

# **PEMBELAJARAN BERBASIS *SHARING* DAN *JUMPING TASK* PADA KONSEP HUKUM KEKALKAN MASSA BERDASARKAN HAMBATAN BELAJAR SISWA DAN REFLEKSI DIRI GURU**

## **ABSTRAK**

Penelitian ini bertujuan untuk menyusun rancangan pembelajaran berbasis *sharing* dan *jumping task* pada konsep hukum kekekalan massa berdasarkan hambatan belajar siswa dan refleksi diri guru. Metode yang digunakan dalam penelitian ini adalah metode deskriptif kualitatif. Subjek penelitian adalah siswa kelas X dan XI di salah satu SMA di Bandung. Instrumen yang digunakan adalah tes kemampuan responden, lembar observasi, pedoman wawancara, *lesson analysis*, dokumentasi dan lembar validasi. Hambatan belajar yang teridentifikasi dari siswa kelas XI yaitu siswa berpikir bahwa dalam reaksi kimia massa padatan dianggap lebih berat dibandingkan dengan massa cairan dan massa gas yang terlibat dalam reaksi kimia tidak diperhitungkan. Selain itu, siswa tidak mampu mengaplikasikan hukum kekekalan massa dalam perhitungan kimia. Hambatan belajar tersebut dijadikan dasar untuk merancang rancangan pembelajaran. Rancangan pembelajaran divalidasi dan hasil validasi dijadikan masukan untuk menghasilkan rancangan pembelajaran yang lebih baik. Di dalam rancangan pembelajaran terdapat kegiatan demonstrasi, *sharing* dan *jumping task*. Rancangan pembelajaran di implementasikan sebanyak dua kali. Setelah implementasi rancangan pembelajaran pertama pada kelas X.1, guru melakukan refleksi diri melalui *lesson analysis*. Hasil refleksi diri guru dan hambatan belajar yang masih teridentifikasi menjadi dasar untuk membuat rancangan pembelajaran revisi. Hasil revisi pertama yaitu memperbaiki cara demonstrasi, penambahan percobaan dan alokasi waktu. Hasil revisi kedua yaitu menambahkan variasi soal aplikasi hukum kekekalan massa pada perhitungan kimia. Secara umum pengalaman *sharing* yang terjadi baik di kelas X.1 maupun di kelas X.2 sudah baik. Selain pengalaman *sharing* yang baik, terdapat juga beberapa siswa yang mengalami *jumping*. Hasil implementasi terakhir rancangan pembelajaran pada kelas X.2 menunjukkan bahwa hambatan belajar siswa yang menganggap massa padatan lebih berat dibandingkan dengan massa cairan tidak ada lagi, namun sebagian kecil siswa masih tidak memperhitungkan massa gas dalam reaksi kimia dan tidak sepenuhnya paham makna dari hukum kekekalan massa.

**Kata Kunci:** Rancangan Pembelajaran, *Sharing* dan *Jumping Task*, Hambatan Belajar, Refleksi Diri Guru, *Lesson Analysis*, Hukum Kekekalan Massa

**SHARING AND JUMPING TASK BASED LESSON ON THE CONCEPT OF  
CONSERVATION OF MASS BASED ON THE STUDENTS' LEARNING  
OBSTACLES AND THE TEACHER'S SELF-REFLECTION.**

**ABSTRACT**

This research is aimed at developing a lesson design based on sharing and jumping task on the concept of conservation of mass by considering the students' learning obstacles and the teacher's self-reflection. The method used in this research was descriptive qualitative research method. The research subjects were students of grade X dan XI in one of the high schools in Bandung. The instruments used were a test, observation sheet, interview guideline, lesson analysis, documentation and validation sheet. Learning obstacles which were indicated in grade XI students were that they thought that the mass of solid was heavier than the mass of liquid, and that the mass of gas involved in chemical reaction was not calculated. Besides, students couldn't apply the low conservation of mass in chemical calculation. Those students' learning obstacles were used as a basis in developing the lesson design. Lesson design was validated and the result of it was used to improve the lesson design. This lesson design contained demonstration, sharing and jumping task activities and was implemented twice. The teacher conducted self-reflection through lesson analysis after the first implementation of the lesson design in class X.1. The results of the teacher's reflection and students' learning obstacles that were still identified were used as a basis in designing the revision of the lesson design. The results of the first revision were improving the technique of demonstration, adding experimentation and time management. The result of the second revision was adding variation for the application of low conservation of mass in chemical calculation question. In general, sharing experiences occurred in both X.1 and X.2 classes had been good. Apart from good sharing experiences, some students also experienced the jumping. The results of the last implementation in class X.2 of the learning design indicated that students no longer thought that the mass of solid was heavier than the mass of liquid. However, some students still did not take into account the mass of gas in a chemical reaction and did not fully understand the meaning of conservation of mass.

Keyword: Lesson Design, Sharing and Jumping Task, Learning Obstacle, Teacher's Self-Reflection, Lesson Analysis, Conservation of Mass