

**PEMBELAJARAN POGIL UNTUK MENINGKATKAN KETERAMPILAN  
BERPIKIR KRITIS SISWA PADA MATERI LARUTAN PENYANGGA**

**SKRIPSI**

diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar Sarjana  
Pendidikan Kimia



oleh

Gina Sonia Hanifa

1505545

**PROGRAM STUDI PENDIDIKAN KIMIA  
FAKULTAS PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN  
ALAM  
UNIVERSITAS PENDIDIKAN INDONESIA  
BANDUNG  
2019**

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KETERAMPILAN BERPIKIR KRITIS SISWA PADA MATERI  
LARUTAN PENYANGGA**

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Gina Sonia Hanifa

Sebuah skripsi yang diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar Sarjana Pendidikan Program Studi Pendidikan Kimia pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

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Agustus 2019

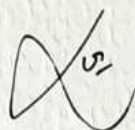
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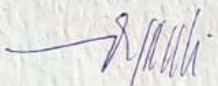
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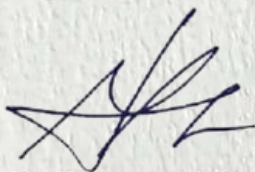


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## ABSTRAK

Penelitian tentang pembelajaran POGIL untuk meningkatkan keterampilan berpikir kritis siswa pada materi larutan penyangga didasarkan pada pentingnya keterampilan berpikir kritis untuk dimiliki tiap individu. Tujuan penelitian ini adalah meningkatkan keterampilan berpikir kritis dan penguasaan konsep. Metode penelitian yang digunakan ialah kuasi eksperimen dengan desain pretest-posttest nonequivalent control group. Penelitian ini dilakukan pada siswa kelas XI IPA di salah satu SMA Negeri di Kota Bandung, yang terdiri dari 30 siswa kelas eksperimen dan 30 siswa kelas kontrol. Instrumen penelitian terdiri atas LKS dan 15 butir soal tes pilihan ganda beralasan. Hasil penelitian menunjukkan bahwa keterampilan berpikir kritis siswa setelah mengikuti kegiatan pembelajaran POGIL (rerata  $\langle g \rangle = 0,71$ ) meningkat signifikan dibandingkan siswa yang mengikuti kegiatan pembelajaran inkuiri terbimbing (rerata  $\langle g \rangle = 0,58$ ). Capaian tertinggi peningkatan keterampilan berpikir kritis dengan menggunakan model POGIL terjadi pada indikator mengamati dan mempertimbangkan suatu laporan hasil observasi (rerata  $\langle g \rangle = 0,81$ ), sedangkan capaian terendahnya terjadi pada indikator menentukan suatu tindakan (rerata  $\langle g \rangle = 0,57$ ). Penguasaan konsep siswa meningkat setelah mengikuti kegiatan pembelajaran model POGIL (rerata  $\langle g \rangle = 0,67$ ). Capaian tertinggi peningkatan penguasaan konsep terjadi pada label konsep komponen larutan penyangga (rerata  $\langle g \rangle = 1$ ), sedangkan capaian terendahnya terjadi pada label konsep perhitungan larutan penyangga (rerata  $\langle g \rangle = 0,27$ ). Perlu adanya penggunaan model POGIL dalam kegiatan pembelajaran yang melibatkan aktivitas laboratorium pada materi lain agar keterampilan berpikir kritis dan penguasaan konsep siswa meningkat.

Kata kunci : *Process Oriented Guided Inquiry Learning (POGIL)*, keterampilan berpikir kritis, penguasaan konsep, larutan penyangga

## ABSTRACT

Research of POGIL implementation to improve students' critical thinking skills and concept mastery of buffer solutions based on the individual importance of critical thinking skills. Objectives of this study were to improve students' critical thinking skills and concept mastery. Quasi-experimental with pretest-posttest nonequivalent control group design was used in this research. The research was conducted among 11th science class in one of public senior high school in Bandung City, consisted of 30 in students experimental and 30 students in control class. The instruments of this study were students' worksheet and 15 reasoning multiple choice questions. The results showed that students' critical thinking skills after participating in POGIL learning activities increased significantly (mean of  $<g> 0,70$ ) compared to students who took guided inquiry learning (mean of  $<g> 0,58$ ). Observe, and judge observation reports indicator has the highest achievement (mean of  $<g> 0,81$ ), whereas making decision indicator has the lowest achievement (mean of  $<g> 0,67$ ). Furthermore, there is an improvement of experimental class students' concept mastery (mean of  $<g> 0,67$ ). The buffer solution components increased (mean of  $<g> 1$ ) significantly different than other concept labels, whereas the calculation of buffer solution has the lowest improvement (mean of  $<g> 0,27$ ). This research contributes to improve students' critical thinking skills and concept mastery. There is necessity to implement POGIL model in chemistry lesson with laboratory activity on another chemistry subjects to improve students' critical thinking skills.

Keywords : *Process Oriented Guided Inquiry Learning (POGIL)*, critical thinking skills, concept mastery, buffer solutions

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