ABSTRAK

Bernadheta Sari Kusherawati. 2022. Eksplorasi Etnomatematika pada Bangunan Gereja Santo Yusuf Pekerja Gondangwinangun dan Penggunaannya dalam Penyusunan Soal Asesmen Kompetensi Minimum. Skripsi. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.

Tujuan penelitian ini untuk (1) mengetahui sejarah dari Gereja Santo Yusuf Pekerja Gondangwinangun, (2) mengetahui aktivitas fundamental matematis yang terdapat pada bangunan Gereja Santo Yusuf Pekerja Gondangwinangun, dan (3) mengembangkan soal asesmen kompetensi minimum berdasarkan kajian etnomatematika pada bangunan Gereja Santo Yusuf Pekerja Gondangwinangun.

Jenis penelitian ini adalah penelitian deskriptif kualitatif dan menggunakan metode etnografi. Analisis dalam penelitian ini dilakukan secara deduktif. Subjek penelitian adalah seorang guru matematika yang pada saat membangun gereja menjadi sekretaris panitia pembangunan dan wakil ketua dewan pastoral paroki saat ini. Teknik pengumpulan data yang digunakan adalah wawancara, observasi, dan dokumentasi. Penelitian ini menggunakan teknik analisis data menurut Miles dan Huberman, yaitu: reduksi data, penyajian data, dan kesimpulan.

Hasil penelitian yang ditemukan dalam penelitian ini sebagai berikut: (1) sejarah Gereja Santo Yusuf Pekerja Gondangwinangun berawal dari pembelian tanah beserta bangunan joglo pada tahun 1963 kemudian seiring bertambahnya umat, gereja mengalami perkembangan dan renovasi hingga sehingga menjadi bangunan gereja saat ini. Gereja diberkati pada tanggal 30 November 2003 dan diresmikan sebagai paroki pada 1 Mei 2004 sehingga menjadi Gereja Paroki Santo Yusuf Pekerja Gondangwinangun. Kekhasan yang terdapat pada bangunan gereja ini adalah sebagian besar bangunan terbuka, tiang-tiang yang mengelilingi berbentuk huruf Y, dan atap yang berbentuk limas segi empat beraturan. (2) Aktivitas fundamental matematis menurut Bishop yang ditemukan pada bangunan Gereja Santo Yusuf Pekerja Gondangwinangun yaitu *counting* banyaknya anak tangga dan perhentian jalan salib, aktivitas *locating* yaitu lokasi dan arah mata angin bangunan, penempatan ruang, pada aktivitas *measuring* meliputi ukuran bangunan, diameter tiang, selanjutnya aktivitas *designing* berupa desain bangunan, altar, perhentian jalan salib, dan desain atap, kemudian aktivitas *playing* diantaranya kekhasan bangunan yang membedakan dengan gereja lainnya dan langkah dalam prosesi jalan salib, terakhir aktivitas *explaining* berkaitan dengan makna dan filosofi dari setiap bagian atau ruangan, makna patung, makna foto Santo/Santa, makna jumlah anak tangga, makna desain altar, dan penjelasan desain atap. (3) Soal Asesmen Kompetensi Minumum yang dibuat terdiri dari 7 soal yang mengambil domain geometri dan pengukuran, sub domain: bangun geometri, pengukuran, dan penalaran spasial, dan konteks stimulus yang digunakan adalah saintifik.

Kata kunci: Etnomatematika, Bangunan Gereja Katolik, Sejarah, Aktivitas Fundamental Matematis Bishop, Asesmen Kompetensi Minimum

ABSTRACT

Bernadheta Sari Kusherawati. 2022. Ethnomathematics Exploration in the Saint Joseph the Worker Church of Gondangwinangun Building and Its Use in the Arrangement of Minimum Competency Assessment Questions. Thesis. Mathematics Education Study Program, Department of Mathematics and Natural Sciences Education, Teacher Training and Education Faculty, Sanata Dharma University.

The purpose of this research was to (1) find out the history of the Saint Joseph the Worker Church of Gondangwinangun, (2) find out the fundamental mathematical activities contained in the Saint Joseph the Worker Church of Gondangwinangun building, and (3) find out the preparation of minimum competency assessment questions based on ethnomathematics studies on the St. Joseph Church of Gondangwinangun Workers.

The type of this research is qualitative descriptive research and uses ethnographic methods. The analysis in this study was carried out deductively. The research subject was a mathematics teacher who at the time of building the church was the secretary of the construction committee and the deputy chairman of the current parish pastoral council. Data collection techniques used are interviews, observation, and documentation. This study uses data analysis techniques according to Miles and Huberman, namely: data reduction, data presentation, and conclusions.

The results of the research found in this study are as follows: (1) the history of the Saint Joseph Worker Church of Gondangwinangun began with the purchase of land and the joglo building in 1963, then as the congregation grew, the church underwent development and renovation so that it became the current church building. The church was blessed on November 30, 2003 and was inaugurated as a parish on May 1, 2004 so that it became the Saint Joseph the worker Church of Gondangwinangun Parish. The peculiarity of this church building is that most of the buildings are open, the pillars that surround it are in the shape of the letter Y, and the roof is in the form of a regular rectangular pyramid. (2) The fundamental mathematical activities, according to Bishop, are found in the Saint Joseph the worker church Gondangwinangun buliding, namely counting the number of stairs, photographs, statues, and the stations of the cross, locating activities, namely the location and building's cardinal direction, placement of space, and measuring activities, including the size of buildings, photos, pillar diameters, furthermore designing activities including the designs of the buliding altars, stations of the cross, and roof, then playing activities including the characteristics of buildings that distinguish them from other churches and the steps in the way of the cross procession, and finally explaining activities related to the meaning and philosophy of each part or room, the meaning of the statues, the meaning of the photos of the Saint, the meaning of the number of stairs, the meaning of the altar design, and an explanation of the roof design. (3) Minimum Competency Assessment Questions that are made consist of 7 questions that take the geometry and measurement domains, sub domains: geometric shapes, measurements, and spatial reasoning, and the stimulus context used is scientific.

Keywords: *Ethnomathematics, Catholic Church Buildings, History, Fundamental Mathematical Activities of Bishops, Minimum Competency Assessment*