Commentary

The Use of YouDermoscopy Application for Dermoscopy learning: A pilot study

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The landscape of postgraduate medical education has changed, incorporating active, patient-centered, and competency-based approaches beyond traditional lectures [1]. Game-based learning

(GBL) has emerged as a promising strategy, enhancing practical skill acquisition in a risk-free environment [1,2].

Dermatoscopy is a non-invasive imaging technique that revolutionised early melanoma detection. Mastering it requires long training and extensive practice. Youdermoscopy™ application is a GBL learning platform, offering over 1,000 training cases of pigmented skin tumors [3]. This free application, launched in 2016, has garnered over 40,000 downloads and 26,000 registered users across more than 150 countries. It is built on game mechanics (progressive difficulty, scoring, and immediate feedback). Despite the potential of GBL in enhancing dermoscopy learning, its use remains under-evaluated.

This pilot study aimed to address that gap by assessing whether YouDermoscopy™ enhances dermatoscopy learning.

This was a single-centre, cross-sectional study at Charles-Nicolle Hospital, Tunis, between January and April 2025. After obtaining informed consent, all Tunisian dermatology residents were invited to participate. They self-assigned to one of three cohorts: YouDermoscopy™ users (study group), residents holding a formal dermoscopy certificate (reference group), and those without specific dermoscopy training outside their clinical rotations. Data was collected using a standardized online questionnaire containing 130 high-resolution dermatoscopic images —50 melanomas, 40 seborrhoeic keratoses/solar lentigines, and 40 melanocytic naevi. This online form was used and validated in a previous study [4]. Each case offered three diagnostic options. After completing the online form, the total diagnostic score was calculated (maximum score 300). The difference between the groups was analyzed using the Mann-Whitney U test.

Out of 64 invited Tunisian dermatology residents, 23 completed the online questionnaire, resulting in a response rate of approximately 35.9%. Seven residents reported using the Youdermoscopy™, and five held a formal dermoscopy diploma. The latter did not receive any dermoscopy training outside of their clinical rotations. The average diagnostic score was 161 ± 29 (median 163).

The study group had higher average scores (161 ± 25) than those with no formal dermatoscopic training (control group) (148 ± 27). However, the Youdermoscopy™ group scored significantly lower than residents with formal dermatoscopic training (reference group) (Table 1).

This study, evaluating a GBL method for learning dermatology, showed that residents who used YouDermoscopy™ tend to perform better than those with no formal training.

Youdermoscopy™ utilizes a gamified approach [3]. Participants are presented with dermoscopic images of cutaneous lesions for a brief duration, after which they select a diagnosis from eight options: basal cell carcinoma (BCC), solar lentigo and seborrheic keratosis, melanoma, squamous cell carcinoma (in situ and invasive), dermatofibroma, vascular lesion, nevus, or other [3]. It is structured into levels, each comprising eight sessions with eight images. To advance, users must correctly identify at least 75% of 64 lesions per level [3]. This gamified approach may encourage residents to learn dermoscopy, practice it, and even read books and articles on the subject.

While YouDermoscopy™ may offer a practical advantage, formal training through a Certified Dermoscopy Course seems to remain vital for accurate clinical dermoscopic skin-tumor diagnosis, as in our study, the reference group scored significantly better than the study group.

The main limitation of this research is its small sample size. Additionally, the assessment was exclusively based on dermoscopic images, without the inclusion of clinical metadata. Future

studies could explore the long-term benefits of YouDermoscopy™ usage and its combination with formal training.

References

1. Hammami O, Zaouche K, Kallel M, Nouira M. Evaluation of learning abilities after role-playing method: Comparing outcomes of Active and Observer. *Tunis Med*. 2024;102(11):866-870. Published 2024 Nov 5. DOI:10.62438/tunismed.v102i11.4996

2. Rangareddy H, Govinda Swamy KS, S A, Petimani MS. Enhancing Student Engagement Through Active Teaching-Learning Approaches Among First-Year Medical Undergraduates. *Cureus*. 2025;17(6):e85921. Published 2025 Jun 13. DOI:10.7759/cureus.85921

3. Pellacani G, Argenziano G. New insights from non-invasive imaging: from prospection of skin photodamages to training with mobile application. *J Eur Acad Dermatol Venereol*. 2022;36 Suppl 6(Suppl 6):38-50. DOI:10.1111/jdv.18197

4. Litaiem N, Sboui K, Daghrir J, et al. Collective human intelligence vs. artificial intelligence: a comparative analysis for melanoma diagnosis in darker skin tones. *Int J Dermatol.* 2024;63(10):e278-e280. DOI:10.1111/ijd.17364

Table 1. Diagnostic score differences among study, control, and reference groups.

Compared groups	N	Mean	Standard deviation	P

Score	Study group				
		7	161,29	25.250	
					0.38
	Control group				
		11	148,55	27,711	
					0,048
	Reference Group	5	190,60	16,519	