

**KEMAMPUAN *TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE* (TPACK) MAHASISWA CALON GURU GEOGRAFI PADA MATERI SISTEM INFORMASI GEOGRAFIS**

**TESIS**

Diajukan sebagai Syarat untuk Memperoleh Gelar Magister  
pada Program Studi Magister Pendidikan Geografi Sekolah Pascasarjana



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**PROGRAM STUDI MAGISTER PENDIDIKAN GEOGRAFI  
SEKOLAH PASCASARJANA  
UNIVERSITAS PENDIDIKAN INDONESIA  
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2021**

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Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd) pada Program Studi Pendidikan Geografi Sekolah Pascasarjana Universitas Pendidikan Indonesia

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**LEMBAR PENGESAHAN**

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dengan ini saya menyatakan bahwa tesis atau disertasi dengan judul “Kemampuan *Technological Pedagogical And Content Knowledge (TPACK)* Mahasiswa Calon Guru Geografi Pada Materi Sistem Informasi Geografis”, dengan ini berserta seluruh isinya adalah benar – benar karya saya sendiri. Saya tidak melakukan penjiplakan atau pengutipan dengan cara – cara yang tidak sesuai dengan etika – etika ilmu yang berlaku dalam masyarakat keilmuan. Atas pernyataan ini saya siap menanggung risiko/sanksi apabila dikemudian hari ditemukan adanya pelanggaran etika keilmuan atau ada klaim dari pihak lain terhadap keaslian karya saya ini. Demikian pernyataan ini saya buat dengan penuh kesadaran tanpa paksaan dari siapapun.

Bandung, April 2021

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## **ABSTRAK**

Tujuan penelitian ini untuk mengetahui pemahaman materi Sistem Informasi Geografis mahasiswa Geografi dan kemampuan TK, TPK, TCK, TPACK. Metode penelitian deskriptif dengan pendekatan kuantitatif diterapkan untuk memperoleh data kemampuan TPACK mahasiswa geografi. Teknik pengumpulan data menggunakan angket berupa instrument kemampuan TPACK mahasiswa geografi, soal pemahaman materi Sistem Informasi Geografis dan instrument CoRe+Technology. Pemilihan partisipan pada penelitian ini menggunakan metode sampling jenuh. Teknik analisis yang digunakan pada penelitian ini adalah analisis deskriptif dengan persentase. Hasil dari penelitian ini menunjukkan bahwa dari 103 mahasiswa yang melakukan tes menunjukkan (1) Pemahaman mahasiswa mengenai konseptual materi SIG berada dalam kategori sedang sejumlah 96 orang (46,60%), pemahaman mahasiswa dalam kategori tinggi hanya 46 orang (22,33%), dan selebihnya berada dalam kategori rendah sebanyak 64 orang (31,07%); (2) Kemampuan TK secara umum mahasiswa geografi berada pada kategori tinggi; (3) Kemampuan TCK mahasiswa geografi berada pada kategori rendah; (4) Kemampuan TPK mahasiswa geografi berada pada kategori sedang; (5) Kemampuan TPACK mahasiswa geografi berada pada kategori sedang dan data desain TPACK mahasiswa calon guru geografi diperoleh dari hasil CoRe+Technology mahasiswa geografi masih belum mampu membuat perencanaan pembelajaran dengan baik pada materi SIG. Hal ini dibuktikan dengan pengisian instrument sebagian mahasiswa hanya mengisi ide pemikiran dalam instrumen CoRe+Technology kurang dari tiga ide pemikiran sejumlah 54% dari 103 mahasiswa terkait perencanaan pembelajaran berbasis TPACK. Rekomendasi yang diajukan pada penelitian ini adalah perlu adanya peningkatan secara berkelanjutan seperti melalui program pelatihan pengoperasian aplikasi SIG guna meningkatkan pemahaman dan keterampilan calon guru untuk memanfaatkan teknologi dalam pembelajaran geografi pada abad 21 ini.

**Kata kunci:** TPACK, Mahasiswa Calon Guru, Sistem Informasi Geografi, *CoRe+Technology*

***THE ABILITY OF TECHNOLOGICAL PEDAGOGICAL AND CONTENT  
KNOWLEDGE (TPACK) NOVICE TEACHERS OF GEOGRAPHIC IN  
GEOGRAPHIC INFORMATION SYSTEM***

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***ABSTRACT***

The purpose of this study was to determine the understanding of Geographic Information System material for Geography students and the abilities of Kindergarten, TPK, TCK, TPACK. The descriptive research method with a quantitative approach was applied to obtain data on the TPACK ability of geography students. The data collection technique used a questionnaire in the form of a geography student TPACK ability instrument, a matter of understanding the Geographical Information System material and the CoRe + Technology instrument. The selection of participants in this study used a saturated sampling method. The analysis technique used in this research is descriptive analysis with a percentage. The results of this study indicate that of the 103 students who did the test showed (1) Students' understanding of the conceptual GIS material was in the moderate category of 96 people (46.60%), the understanding of students in the high category was only 46 people (22.33%), and the rest are in the low category as many as 64 people (31.07%); (2) The ability of kindergarten students, in general, is in the high category; (3) The TCK ability of geography students is in the low category; (4) The ability of the TPK for geography students is in the medium category; (5) The ability of the TPACK for geography students is in the medium category and the TPACK design data for prospective geography teacher-students is obtained from the results of CoRe + Technology, geography students are still not able to make good lesson plans on GIS material. This was proven by filling in the instruments, some students only filled in the ideas in the CoRe + Technology instrument, less than three ideas, a number of 54% of the 103 students related to TPACK-based learning planning. The recommendation put forward in this study is that there is a need for continuous improvement such as through a training program for the operation of GIS applications in order to increase the understanding and skills of prospective teachers to utilize technology in learning geography in the 21st century.

**Keywords:** TPACK, Novice Teachers, Geographic Information Systems,  
CoRe + Technology

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