

**PENGEMBANGAN INSTRUMEN PENILAIAN KINERJA UNTUK  
MENGUKUR KEMAMPUAN *TECHNOLOGICAL PEDAGOGICAL  
CONTENT KNOWLEDGE* (TPACK) CALON PENDIDIK KIMIA**

**TESIS**

**Diajukan untuk Memenuhi Sebagian dari Syarat untuk Memperoleh Gelar  
Magister Pendidikan Kimia**



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**2024**

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Magister Pendidikan Program Studi Pendidikan Kimia  
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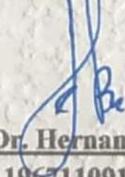
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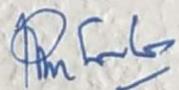


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## **PERNYATAAN**

Dengan ini saya menyatakan bahwa tesis dengan judul "Pengembangan Instrumen Penilaian Kinerja Untuk Mengukur Kemampuan *Technological Pedagogical Content Knowledge* (TPACK) Calon Pendidik Kimia" beserta seluruh isinya adalah benar-benar karya saya sendiri. Saya tidak melakukan penjiplakan atau pengutipan dengan cara-cara yang tidak sesuai dengan etika ilmu yang berlaku dalam masyarakat keilmuan. Atas pernyataan ini, saya siap menanggung risiko/sanksi apabila di kemudian hari ditemukan adanya pelanggaran etika keilmuan atau ada klaim dari pihak lain terhadap keaslian karya saya ini.

Bandung, Februari 2023

Yang membuat pernyataan



## UCAPAN TERIMA KASIH

Puji syukur atas rahmat dan karunia Allah SWT sehingga penulis dapat menyelesaikan tesis yang berjudul “Pengembangan Instrumen Penilaian Kinerja Untuk Mengukur Kemampuan *Technological Pedagogical Content Knowledge* (TPACK) Calon Pendidik Kimia” Dalam penyusunan tesis, penulis banyak mendapatkan bantuan dan bimbingan dari berbagai pihak. Oleh karena itu, penulis ingin menyampaikan ucapan terima kasih kepada:

1. Bapak Prof. Dr. Nahadi, M.Pd., M.Si dan Ibu Dr. Hernani, M.Si dosen pembimbing pertama dan pembimbing kedua yang telah memberikan ilmu, masukan, saran, bimbingan, dan motivasi dalam penyusunan desain tesis.
2. Bapak Dr. Wiji, M.Si dan Ibu Dr. Tuszie Widhiyanti, M.Pd selaku ketua program studi dan sekretaris program studi pendidikan kimia yang turut memberikan dorongan pelaksanaan penelitian ini.
3. Ibu Dr. Hairida, M.Pd, bapak Rahmat Rasmawan, M.Pd, serta bapak Lukman Hadi, M.Pd membantu dalam finalisasi instrumen penelitian.
4. Dini Dwi Apriani, M.Pd, Elginda Yusa Arniezca, M.Pd dan Pandu Eka Putra Ariana, M.Pd telah berkenan menjadi *rater* dalam uji coba instrumen
5. Mahasiswa pendidikan kimia UPI pada mata kuliah Perencanaan Pembelajaran Kimia (PPK) yang telah bekerja sama dalam penelitian.
6. Bapak Febrizal, M.Pd., ibu Purwanti, M.Pd., Adek Diah Murti, M.Pd serta Nurul Amali, M.Pd yang selalu memberikan bantuan, motivasi dan teman diskusi dalam penulisan tesis ini.

Kedua orang tua yaitu bapak Mochtaram dan ibu Rahmah serta saudara kandung yaitu Chandra Prayudi dan Indra Dinata yang telah menjadi pendukung nomor satu, senantiasa berdoa dan memberikan dukungan baik moril maupun materil serta motivasi dalam penulisan tesis ini.

## KATA PENGANTAR

Puji syukur atas rahmat dan karunia Allah SWT yang telah menurunkan Al-qur'an sebagai sumber ilmu serta shalawat dan salam kepada Rasulullah Muhammad SAW yang mengubah pola pikir manusia dari pola pikir Islamiyah sehingga menjadi contoh teladan yang baik. Sehingga penulis dapat menyelesaikan Tesis yang berjudul "Pengembangan Instrumen Penilaian Kinerja Untuk Mengukur Kemampuan *Technological Pedagogical Content Knowledge* (TPACK) Calon Pendidik Kimia". Penyusunan tesis ini diajukan sebagai syarat untuk memperoleh gelar Magister Pendidikan pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam, Universitas Pendidikan Indonesia.

