ANALYSIS OF THE EFFECTIVENESS OF GENERATIVE ARTIFICIAL INTELLIGENCE AS A TOOL TO IMPROVE UNDERSTANDING OF DISEASE DIAGNOSIS: QUANTITATIVE STUDY OF MEDICAL STUDENTS OF MUHAMMADIYAH MAKASSAR UNIVERSITY CLASS OF 2021

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ABSTRACT

Background: Diagnosis of disease is a fundamental element in medical practice that requires clinical skills, scientific knowledge, and critical thinking. Along with technological developments, Generative AI is starting to be applied in various fields, including medical education, to improve understanding of disease diagnosis. However, the effectiveness of its use in improving medical students' understanding of diagnosis still needs to be studied further. **Objective:** This research aims to evaluate the effectiveness of Generative AI in improving understanding of disease diagnosis among medical students at Muhammadiyah University of Makassar Class of 2021. **Research Methods:** The research uses quantitative methods with an analytical observational design with a cross-sectional approach. A sample of 108 was selected using random sampling techniques. Data was collected through a pre-test and post-test which measured theoretical and clinical understanding of disease diagnosis before and after the intervention using Generative AI. Data analysis used the Wilcoxon Test. **Research Results:** The research results of theoretical understanding, as much as 91.2% and clinical understanding, 71.7% experienced an increase in understanding after the intervention. The Wilcoxon Test shows a p value = 0.000 for both aspects, which means there is a significant difference before and after the intervention using Generative AI in medical students' understanding of disease diagnosis. **Conclusion:** Generative AI has proven effective in increasing understanding of disease diagnosis in medical students. However, AI integration requires attention to ethical, regulatory and adaptation aspects in the application of AI in the field of medical education.

Keywords : Generative Artificial Intelligence, Understanding Disease Diagnosis, Medical Education, Medical Students.

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ABSTRAK

Latar Belakang : Diagnosis penyakit merupakan elemen mendasar dalam praktik medis yang membutuhkan keterampilan klinis, pengetahuan ilmiah, dan pemikiran kritis. Seiring dengan perkembangan teknologi, Generative AI mulai diterapkan dalam berbagai bidang, termasuk pendidikan kedokteran, untuk meningkatkan pemahaman diagnosis penyakit. Namun, efektivitas penggunaannya dalam meningkatkan pemahaman diagnosis mahasiswa kedokteran masih perlu dikaji lebih lanjut. **Tujuan :** Penelitian ini bertujuan untuk mengevaluasi efektivitas Generative AI dalam meningkatkan pemahaman diagnosis penyakit pada mahasiswa kedokteran Universitas Muhammadiyah Makassar Angkatan 2021. **Metode Penelitian :** Penelitian menggunakan metode kuantitatif dengan desain observasional analitik pendekatan cross-sectional. Sampel berjumlah 108 dipilih menggunakan teknik random sampling. Data dikumpulkan melalui pre-test dan post-test yang mengukur pemahaman diagnosis penyakit secara teoritis dan klinis sebelum dan setelah intervensi penggunaan Generative AI. Analisis data menggunakan uji Wilcoxon Test. **Hasil Penelitian :** Hasil penelitian pemahaman teoritis, sebanyak 91,2% dan pemahaman klinis, 71,7% mengalami peningkatan pemahaman setelah intervensi. Uji Wilcoxon Test menunjukkan nilai p = 0,000 untuk kedua aspek, yang berarti terdapat perbedaan yang signifikan sebelum dan setelah intervensi penggunaan Generative AI dalam pemahaman diagnosis penyakit mahasiswa kedokteran. **Kesimpulan :** Generative AI terbukti efektif dalam meningkatkan pemahaman diagnosis penyakit pada mahasiswa kedokteran. Namun, Integrasi AI perlu perhatian terhadap aspek etika, regulasi, dan adaptasi dalam penerapan AI di bidang pendidikan medis.

Kata Kunci : Generative Artificial Intelligence, Pemahaman Diagnosis Penyakit, Pendidikan Kedokteran, Mahasiswa Kedokteran.

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