Enhancing Dermatology Education through Innovative Teaching and Learning Strategies and Technology

Yethindra Vityala*, Tugolbai Tagaev, Altynai Zhumabekova

Honorary International Faculty, AJ Research Centre, AJ Institute of Medical Sciences and Research Centre, Mangalore, Karnataka, India

*Corresponding author:

Yethindra Vityala

AJ Institute of Medical Sciences and Research Centre, Mangalore, Karnataka, India;
Email: yethindravityala10@gmail.com
ORCID ID: https://orcid.org/0000-0003-1007-2422

ABSTRACT

This research paper aims to explore the potential of innovative teaching and learning strategies and technology in enhancing dermatology education. The paper will discuss the challenges and opportunities presented by recent advancements in medical education and the importance of equipping medical students with the necessary knowledge and skills to recognize and manage skin disorders. The paper will also examine the most effective teaching and learning strategies in dermatology education and how cutting-edge technologies and online platforms can enhance both student and teacher engagement. The paper will further discuss the use of free software or shared applications and social media platforms as cost-effective and easily accessible means of connecting students. Finally, the paper will highlight the importance of human capabilities in dermatological education and provide recommendations for improving practical teaching.

Keywords: Dermatology, Education, Medical Student, Social Media, Technology

INTRODUCTION

Dermatology education is crucial for equipping medical students with the necessary knowledge and skills to recognize and manage skin disorders, which are prevalent in various medical domains and account for approximately 15% of primary care [1].

Recent advancements in medical education have presented both challenges and opportunities for professors and students of dermatology. Curricula have been updated to include new methodologies and technologies, such as dermoscopy and immune-mediated disorders, as well as the most commonly observed pathologies. The traditional approach to transmitting concepts has been adapted to include collaborative conversation tasks, active thinking, and a patient-centered practical approach [2,3]. Today, medical students have high levels of technological proficiency and access to numerous

online tools and resources, which provides new opportunities to enhance their educational experience in dermatology. Therefore, the question arises: How can we optimize medical students' educational experience in dermatology?

Teaching and learning strategies that are considered the most effective are not universally agreed upon; however, students highly value clinical interactions with patients and interactive or hands-on methods. Active learning activities support knowledge exchange and skill development, both of which are essential to students [4]. These goals can be achieved using cutting-edge technologies and online platforms, which enhance both student and teacher engagement, and create a more organized and intellectually stimulating educational experience [5]. Numerous tools such as films, podcasts, atlases, questionnaires, and online or interactive diagnostic communities serve as valuable supplements to conventional in-person instruction. Incorporating these applications into blended learning has had a positive impact on student satisfaction and the effectiveness of educational interventions [6]. However, implementing these platforms and resources can be costly and resource-intensive for educators, thereby making the use of free software or shared applications potentially advantageous [6]. Social media platforms provide a modern and easily accessible means of connecting students through concise videos or instructional conversations. In the field of dermatology, which relies heavily on visual learning, the ability to access and distribute materials immediately and without limitations is highly beneficial [7]. Additionally, other audiovisual tools that use virtual simulation or artificial intelligence enable students to gain knowledge through firsthand experience, while also contributing to a model that evaluates their behavior and reaction to novel clinical scenarios. Although this technology is expensive and may have limited availability, its use provides authentic medical instructions in a safe clinical setting.

The implementation of innovative approaches and technology in dermatological education has the potential to transform pedagogical practices significantly. However, human capabilities are essential in this field. Integrating technology can serve as an optimal supplement to motivate instructors and students to acquire specialized information. Practical teaching is important in dermatological education, and face-to-face interactions are preferred.

However, limitations exist, such as a high student-to-practice group ratio and limited time allocation for patient care by the teacher. To improve practical teaching, specific care agendas should be implemented during school hours, allowing more time to be allocated to each patient. Increasing the number of practical teaching collaborators can also help to reduce the number of students per group, leading to improved practical training.

REFERENCES

1. Margolis DJ, Schaffer JV. (2010). Dermatology in the medical school curriculum. J Am Acad Dermatol. 63(4):593–597.

2. Rana J, Burgin S. (2018). Teaching & learning tips 3: active learning strategies. Int J Dermatol. 57(1):79–82.

3. Hwang SW, Oh CK, Chung JH. (2015). Current status of dermatology education in Asian medical schools. J Dermatol. 42(11):1165–1169.

4. Aluko A, Rana J, Burgin S. (2018). Teaching & learning tips 9: case-based teaching with patients. Int J Dermatol. 57(7):858–861.

5. Finlay AY. (2013). Put the student in charge: take part in the biggest revolution ever in teaching and learning in dermatology. Acta Derm Venereol. 93(1):23–26.

6. Giunta A, Di Stefani A, Chimenti S. (2011). Mobile phones: a role in teaching dermatology? Dermatology. 222(1):22–23.

7. Kaliyadan F, Pulickal JK, Al Dhafiri M. (2022). Using learning management systems for virtual teaching clinics in dermatology. Indian J Dermatol Venereol Leprol. 88(4):559–561.