

# A Meta-Analysis of E-Content's Impact on Competency-Based Medical Education in India

R. Bhuvanamha Devi

Professor, Department of Pathology, Sri Venkateshwaraa Medical College Hospital and Research Centre, Ariyur, Puducherry.

**Background:** In India, competency-based medical education (CBME), a learner-centred approach that prioritizes the acquisition of specific knowledge and skills, has gained significant prominence.<sup>1</sup> The integration of digital educational resources (e-content) into CBME has the potential to revolutionize medical training.<sup>2</sup> This study aims to synthesize existing research on the effectiveness, efficiency, and utility of e-content in facilitating competency development, providing valuable insights for educators, policymakers, and medical students.

**Aim and Objectives:** This systematic review seeks to consolidate a repository of evidence addressing the impact of e-content on CBME in India.

**Methodology:** The search parameters were restricted to English-language publications, original research articles, and peer-reviewed studies on e-content in Indian medical education, utilizing the keywords "e-content," "e-learning," "competency-based medical education," "India," and "Impact" published between 2019 and 2024. Studies without relevant outcome measures, that did not focus on impact, and editorial letters were excluded. Statistical analysis was conducted using SPSS software.

**Results:** A comprehensive database search identified 15 articles that met the inclusion criteria. The original research articles were disseminated across 12 different journals, with a notable concentration in BMC Medical Education and the Journal of Education and Health Promotion. A majority (73%) of the studies utilized a cross-sectional questionnaire-based approach. A substantial proportion (85%) of students possessed smartphones for accessing e-content. The analysis revealed that 70% of the studies were conducted among first-year students. Google Classroom emerged as the commonest platform and Lecture PowerPoint with notes were the most commonly shared e-content resources, followed by videos and animations. A significant portion of students (47.8%) expressed satisfaction with the e-learning resources and in their academic performance. Furthermore, 60% of students indicated a preference for structured e-modules as a means of delivering the curriculum.

**Conclusion:** The present study reveals a growing trend toward the acceptance of e-learning modalities by medical undergraduates in India. Nevertheless, for practical and clinical subjects, the blended learning approach appears to be favoured. The free E-content available online is often perceived as being of substandard quality. Students express their desire for guidance in accessing reliable, informative, and understandable e-content resources that are widely accessible.

**Keywords:** E-content, Impact, Competency-based Medical Education in India

## References

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