Penulis telah berusaha dengan maksimal dalam menyusun desain penelitian ini, namun penulis menyadari bahwa desain penelitian ini masih terdapat banyak kesalahan, oleh karena itu, diharapkan kritik dan saran yang bersifat membangun untuk memperbaiki desain penelitian ini. Akhir kata penulis berharap agar instrumen penelitian ini dapat berguna dan memberikan manfaat yang baik bagi semua pihak.

Bandung, Februari 2024

Penulis

## ABSTRAK

Tujuan dari penelitian ini adalah untuk mengembangkan instrumen penilaian kinerja *Technological Pedagogical Content Knowledge* (TPACK) untuk menilai rancangan pembelajaran yang disusun oleh mahasiswa calon pendidik kimia. Metode penelitian yang digunakan adalah *Design and Development Research* (DDR) dengan tiga tahapan besar yaitu *design, development and evaluation*. Hasil penelitian menunjukkan; 1) pada tahap perencanaan (*Design*) dihasilkan definisi, indikator, dan *task* dalam membuat perencanaan pembelajaran. Instrumen penilaian kinerja berupa penilaian lembar observasi dilengkapi rubrik penilaian, dan survei berupa penilaian sendiri. Instrumen *self assessment* terdiri dari 21 pernyataan; 2) pada tahap pengembangan (*Development*) dihasilkan draf awal instrumen berupa kisi-kisi instrumen, rubrik penilaian, dan angket pernyataan yang valid secara konten (isi), dan konstruk; 3) tahap evaluasi (*Evaluation*) dihasilkan instrumen yang rubrik teruji secara validitas, dan reliabilitas. *Draft* instrumen yang dirancang dilakukan uji kualitas secara validitas isi, dan konstruk pada item pernyataan. Korelasi pearson untuk *self assessment* diperoleh nilai sebesar 0,547-0,768 dengan jumlah responden 14 mahasiswa sehingga r tabel 0,532 instrumen *self assessment* dikatakan valid karena nilai r hitung lebih besar dari r tabel. Reliabilitas Alfa Cronbach pada *self assessment* diperoleh setiap domain sebesar 0,701 hingga 0,876. Reliabilitas lembar observasi indeks ICC berkisar 0,503 hingga 0,919, dan W Kendall 0,607 hingga 0,939. Instrumen yang telah dikembangkan dapat dikatakan akurat dalam mengukur penilaian kinerja TPACK mahasiswa calon pendidik. Perbandingan antara hubungan penilaian *self assessment*, dan lembar observasi dilakukan dengan uji korelasi non parametrik Spearman dengan korelasi tertinggi pada domain CK, dan domain TCK yaitu sebesar 1, dan 0,553.

**Kata Kunci:** TPACK, penilaian kinerja, perencanaan pembelajaran, calon pendidik kimia, rubrik penilaian, *self assessment*, lembar observasi

## ABSTRACT

The aim of this research is to develop a performance assessment instrument Technological Pedagogical Content Knowledge (TPACK) in assessing learning plans prepared by prospective chemistry teaching students. The research method used is Design and Development Research (DDR) with three major stages, namely design, development and evaluation. The research results show; 1) at the planning stage (Design) produced definitions, indicators and tasks in making learning plans. The performance assessment instrument is in the form of an observation sheet with an assessment rubric and a survey in the form of self-assessment. Instrument Self assessment consists of 21 statements; 2) at the development stage (Development) an initial draft of the instrument is produced in the form of an instrument grid, assessment rubric and statement questionnaire that is content and construct valid. Evaluation stage (Evaluation) produced an instrument with a rubric for validity and reliability. Draft The designed instrument was tested for quality in terms of content and construct validity on the statement items. Pearson correlation for self assessment The value obtained was 0.547-0.768 with a total of 14 students responding so that the r table was 0.532 for the instrument self assessment is said to be valid because the calculated r value is greater than the t table. Cronbach's Alpha Reliability in self assessment obtained for each domain was 0.701 to 0.876. The reliability of the ICC index observation sheet ranges from 0.503 to 0.919 and Kendall's W from 0.607 to 0.939. The instrument that has been developed can be said to be accurate in measuring the TPACK performance assessment of prospective teaching students. Comparison between assessment relationships, self assessment and the observation sheet was carried out using the Spearman nonparametric correlation test with the highest correlation in the CK domain and TCK domain, namely 1 and 0.553.

**Keywords:** TPACK, performance assessment, lesson planning, chemistry teacher candidates, assessment rubric, self-assessment, observation

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