

ABSTRAK

**REPRESENTASI MATERI PEMBELAJARAN FISIKA OLEH DUA
ORANG GURU FISIKA DI DUA SMA YOGYAKARTA DAN
PENGETAHUAN YANG DI DUGA MENDASARINYA**

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Penelitian ini bertujuan untuk mendeskripsikan representasi materi pembelajaran fisika oleh dua orang guru fisika dan pengetahuan yang diduga mendasarinya. Penelitian ini merupakan penelitian deskriptif kualitatif. Subyek dalam penelitian ini adalah dua orang guru fisika. Penelitian dilaksanakan di dua Sekolah Menengah Atas yaitu di salah satu sekolah negeri di Yogyakarta dan salah satu sekolah swasta di Yogyakarta. Proses pengambilan data dilaksanakan pada bulan Juli 2009 - Agustus 2009. Instrumen yang digunakan dalam penelitian ini adalah video rekaman proses pembelajaran, *fieldnotes*, dan pertanyaan wawancara.

Representasi materi pembelajaran terlihat dari : media dan metode yang digunakan guru dalam menyampaikan materi, alur penyampaian materi, dan cara guru menyampaikan materi sehingga mudah dipahami siswa.

Hasil penelitian menunjukkan : media yang digunakan guru A untuk menjelaskan gaya lorentz ialah papan tulis, alat peraga (tangan kanan dan 3 buah spidol). Media yang digunakan guru B untuk menjelaskan gerak peluru ialah papan tulis, rekaman gerak benda, dan power point. Metode yang digunakan guru A untuk menjelaskan gaya lorentz ialah ceramah, ceramah siswa aktif, demonstrasi, tanya jawab, dan problem solving (diskusi). Metode yang digunakan guru B untuk menjelaskan gerak peluru ialah ceramah, pendampingan individual, dan problem solving (diskusi). Alur penyampaian materi pelajaran yang dilakukan guru A : guru memulai dengan perumusan persamaan gaya lorentz pada kawat sejajar, cara menentukan arah gaya lorentz, penurunan persamaan gaya lorentz per satuan luas dan latihan soal. Sedangkan guru B : guru memulai dengan memberikan rekaman gerak benda, penurunan persamaan gerak parabola, dan latihan soal. Cara guru A menyampaikan materi tentang gaya lorentz dengan menyampaikan secara berulang-ulang, menggunakan media lebih dari satu, gerakan tangan, kalimat penekanan, dan memberikan tanda kotak pada hasil akhir persamaan. Sedangkan cara yang digunakan oleh guru B dalam menyampaikan materi tentang gerak peluru ialah menggunakan kalimat penekanan, peringatan, gerakan tangan, contoh peristiwa dalam kehidupan sehari-hari dan memberikan tanda kotak pada persamaan yang dianggap penting. Pengetahuan-pengetahuan yang diduga mendasari tindakan guru merepresentasikan materi pembelajaran, yaitu pengetahuan tentang media dan metode pembelajaran, materi, pengetahuan kondisi siswa, lingkungan, dan pengalaman mengajar yang berbeda.

ABSTRACT

**REPRESENTATION OF PHYSICS SUBJECT MATTER BY
TWO PHYSICS TEACHER IN TWO SENIOR HIGH SCHOOL
OF YOGYAKARTA AND KNOWLEDGE WHICH IS
THOUGHT AS THE BASIS**

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This study aims at describing the representation of physics subject matter by two physics teachers. This research is a descriptive qualitative research. The subject of the research itself are two physics teacher. The research was carried out in two Senior High School, one of them is Yogyakarta State Senior High School and the other is private school. The research was done on July until August 2009. Instrument which were used in this research is learning process video record, field notes and interview scene.

The forms of representation used by teachers is a generally representation that usually used by teachers in general. The representation of subject matter looked on : media and method used by teachers when delivered materials, material delivery sequences, and how teachers deliver materials so students can easily understand.

The results of the research show: the media used by teacher A to explain Lorentz force are a blackboard and demonstration (right hand and three markers). The media used by teacher B to explain projectile motion are a blackboard, track of movement object and powerpoint. The methods used by teacher A to explain Lorentz force are lecturing, student active lecturing, demonstration, question and answer, and problem solving. The methods used by teacher B to explain projectile motion are lecturing, individual tutorial and problem solving. The sequence of learning material delivery by teacher A : the teacher start with the formula of Lorentz force equation on the parallel wires, how to determine the direction of Lorentz force, Lorentz force per unit area equation deriving and exercises. While the sequence of learning materials delivery on the teacher B : the teacher start with by giving students track of movement object, equation deriving of parabola motion, and exercises. The way teacher A delivered learning materials about Lorentz force was by repeatedly explaining, using more than a media, hand it thus illustration, emphasizing, and giving a signal box on the equation. Whereas the way used by teacher B in learning materials delivery about projectile motion was using a emphasizing sentences, hands movements, event example in everyday life, and giving a signal box on an important equation. Knowledges which teacher is based on represented subject matter are knowledge about media and learning methods, materials, knowledge about the condition of students, environments, and the different of learning experiences.