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Editorial

The evolving landscape of medical education innovations

Kourosh Amini, PhD
Professor of Nursing Education, Zanjan University of Medical Sciences, Zanjan, Iran
Editor-in-Chief, Journal of Medical Education Development
Email: korosh@zums.ac.ir

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The landscape of medical education is rarely static; it is a living ecosystem that evolves in response to technological pressures, societal needs, and the internal drive for excellence. As we move further into the decade following the global pandemic, the focus has shifted from mere survival to meaningful evolution. The articles compiled in this issue of the Journal of Medical Education Development (J Med Edu Dev. 2026;19(1)) offer a panoramic view of this terrain. They do not merely present data; they tell a story of a discipline in transition, grappling with how best to cultivate the healers of tomorrow.

A close reading of these studies reveals a complex interplay between the individual learner and the educational environment, suggesting that the path forward requires us to harmonize the efficiency of modern tools with the irreplaceable depth of human mentorship.

The human element leadership and power

At the heart of clinical education lies the relationship between the teacher and the student. It is here, in the crucible of practice, that professional identity is forged. Namdari et al. [1] provide compelling evidence that the style of leadership exercised by clinical instructors is not merely a matter of management but a determinant of student self-efficacy. Their findings suggest that when instructors adopt transformational behaviors, they do more than transmit knowledge; they instill belief. This resonates deeply with the broader ethos of medical education, where confidence is as vital as competence. The implication is clear: we cannot expect students to navigate the complexities of patient care if their guides do not first empower them through visionary leadership. However, the shadow side of these relationships is illuminated by the work of Enang et al. [2].

Their qualitative exploration of power dynamics in allied medical education exposes the "hidden curriculum"—the subtle, often unwritten lessons that students absorb through institutional culture. The study paints a sobering picture of intimidation and hierarchy, where fear rather than respect drives compliance.

This serves as a critical reminder that the formal curriculum tells only half the story.

If we wish to produce professionals who are compassionate and ethically sound, we must dismantle the cultures of silence and domination that persist in our lecture halls and clinics. The emotional toll of these dynamics, as Enang et al. note, is a barrier to true learning, one that must be addressed with as much urgency as any curricular deficit.

Bridging the gap between technology and methodology

The tension between traditional methods and technological innovation is another recurring theme. In an era where artificial intelligence promises to revolutionize learning, Al Harthi et al. [3] offer a timely investigation into the VARK learning preferences of pre-clinical students. By mapping

these preferences onto the BLOOM-AI framework, they highlight a crucial insight: technology must serve the learner, not the other way around. The predominance of kinesthetic and multimodal preferences among students suggests that while AI can personalize learning, it must be designed to engage the senses fully, not just the intellect. This aligns with the findings of Merghani et al. [4], whose study on computer-based simulations in physiology demonstrates that digital tools can indeed create enjoyable and low-stress learning environments. Yet, the success of such tools depends on their ability to mimic the engagement of real-world experiences. Nevertheless, technology has its limits, as evidenced by Zengin et al. [5]. In their randomized controlled trial comparing video-assisted learning with face-to-face instruction for surgical knot-tying, the human touch proved superior. While videos offer accessibility, they lack the immediate, corrective feedback of a live mentor.

This distinction is vital. It reminds us that in the acquisition of psychomotor skills, there is no substitute for the presence of an expert who can guide, correct, and encourage.

The challenge for modern educators is not to replace face-to-face interaction but to find the optimal hybrid model where technology enhances, rather than eclipses, the human connection.

Collaboration in a complex world

Modern healthcare is a team sport, and education must reflect that reality. The studies by Zahra et al. [6] and Fauziyah et al. [7] delve into the mechanics of collaborative learning. Zahra et al. explore the readiness of students for interprofessional online learning, revealing a journey from confusion to adaptation. Their findings suggest that "readiness" is not a static state but a developmental process that requires structured facilitation and psychological safety. Similarly, Fauziyah et al. present the PAL-Jigsaw method as a hybrid cooperative model that fosters community.

Both studies underscore a fundamental truth: learning is a social act. Whether online or in person, students thrive when they feel connected to their peers and when they are active participants in their own education. These methods move beyond the passive absorption of facts to the active construction of knowledge through dialogue and cooperation.

The internal landscape self-regulation and thought

Finally, this issue turns the lens inward to the psychological world of the student. Sahu et al. [8] examine the impact of Problem-Based Learning (PBL) on critical thinking, finding that while students value the approach, their perceptions vary with age and maturity.

This suggests that critical thinking is not merely taught but caught, requiring a developmental readiness that educators must nurture. Karimkhanlooei et al. [9] reinforce this by linking self-directed learning readiness to age and maturity, arguing that we must scaffold the transition to autonomy for younger students.

Conversely, Seraji et al. [10] highlight a significant barrier to this autonomy: academic procrastination fueled by social media. Their study distinguishes between mere usage and the specific behavior of using platforms to avoid tasks. This finding is a microcosm of the larger struggle for attention in the digital age.

It calls for an educational approach that not only teaches content but also cultivates the self-regulation and discipline necessary to resist the endless distractions of the modern world.

A new path forward

The collective voice of these articles is a call for balance. We see the value of high-tech simulations and AI frameworks, but we are reminded that the bedrock of medical education remains the mentorship of empathetic leaders and the support of peer communities. We see the potential of innovative pedagogies like PBL and Jigsaw, but we recognize they must be tailored to the developmental stage of the learner.

Ultimately, the evolution of medical education is not about choosing between the old and the new, but about integrating the best of both. It is about creating environments where power is shared rather than hoarded, where technology serves to connect rather than isolate, and where the development of the student's character is valued as highly as the acquisition of their skills.

As we look to the future, let us carry these lessons forward, striving to create an educational culture that is as humane as it is scientifically rigorous.

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