseline A phase by obtaining an average 89 *number sense* ability was that the *slow learners* were able to compare and assessed the large numbers 0-9. These results indicated that the MathematicalCognition-based learning design can improve the *number sense* ability of the *slow learners*.

ABSTRAK

Wita Tri Yanti. 2021. Pengembangan Desain Pembelajaran Berbasis *Mathematical Cognition* Topik Mengenal Bilangan Untuk Siswa Lamban Belajar Di Sekolah Dasar. Tesis. Program Pascasarjana Fakultas Ilmu Pendidikan Universitas Negeri Padang.

Penelitian ini dilatarbelakangi oleh desain pembelajaran yang digunakan guru belum optimal untuk siswa lamban belajar di SD. Desain pembelajaran mengenal bilangan siswa lamban belajar di kelas yang digunakan belum memenuhi kebutuhan,sehingga siswa lamban belajar tidak memiliki kemampuan kepekaan bilangan yang baik. Penelitian ini bertujuan mengembangkan desain pembelajaran berbasis *mathematical cognition* topik mengenal bilangan yang valid, praktis, dan efektif.

Jenis penelitian yang digunakan *developmental research approach* dengan menggunakan *design research* yang dikemukakan Gravemeijer & Cobb yang terdiri dari tiga fase yaitu *preparing for the experiment, experimenting in the classroom,* dan *conducting retrospective analyses.* Subjek uji coba yaitu siswa lamban belajar di SDN 06/III Ambai Atas. Penelitian didukung dengan teknik pengumpulan data berupa analisis dokumen, observasi, wawancara, angket, dan tes, analisis data dilakukan statistik deskritif.

Hasil validasi HLT menunjukkan LIT valid yang terlihat dari aspek isi, bahasa didaktik dan penyajian yang sesuai dengan dengan prinsip yang terlihat dari segi kemudahan dalam penggunaan. Keterbacaan siswa dan ketersediaan waktu sehingga siswa lamban belajar dapat melakukan serangkaian aktivitas belajar LIT. Desain pembelajaran berdampak pada kemampuan kepekaan siswa terhadap bilangan. Kemampuan kepekaan bilangan siswa pada f*ase baseline* A dengan skor rata-rata 3,3 yaitu siswa lamban belajar belum mampu menilai besar bilangan 0-9. Fase *intervensi* siswa mendapatkan rata-rata 54, kemampuan kepekaan bilangan siswa sudah mampu menilai besar bilangan namun belum tepat dalam memperkirakan banyak benda. Kondisi siswa pada *fase Baseline* A' dengan memperoleh rata-rata 89,6 kemampuan kepekaan siswa lamban belajar sudah mampu membandingkan dan menilai besar bilangan 0-9. Hasil ini menunjukkan bahwa desain pembelajaran berbasis *Mathematika Cognition* dapat meningkatkan kemampuan kepekaan bilangan siswa lamban belajar.