Category 6: Anatomy Education and Training, Anatomical Techniques, Body Donation and Procurement Ethics, Digital Anatomy.

Title 1: Anatomy Reimagined with CADAVIZ: Making Sense of the Journey from Cell to System

Title 2: CADAVIZ: Making Sense of the Journey from Cell to System in Embryology

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Abstract

Background:
Embryology is one of the most conceptually challenging areas in early medical education. Traditional resources, such as static textbook diagrams and non-interactive YouTube videos, often fall short in aiding learners to visualize subtle transformations and mentally reconstruct complex three-dimensional processes. To address these limitations, Cadaviz, a Virtual Dissection Table equipped with interactive 3D models, animations, and embedded videos, offers a pedagogically enriched digital alternative.

Methods:
A cross-sectional, questionnaire-based study was conducted to assess student perceptions of learning embryology through Cadaviz. The instrument evaluated five key learning domains: conceptualization, visualization, spatial connection, knowledge retention, and clinical understanding. Responses were collected using a five-point Likert scale and analyzed descriptively to identify overall trends.

Results:
Students expressed consistently positive perceptions across all domains. In the conceptualization domain, Cadaviz was reported to enhance clarity of developmental sequences compared to conventional resources. Feedback under visualization highlighted the constraints of textbooks and non-interactive videos, with learners noting that Cadaviz's 3D models and animations made abstract embryological events more accessible. Improved spatial connection was attributed to the ability to rotate and explore structures from multiple angles, aiding the understanding of how early forms relate to adult anatomy. Regarding knowledge retention, students reported that repeated access and multimodal interactivity strengthened long-term recall. In the clinical understanding domain, participants felt better equipped to relate developmental processes to congenital anomalies without the limitations posed by traditional teaching methods.

Conclusion:
Cadaviz stands out as an innovative and pedagogically impactful tool that significantly enhances conceptual clarity, visualization, retention, and clinical integration in embryology education.