ABSTRAK

Anisa Imansari. Analisis TPACK *(Technological Pedagogical and Content Knowledge)* Guru dan Model Mental Peserta Didik pada Topik Asam Basa. **Skripsi**. Jakarta: Program Studi Pendidikan Kimia, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Jakarta, Agustus 2019.

Penelitian ini bertujuan untuk mengetahui profil TPACK guru dan model mental peserta didik yang terbentuk dalam pembelajaran asam basa. Penelitian melibatkan 36 peserta didik di kelas XI IPA dan seorang guru kimia yang dianalisis kompetensi *Technological Pedagogical and Content Knowledge* (TPACK) di salah satu sekolah di Jakarta. Kriteria responden guru dalam penelitian adalah seorang guru profesional yang telah disertifikasi dan memiliki lebih dari 20 tahun pengalaman mengajar serta menguasai teknologi informasi & komunikasi (TIK) yang menunjang pembelajaran. Penelitian ini menggunakan metode deskriptif kualitatif. Sumber data dikumpulkan melalui wawancara, kuesioner TPACK, observasi proses pembelajaran, *tes essay* asam basa dan reflektif jurnal peserta didik. *Quality standards* yang digunakan adalah *trustworthiness* (kepercayaan) dengan kriteria *credibility* (kredibilitas) melalui *prolonged engagement, persistent observation, progressive subjectivty* dan *member checking*. Hasil penelitian menunjukan, guru telah mengintegrasikan semua komponen TPACK ke dalam pembelajaran asam-basa sehingga profil TPACK tergolong pada *Action Level/An*. Hasil penelitian juga menunjukkan bahwa empat kategori model mental peserta didik terbentuk sebagai hasil pembelajaran. Model mental yang terbentuk terdiri dari pemahaman karakteristik zat asam atau basa dari tiga representasi kimia (MS) 58,33%, pemahaman konsep asam dan basa dari pengamatan indra (MF) 22,22%, pemahaman konsep asam basa melalui kata dan simbol (MKS) 5,56% dan miskonsepsi asam basa (MI) 13,89%. Model mental yang terbentuk merupakan hasil dari proses pembelajaran yang bervariasi sehingga menarik peserta didik untuk termotivasi belajar. Guru dengan tepat mengajarkan konsep asam basa, sehingga sebagain besar peserta didik menguasai konsep asam basa pada level makroskopik, simbolik, dan sub mikroskopik.

Kata Kunci: Model mental, *technological pedagogical and content knowledge* guru, asam basa, TPACK

ABSTRACT

Anisa Imansari. Analysis of Teacher's TPACK (Technological Pedagogical and Content Knowledge) and Mental Model of Students on the Topic of Acid Base. Jakarta: Chemistry Education Study Program, Faculty of Mathematics and Natural Sciences, Universitas Negeri Jakarta, August 2019.

This study purpose is to determine the TPACK profile of teacher and mental models of students formed in acid-base learning. The study involved 36 students in class XI Science and a chemistry teacher who analyzed the competence of Technological Pedagogical and Content Knowledge (TPACK) in one school in Jakarta. Criteria for teacher as the respondent in the study was professional teacher who had been certified and had more than 20 years of teaching experience and mastered in information & communication technology (ICT) that supported learning. This study used descriptive qualitative method. Data sources were collected through interviews, TPACK questionnaires, observation of the learning process, acid-base essay tests and reflective journals of students. Quality standard used is trustworthiness with credibility criteria through prolonged engagement, persistent observation, progressive subjectivity and member checking. The results showed that the teacher had integrated all TPACK components into acid-base learning so that the TPACK profile was classified as Action Level/An. The results also showed that four categories of students' mental models formed as learning outcomes. The mental model formed consists of understanding the characteristics of acidic or basic substances from three chemical representations (MS) 58.33%, understanding the concept of acid and base from sensory observation (MF) 22.22%, understanding the concept of acid base through words and symbols (MKS) 5.56% and acid base misconception (MI) 13.89%. The mental model that is formed is the result of a varied learning process that attracts students to be motivated to learn. The teacher correctly teaches the concept of acid-base, so that most students master the concept of acid-base at the macroscopic, symbolic, and sub-microscopic level.

Keywords: Mental models, teachers' technological pedagogical and content knowledge, acid base.