

**STUDI TENTANG PENDEKATAN *STEAM* DENGAN METODE
PROJECT BASED LEARNING PADA HIDROLISIS GARAM DAN
LARUTAN PENYANGGA UNTUK MENGEMBANGKAN
KETERAMPILAN ABAD 21**

Hayyun Lisdiana

Abstrak

Penelitian ini bertujuan untuk mengembangkan *soft skills* siswa pada materi hidrolisis garam dan larutan penyangga menggunakan pendekatan *STEAM* (*Science, Engineering, Technology, Art, and Mathematic*) dan metode *PjBL project based learning*. Penelitian dilaksanakan pada semester genap tahun akademik 2016/2017 dan melibatkan 40 siswa kelas XI MIA 4 SMAN 2 Tangerang.

Penelitian menggunakan metode kualitatif dan berfokus pada integrasi dan implikasi penggunaan pendekatan *STEAM* dengan metode *PjBL* pada materi hidrolisis garam dan larutan penyangga. Data dikumpulkan melalui wawancara, observasi, reflektif jurnal, catatan harian guru yang didukung kuesioner keterampilan Abad 21. *Quality standards* pada penelitian ini adalah *trustworthiness* dengan menggunakan *prolonged engagement, progressive subjectivity, persistent observation* dan *member checking*.

Berdasarkan hasil penelitian pembelajaran hidrolisis garam dan larutan penyangga menggunakan pendekatan *STEAM* dapat diketahui, bahwa siswa tertarik, termotivasi, dan merasa senang karena merupakan pembelajaran yang modern. Keterampilan Abad 21 yang terdiri dari keterampilan hidup dan berkarier, keterampilan belajar dan berinovasi, serta keterampilan teknologi, terlihat dengan digunakannya pendekatan ini. Implikasi lain seperti rasa ingin tahu, motivasi, percaya diri, dan religius juga dapat dilihat dari pengerjaan proyek siswa. *STEAM* ini bisa digunakan sebagai sebuah alternatif untuk mengembangkan *soft skills* siswa dalam pembelajaran hidrolisis garam dan larutan penyangga.

Kata kunci: pendekatan *STEAM*, keterampilan Abad 21, *PjBL*, hidrolisis garam, larutan penyangga.

A STUDY ABOUT STEAM APPROACH WITH PROJECT BASED LEARNING METHOD ON SALT HYDROLYSIS AND BUFFER SOLUTION TO DEVELOP 21ST CENTURY SKILLS

Hayyun Lisdiana

Abstract

This research aims to developing students' soft skills in salt hydrolysis and buffer solution using the STEAM (Science, Technology, Art, and Mathematic) approach and PjBL (Project Based Learning) method. The research were conducted during the second semester in the academic year 2016/2017 and involved 40 students of XI MIA 4 in SMAN 2 Tangerang

The research used qualitative method and focus on integration and implication using STEAM approach with PjBL method in salt hydrolysis and buffer solution. Data was collected through interview, observation, students' reflective journal, and teacher's journal was supported by 21st Century skills questionnaire. Quality standard in this research was trustworthiness used prolonged engagement, progressive subjectivity, persistent observation, and member checking.

Data collection technique of STEAM approach uses students interview data, students' reflective journal, class observation, and teacher's journal supported by 21st Century skills questionnaire. Quality standard used in this research is trustworthiness by using prolonged engagement, progressive subjectivity, persistent observation, and member checking.

The result shows that students were interested, motivated, and comfortable in the learning salt hydrolysis and buffer solution used STEAM approach. The 21st century skills which involves living and working skills, learning and innovating skills, also technology skills was found in this research. Other implication such as curiosity, motivation, self-confidence, and religion can be found through processed students' project. The STEAM approach can be used as an alternative to developing students' soft skills in the learning of salt hydrolysis and buffer solution.

Keywords: STEAM approach, 21st century skills, PjBL, salt hydrolysis, buffer solution.