

## ABSTRAK

**Salsabila Putri Lubis, 4181141029. Analisis *Technological Pedagogical and Content Knowledge (TPACK)* dalam Pembelajaran Biologi kelas XI IPA Materi Sistem Respirasi pada Era Covid-19 di SMA Negeri Kecamatan Medan Kota.**

Penelitian ini bertujuan untuk mengetahui tingkat kategori komponen TPACK dan persepsi siswa terhadap *Technological Pedagogical and Content Knowledge (TPACK)* dalam pembelajaran biologi kelas XI IPA materi respirasi pada era *Covid-19* di SMA Negeri Kecamatan Medan Kota. Penelitian dilaksanakan pada bulan Januari hingga April 2022. Populasi penelitian adalah seluruh sekolah SMA negeri di Kecamatan Medan Kota. Sampel penelitian adalah seluruh guru biologi dan siswa kelas XI IPA di SMAN 6 Medan dan SMAN 10 Medan. Instrumen penelitian berupa tes TPACK, *Self assessment* TPACK, Kuesioner persepsi siswa dan wawancara siswa. Teknik pengambilan sampel dengan *Purposive sampling*. Jenis penelitian ini adalah kuantitatif deskriptif. Hasil penelitian yang diperoleh terkait tingkat kategori komponen *Technological Pedagogical and Content Knowledge (TPACK)* dalam pembelajaran biologi kelas XI IPA materi system respirasi pada era covid-19 di SMA Negeri kecamatan Medan Kota jika diuraikan terdiri dari 7 komponen TPACK yaitu: 1) Pada kategori kurang baik terdiri dari aspek *Pedagogical Knowledge (PK)* dan aspek *Technological Pedagogic Knowledge (TPK)*, 2) Pada kategori cukup baik terdapat pada aspek *Technological Knowledge (TK)*, 3) Pada kategori baik terdiri dari aspek *Technological Content Knowledge (TCK)*, aspek *Pedagogical Conten Knowledge (PCK)* dan *Technological Pedagogic Content Knowledge (TPCK)*, 4) Pada kategori sangat baik terdapat pada aspek *Content Knowledge (CK)*. Hasil penelitian terhadap tingkat persepsi siswa terkait penerapan TPACK yaitu: 1) Pada kategori kurang baik terdiri dari aspek *Pedagogical Knowledge (PK)* dan aspek *Technological Pedagogic Knowledge (TPK)*, 2) Pada kategori cukup baik terdapat pada aspek *Technological Knowledge (TK)*, 3) Pada kategori baik terdiri dari aspek *Technological Content Knowledge (TCK)*, aspek *Pedagogical Conten Knowledge (PCK)* dan *Technological Pedagogic Content Knowledge (TPCK)*, 4) Pada kategori sangat baik terdapat pada aspek *Content Knowledge (CK)*.

**Kata Kunci :** Analisis, *Technological Pedagogical Content and Knowledge (TPACK)*, Respirasi

## ABSTRACT

**Salsabila Putri Lubis, 4181141029. Analysis of Technological Pedagogical and Content Knowledge (TPACK) in Biology Learning class XI IPA Respiration System Material in the Covid-19 Era at Medan Kota District High School.**

This research aims to knowing the level of the TPACK component category and students' perceptions of Technological Pedagogical and Content Knowledge (TPACK) in learning biology class XI science respiration material in the covid-19 era at SMA Negeri Medan Kota. The study was conducted from January to April 2022. The research population was all public high schools in Medan Kota District. The research sample was all biology teachers and students of class XI science at SMAN 6 Medan and SMAN 10 Medan. Research instruments in the form of TPACK test, TPACK self assessment, student perception questionnaire and student interviews. The sampling technique was purposive sampling. This type of research was descriptive quantitative. The results obtained are related to the level of the Technological Pedagogic and Content Knowledge (TPACK) component category in biology learning for class XI IPA material on the respiratory system in the Covid-19 era at SMA Negeri Medan Kota sub-district, if described, consists of 7 TPACK components, namely: 1) In the poor category both consist of aspects of Pedagogical Knowledge (PK) and aspects of Technological Pedagogic Knowledge (TPK), 2) In the fairly good category there are aspects of Technological Knowledge (TK), 3) In the good category consists of aspects of Technological Content Knowledge (TCK), Pedagogical aspects Content Knowledge (PCK) and Technological Pedagogic Content Knowledge (TPCK), 4) In the very good category, there are Content Knowledge (CK) aspects. The results of the research on the level of student perceptions related to the implementation of TPACK are: 1) In the poor category consisting of aspects of Pedagogical Knowledge (PK) and aspects of Technological Pedagogic Knowledge (TPK), 2) In the fairly good category there are aspects of Technological Knowledge (TK), 3) In the good category consists of aspects of Technological Content Knowledge (TCK), aspects of Pedagogical Content Knowledge (PCK) and Technological Pedagogic Content Knowledge (TPCK), 4) In the very good category there are aspects of Content Knowledge (CK).

**Keywords:** *Analysis, Technological Pedagogical Content and Knowledge (TPACK), Respiration*