

ABSTRAK

Agung Eka Saptaji, 2025. **Pengaruh Penerapan Bahan Ajar Berbasis *Microlearning* pada Pembelajaran Geografi terhadap Peningkatan Kemampuan Berpikir Kritis dan Spasial Peserta Didik (Studi Kelas XI IPS pada Materi Keanekaragaman Hayati di SMA Al-Islam Cirebon).** Program Studi Pendidikan Geografi. Pascasarjana. Universitas Siliwangi. Tasikmalaya.

Penelitian ini didasari oleh rendahnya pemanfaatan teknologi pembelajaran yang optimal di SMA Al-Islam Cirebon, meskipun telah tersedia fasilitas seperti komputer dan akses internet. Pembelajaran geografi masih didominasi metode konvensional yang kurang interaktif, sehingga belum mampu mendorong pengembangan kemampuan berpikir kritis dan berpikir spasial peserta didik secara maksimal. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh penerapan bahan ajar berbasis *microlearning* terhadap kemampuan berpikir kritis dan spasial peserta didik kelas XI IPS pada materi keanekaragaman hayati.

Metode penelitian yang digunakan adalah metode kuantitatif dengan pendekatan quasi eksperimen dan desain pretest-posttest control group design. Teknik pengumpulan data dilakukan melalui tes kemampuan berpikir kritis dan spasial yang diberikan sebelum dan sesudah perlakuan. Sampel penelitian terdiri dari dua kelas yang dipilih secara purposive, yaitu kelas eksperimen yang menggunakan bahan ajar berbasis *microlearning* dan kelas kontrol yang menggunakan pembelajaran konvensional. Instrumen penelitian terdiri dari observasi, angket, dan tes, yang telah divalidasi oleh ahli serta diuji reliabilitasnya. Penerapan bahan ajar *microlearning* dilakukan pada kelas eksperimen dengan format video singkat, infografis, dan animasi yang diakses secara digital.

Hasil uji validitas menunjukkan bahwa bahan ajar berada dalam kategori sangat layak dari segi isi, tampilan, serta efektivitas penyampaian. Berdasarkan hasil analisis data menggunakan uji *paired sample t-test* dan *N-Gain Score*, terdapat peningkatan signifikan pada kemampuan berpikir kritis dan spasial siswa setelah penggunaan bahan ajar berbasis *microlearning*. Perbandingan antara kelas eksperimen dan kelas kontrol menunjukkan perbedaan hasil belajar yang signifikan. Penelitian ini menyimpulkan bahwa bahan ajar berbasis *microlearning* efektif meningkatkan kualitas pembelajaran geografi, khususnya pada aspek berpikir kritis dan spasial peserta didik. Bahan ajar *Microlearning* yang dikemas dalam video singkat, infografis, animasi, dan peta digital interaktif terbukti memfasilitasi pengembangan keterampilan berpikir tingkat tinggi peserta didik, seperti kemampuan merumuskan masalah, mengumpulkan informasi, menganalisis pola spasial, serta menyusun kesimpulan dan solusi. Implikasi penelitian ini menunjukkan bahwa penggunaan *Microlearning* dapat dijadikan strategi pembelajaran inovatif dan efektif dalam pembelajaran geografi, khususnya untuk mengembangkan kemampuan berpikir kritis dan spasial peserta didik sesuai tuntutan pembelajaran abad 21.

Kata Kunci: *Microlearning*, Bahan Ajar Digital, Berpikir Kritis, Berpikir Spasial, Pembelajaran Geografi.

ABSTRACT

Agung Eka Saptaji, 2025. ***The Influence of Microlearning-Based Teaching Materials on Geography Learning to Improve Students' Critical and Spatial Thinking Skills (A Study of Grade XI Social Science Students on the Topic of Biodiversity at SMA Al-Islam Cirebon).*** Graduate Program in Geography Education. Postgraduate School, Universitas Siliwangi, Tasikmalaya.

This study is based on the suboptimal utilization of educational technology at SMA Al-Islam Cirebon, despite the availability of facilities such as computers and internet access. Geography learning is still dominated by conventional, less interactive methods, which have not effectively fostered students' critical and spatial thinking skills. The aim of this study is to determine the effect of implementing microlearning-based teaching materials on the critical and spatial thinking abilities of Grade XI social science students in learning biodiversity.

The research employed a quantitative method with a quasi-experimental approach using a pretest-posttest control group design. Data were collected through tests of critical and spatial thinking skills administered before and after the intervention. The sample consisted of two purposively selected classes: the experimental class used microlearning-based teaching materials, while the control class received conventional instruction. Research instruments included observation sheets, questionnaires, and tests, all of which were validated by experts and tested for reliability. The microlearning teaching materials in the experimental class were delivered in the form of short videos, infographics, and animations accessible digitally.

The results of the validation process indicated that the teaching materials were highly appropriate in terms of content, presentation, and delivery effectiveness. Data analysis using paired sample t-tests and N-Gain Scores showed a significant improvement in students' critical and spatial thinking skills after the use of microlearning-based materials. The comparison between the experimental and control classes revealed significant differences in learning outcomes. The study concludes that microlearning-based teaching materials are effective in enhancing the quality of geography learning, particularly in developing students' critical and spatial thinking skills. Microlearning instructional materials, packaged in short videos, infographics, animations, and interactive digital maps, have been proven to facilitate the development of students' higher-order thinking skills, such as problem formulation, information gathering, spatial pattern analysis, as well as drawing conclusions and solutions. The implications of this study indicate that the use of Microlearning can serve as an innovative and effective teaching strategy in geography education, particularly for enhancing students' critical and spatial thinking skills in accordance with the demands of 21st-century learning.

Keywords: Microlearning, Digital Teaching Materials, Critical Thinking, Spatial Thinking, Geography Learning