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Mini-Review

A New Dawn in Orthodontic Teaching: Embracing the Power of Online Learning in Orthodontics

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Abstract

The digital transformation of education is reshaping how orthodontics is taught and learned. Online learning models offer flexibility, accessibility, and cost-efficiency that traditional in-person teaching often cannot match. This article examines the evolving role of e-learning in orthodontic postgraduate education, focusing on the pedagogical advantages and structural models that support clinician development. As a case study, the Online Orthodontic Academy (OOA) is explored to illustrate how modular, clinically grounded, and mentorship-driven curricula can support professional upskilling and lead to recognised qualifications such as the Level 7 Diploma in Orthodontics. Broader implications for the future of orthodontic education are discussed.

Keywords: *Orthodontic Education; E-Learning; Digital Learning in Dentistry*

Introduction

Orthodontic education, like much of postgraduate training, is undergoing a significant evolution. Traditionally reliant on in-person lectures and clinical workshops, the field is now embracing digital learning environments. While the COVID-19 pandemic accelerated this shift, the sustained uptake of online education highlights its long-term viability. E-learning in healthcare has been shown to improve knowledge retention, provide flexibility, and increase accessibility (Swan, 2020; Cook et al., 2010).

This article explores the advantages and challenges of online orthodontic education and examines how structured digital platforms can enhance professional learning. As an illustrative example, the Online Orthodontic Academy (OOA) a UK-based digital education provider is presented to demonstrate how a modular, mentorship-based format can lead to credible postgraduate qualifications.

Rationale for Online Orthodontic Teaching

Accessibility and Flexibility

Orthodontic training has traditionally required clinicians to take time away from practice, travel to centralized institutions, and incur substantial costs challenges that disproportionately affect those in remote or underserved areas (Berge, 2011). Online platforms eliminate these barriers by offering fully accessible, flexible learning that fits around professional schedules. Crucially, the digital format allows the course to reach a worldwide audience, empowering clinicians across continents to access expert-led orthodontic education, regardless of geographic location or time zone.

Self-Paced and Personalised Learning

Digital education supports varied learning trajectories. Learners can review lectures, pause practical demonstrations, and complete assessments at their own pace. This aligns with adult learning theory (Knowles et al., 2005), which emphasises autonomy, relevance, and intrinsic motivation.

Community and Interactivity

Despite concerns that online learning can be isolating, many programs now include peer interaction, live webinars, and case discussion forums. These elements replicate the benefits of small-group teaching, enhance engagement, and allow learners to benefit from diverse clinical perspectives.

Case Study: The Online Orthodontic Academy (OOA)

Founded by a UK-trained specialist, OOA offers a structured 12-month curriculum designed for dentists seeking formal continuing education or postgraduate qualifications. While the academy is one of several platforms in the sector, its integration of case-based mentorship and assessment-led progression exemplifies a robust model for online clinical education.

Qualification Pathway: Level 7 Diploma in Orthodontics

Upon completion, participants may pursue a Level 7 Diploma in Orthodontics, registered on the UK's Regulated Qualifications Framework (RQF). The diploma reflects clinical proficiency, ethical practice, and diagnostic skill. Although other platforms may offer certificates or CPD accreditation, Level 7 recognition provides a formal benchmark for postgraduate achievement.

Educational Evidence and Efficacy

Numerous high-quality studies validate the effectiveness of online and blended learning models in medical and dental education. A comprehensive meta-analysis by Cook et al. (2010), which reviewed over 200 studies involving healthcare professionals, concluded that internet-based instruction is not only comparable to traditional face-to-face methods in terms of learning outcomes but often *superior* when designed with interactive and self-directed elements. Specifically, the study found that learners in online environments demonstrated moderate improvements in knowledge acquisition, especially when courses included practice exercises, feedback loops, and multimedia content. Other research corroborates these findings, noting that learner satisfaction, engagement, and knowledge retention are significantly enhanced in online platforms that allow for flexibility and repeated exposure to content (Means et al., 2013; Regmi & Jones, 2020). These findings support the pedagogical design of the Online Orthodontic Academy, which integrates interactivity, modular pacing, and real-world case application to optimize learner outcomes.

Mentorship and Case-Based Learning

OOA's model includes individual mentorship from a UK trained Specialist Orthodontist. Each participant is paired with a dedicated, experienced orthodontist who provides personalised, case-based guidance throughout the program. Learners upload real patient cases to a secure mentoring forum, including full orthodontic records for review. The mentor assesses case suitability, collaborates on finalising the treatment plan, and then provides ongoing support as the case progresses. After each patient visit, learners submit updated clinical photographs, which are carefully reviewed by the mentor. Detailed feedback is then given, including tailored recommendations for the next appointment. This iterative, step-by-step support ensures that clinicians are never working in isolation, allowing for confidence-building, clinically relevant learning, and continuous professional development.

Case-based learning is central to the program. Students are required to submit diagnostic records, treatment plans, progress notes, and final results. This active learning approach mirrors clinical reality, promoting both critical thinking and reflection skills often underdeveloped in lecture-only formats (Schön, 1983).

Challenges and Solutions in Online Orthodontic Education

Practical Skill Development

A known limitation of online education in dentistry is the development of manual skills. High-quality platforms attempt to address this via slow-motion video demonstrations, 3D simulations, and optional hands-on workshops. OOA, for example, encourages learners to submit photos of bracket placement on typodont models for feedback an approach that blends digital instruction with physical practice.

Engagement and Motivation

Maintaining learner motivation is critical. Programs such as OOA and similar initiatives integrate quizzes, discussion forums, milestone webinars, and live Q&A sessions to build accountability and prevent disengagement.

Quality Assurance

Robust assessment is essential to uphold academic standards. Level 7 programs typically involve a combination of written exams, clinical portfolio submission, and structured oral assessments conducted via video conferencing. These ensure academic credibility on par with traditional postgraduate education.

Broader Implications for the Field

Online learning is poised to become a core component of postgraduate orthodontic education. Beyond convenience, it promotes equity by reducing geographic and socioeconomic barriers. As technology advances, integration of AI, AR/VR simulation, and adaptive learning may further enhance educational outcomes. While traditional formats retain value particularly for hands-on training the flexibility and reach of online models make them indispensable in modern clinical education.

Conclusion

The shift toward online orthodontic education reflects broader changes in professional learning. Case-based, mentor-supported programs such as those exemplified by the Online Orthodontic Academy demonstrate that digital platforms can deliver clinically rigorous, accessible, and credentialed learning experiences. As more clinicians seek flexible pathways for upskilling without sacrificing practice time or income, online education offers a credible and forward-looking solution for postgraduate development in orthodontics.

Conflict of Interest Statement

Dr. Zaid Esmail is the founder and director of the Online Orthodontic Academy (OOA), which is discussed in this article as a case study. Efforts have been made to present the information objectively and within the context of broader educational trends.

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