

ABSTRAK

Identifikasi Pengetahuan Guru Fisika Tentang Siswanya Pada 2 SMA di YOGYAKARTA sebagaimana Terungkap Melalui Aktivitas Guru dalam Pembelajaran

Albertus Wahyu Suwido
Universitas Sanata Dharma
2010

Tujuan dari penelitian ini adalah: (1) untuk mengetahui pengetahuan guru tentang konteks dan karakteristik siswa; (2) untuk mengetahui pengetahuan guru tentang motivasi dan keaktifan siswa; (3) untuk mengetahui pengetahuan guru tentang miskonsepsi dan kemampuan awal siswa; dan (4) untuk mengetahui pengetahuan guru tentang kesulitan belajar siswa.

Penelitian dilakukan pada dua Sekolah Menengah Atas Swasta di Yogyakarta. Penelitian dilaksanakan pada tanggal 24 Juli 2009 – 11 September 2009 dan 22 Juli 2009 – 25 November 2009. Subyek dalam penelitian ini adalah guru fisika dari kedua sekolah tersebut dan objek penelitian ini adalah PCK khususnya pengetahuan guru tentang siswa. Penelitian ini merupakan penelitian deskriptif kualitatif dan instrumen pengumpulan data terdiri dari video hasil rekaman pada saat pembelajaran, *fieldnotes*, dan wawancara guru.

Video hasil rekaman dilihat berulang-ulang dan ditranskrip, lalu dicari hal-hal yang unik baik yang umum maupun yang khusus dan berkaitan dengan pengetahuan guru tentang siswa. Dari hal-hal unik yang sama dari kedua guru digabungkan dalam satu tema atau kategori. Dari setiap peristiwa yang diambil sebagai data mengenai pengetahuan guru tentang siswa tersebut dibahas dengan didukung oleh hasil wawancara.

Hasil penelitian guru A adalah: (1) guru mengetahui dan menyadari suasana kelas yang hidup, selain itu kelas terbagi menjadi dua kelompok, guru mengetahui kemampuan, serta guru hafal nama siswanya; (2) guru mengetahui dan menyadari motivasi dan keaktifan siswanya cukup bagus dalam mempelajari fisika; (3) Miskonsepsi yang terjadi pada siswa dalam penelitian ini tidak terungkap. Guru mengetahui konsep gaya normal, gaya berat, dan gaya gesek merupakan kemampuan awal yang diperlukan siswanya untuk mempelajari diagram bebas gaya jika dua benda dihubungkan oleh tali; (4) guru mengetahui kesulitan siswanya dalam memahami konsep gaya gesek dan diagram bebas gaya.

Hasil penelitian guru B adalah: (1) guru mengetahui dan menyadari kemampuan serta sifat siswa, guru hafal nama siswanya; (2) guru mengetahui dan menyadari motivasi dan keaktifan siswanya yang rendah dalam mempelajari fisika; (3) Miskonsepsi yang terjadi pada siswa dalam penelitian ini tidak terungkap. Guru mengetahui konsep perpaduan gelombang datang dan pantul merupakan kemampuan awal yang diperlukan siswanya untuk mempelajari diagram bebas gaya dan gelombang stasioner dengan ujung terikat; (4) guru mengetahui kesulitan siswanya dalam menentukan letak perut dan simpul gelombang stasioner.

ABSTRACT

Identification of Physics Teachers' Knowledge about Students in 2 Senior High Schools in Yogyakarta which is revealed through Their Teaching Activities.

Albertus Wahyu Suwido
Sanata Dharma University
2010

The goals of this research are: (1) to discover teachers' knowledge about students' context and characteristic; (2) to discover teachers' knowledge about students' motivation and liveliness; (3) to discover teachers' knowledge about students' misconception and initial knowledge; (4) to discover teachers' knowledge about students' learning difficulties.

The research was done in 2 private Senior High School in Yogyakarta. The research was held on July 24 – September 11, 2009 and July 22 – November 25, 2009. The subjects of research were Physics teachers from those 2 schools and the object of research was PCK, especially teachers' knowledge about students. This research was a qualitative descriptive research and the data collection instrument consisted of video recordings during learning process, fieldnotes, and teacher interviews.

Video recording was watched repeatedly and analyzed, then it be sought the unique things either general or specific and related to teachers' knowledge about students. From the similar unique things from both teachers were combined into one theme or category. From each event which was taken as data on teachers' knowledge about students was discussed and supported by results of interviews.

The research results of teacher A were: (1) teacher knew and realized the atmosphere of a live classroom, other than that the class was divided into two groups, teachers knew the ability of the students, and teachers memorized their students' name; (2) teacher knew and realized the motivation and liveliness of their students was good enough in learning Physics; (3) Misconception that occurred in students was not revealed in this research. Teachers knew that the concept of normal force, gravity, and friction was the initial ability required by the students to learn free diagram of force if two objects were connected by a rope; (4) teacher knew the students' difficulties in understanding the concept of friction and free diagram of force.

The research results of teacher B were: (1) teacher knew and realized the ability and character of the students, and teacher memorized the students' name; (2) teachers knew and realized the motivation and liveliness of their students was low in learning Physics; (3) Misconception that occurred in students was not revealed in this research. Teachers knew the concept of fusion of incoming waves and reflection was an initial ability required by the students to learn free diagram of force and stationary wave with the tip attached; (4) Teacher knew their students difficulty in determining the location of the stomach and a knot of stationer waves.