ANALISIS *ZONE OF CONCEPT IMAGE DIFFERENCES* PADA FENOMENA TRANSPOSISI DIDAKTIS MATERI PERTIDAKSAMAAN RASIONAL

DISERTASI
Diajukan untuk Memenuhi Sebagian dari Syarat Memperoleh Gelar
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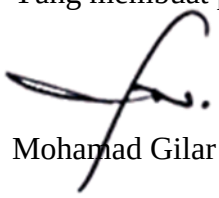
PERNYATAAN KEASLIAN

Dengan ini saya menyatakan bahwa disetasi dengan judul "Analisis *Zone Of Concept Image Differencies* Pada Fenomena Transposisi Didaktis Materi Pertidaksamaan Rasional" beserta seluruh isinya adalah benar-benar karya saya sendiri, dan saya tidak melakukan penjiplakan atau pengutipan dengan cara-cara yang tidak sesuai dengan etika keilmuan yang berlaku. Saya siap menanggung resiko/sanksi yang dijatuhkan kepada saya apabila kemudian hari ditemukan adanya pelanggaran terhadap etika keilmuan dalam karya saya ini, atau ada klaim pihak ain terhadap keaslian karya saya ini.

Bandung, Agustus 2024
Yang membuat pernyataan



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ANALISIS *ZONE OF CONCEPT IMAGE DIFFERENCES* PADA FENOMENA TRANSPOSISI DIDAKTIS MATERI PERTIDAKSAMAAN RASIONAL

ABSTRAK

Penelitian ini bertujuan untuk memahami konsep pertidaksamaan rasional bertransformasi dari bentuk *scholarly knowledge*, yang dihasilkan di perguruan tinggi diubah menjadi *knowledge to be taught* dalam bentuk buku teks yang menjadi pedoman guru untuk mengajar. Proses selanjutnya guru mengubah menjadi *tauhgt knowledge* yaitu pengetahuan yang siap untuk diajarkan kepada siswa dalam bentuk yang sesuai dengan kemampuan siswa. Terakhir, *tauhgt knowledge* berubah menjadi *learnt knowledge* yaitu pengetahuan yang telah dipelajari oleh siswa. Pada penelitian ini menerapkan metode kualitatif dengan desain *Didactical Design Research* (DDR) paradigma interpretif, yang bertujuan untuk mengeksplorasi fenomena yang terjadi pada transformasi konsep pertidaksamaan rasional. Pendekatan hermeneutika dan fenomenologi digunakan untuk memahami realitas dalam kelas dan perspektif subjektif para partisipan. Data dikumpulkan melalui observasi, wawancara, tes, dan dokumentasi dari dua guru matematika, kemudian melalui persetujuan partisipan dipilih secara *purposive sampling* 20 partisipan dari total partisipan 56 pada kelas 10 dari dua SMA di Kabupaten Majalengka, serta partisipan dari mahasiswa Universitas Majalengka. Analisis data dilakukan dengan teknik *Interpretative Phenomenological Analysis* (IPA), yang melibatkan langkah-langkah seperti membaca ulang data, mencatat awal, mengembangkan tema-tema yang muncul, dan mencari pola antar kasus. Hasil analisis menunjukkan bahwa *Scientific Conception* memberikan Gambaran konsep terkait dengan konsep pertidaksamaan rasional yang mendalam namun bebas konteks. Buku teks memberikan Gambaran konsep definisi formal dan langkah-langkah sistematis untuk penyelesaian pertidaksamaan rasional. Guru M1 memberikan Gambaran konsep pertidaksmaan rasional dengan pendekatan praktis dan visual dalam menjelaskan konsep-konsep abstrak dan aplikasi praktisnya, sedangkan Guru M2 memberikan Gambaran konsep dengan menggunakan pendekatan teknis dan analogi sehari-hari tetapi tidak membahas detail titik kritis secara mendalam. Analisis terhadap siswa menunjukkan kesenjangan dalam pemahaman konsep dasar, seperti definisi umum pertidaksamaan rasional, pentingnya titik kritis, penggunaan garis bilangan, dan uji tanda. Temuan tersebut memberikan informasi perlunya menggunakan gagasan transposisi didaktis dalam merencanakan proses pembelajaran dengan mengintegrasikan analisis terhadap *scientific conception, knowledge to be taught, taught* dan *learnt knowledge,* akan memberikan informasi yang komprehensif dalam menyusun desain didaktis.

Kata Kunci: Transposisi didaktis, pertidaksamaan rasional, *concept image*, praksiologi,

ANALYSIS OF ZONE OF THE CONCEPT OF IMAGE DIFFERENCES IN THE PHENOMENON OF THE DIDACTIC TRANSPOSITION OF RATIONAL INEQUALITIES

ABSTRACT

This study aims to understand the concept of rational inequality transformed from the form of scholarly knowledge produced in universities into knowledge to be taught in the form of textbooks that guide teachers to teach. In the next process, the teacher transforms it into knowledge to be taught, which is knowledge ready to be taught to students in a form suitable for students' abilities. Lastly, it turns into learnt knowledge, which students have learned. This study applied the qualitative method with the Didactical Design Research (DDR) design of interpretive paradigm, which aims to explore the phenomenon that occurs in the transformation of the concept of rational inequality. Hermeneutic and phenomenological approaches were used to understand the reality in the classroom and the subjective perspectives of the participants. Data were collected through observations, interviews, tests, and documentation from two mathematics teachers. Then, through participant approval, 15 participants were selected by purposive sampling from 56 participants in grade 10 from two high schools in Majalengka Regency and participants from Majalengka University students. Data were analyzed using the Interpretative Phenomenological Analysis (IPA) technique, which involved re-reading the data, taking initial notes, developing emerging themes, and looking for patterns between cases. The analysis showed that the Scientific Conception provided an in-depth but context-free overview of concepts related to rational inequality. Textbooks provide conceptual overviews of formal definitions and systematic steps for solving rational inequalities. Teacher M1 provides an overview of rational inequality with a practical and visual approach to explaining abstract concepts and their practical applications. In contrast, Teacher M2 provides an overview of the concept using a technical approach and everyday analogies but does not discuss the details of critical points in depth. Analysis of the students showed gaps in understanding basic concepts, such as the general definition of rational inequality, the importance of essential points, the use of number lines, and the sign test. The findings inform the need to use the notion of didactic transposition in planning the learning process by integrating analyses of scientific conception, knowledge to be taught, and learnt knowledge, which will provide comprehensive information in developing didactic designs.

***Keyword**: Didactic Transposition, Rational Inequality, Concept Image, Praxeology*

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