

Digital Transformation of Physical Education in Chinese Higher Education: Pathways Toward the Sustainable Development Goals

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INTRODUCTION

Higher Education as a Driver for Sustainable Development

Higher education institutions are pivotal in achieving the UN's 2030 Agenda. This presentation explores how digital integration in Chinese Physical Education (PE) contributes to the Sustainable Development Goals (SDGs), focusing on SDG 3 (Good Health and Well-Being) and SDG 4 (Quality Education).



Global Imperative

Universities must rethink their missions to address social, environmental, and health outcomes.



PE in China

Physical culture, encompassing health and discipline, is a national priority, offering a unique sustainability lens.



Digital Synergy

Pairing physical education with digital technologies aligns education with global sustainability goals.

Digital Transformation of Physical Education

The digital transformation in Chinese universities has dramatically accelerated, especially during the COVID-19 pandemic, revolutionizing physical education.

Technological Innovations

- Virtual reality (VR) sports simulations.
- AI-based fitness applications.
- Big data analytics for experimental teaching.



Student Engagement & Equity

- Personalized, data-driven learning experiences improve motivation.
- Digital platforms enable remote and underserved communities to participate.
- Promotes democratization, health, and sustainability.



Practical Illustrations and Impact

Leading universities are pioneering hybrid curricula that blend traditional and digital learning, demonstrating tangible benefits.

Hybrid Curricula Success

Beijing Sport University and Shanghai University of Sport integrate face-to-face classes with online platforms. Students use wearable devices and mobile apps for personalized feedback, fostering long-term healthy habits (SDG 3).



During the pandemic, over **80%** of PE instructors used digital tools, maintaining continuity and supporting students' mental health through virtual communities.

This integration enhances educational quality and contributes directly to well-being.

NAVIGATING OBSTACLES

Challenges and Contradictions in Digital Transformation

While promising, the digital transition presents significant challenges that must be addressed for equitable and sustainable outcomes.

Digital Divide

Rural institutions lack infrastructure, widening the gap with urban universities and undermining inclusive education.

Instructor Preparedness

Only 60% of PE instructors feel trained in advanced tech, highlighting a critical need for professional development.

Environmental Footprint

Increased energy demands from data centers challenge SDG 13 (Climate Action), requiring critical examination of digital sustainability.

⊗ Digitalization requires strategic planning, investment, and ethical reflection to avoid exacerbating inequalities.

STRATEGIC RESPONSES

Policy and Institutional Interventions

China is actively implementing multi-level responses to these challenges, fostering sustainable digital growth.

1

Government Subsidies

Targeted funding for digital infrastructure, especially in rural areas, to bridge the digital divide.

2

Public–Private Partnerships

Collaborations with tech firms like Huawei to develop eco-friendly, energy-efficient platforms.

3

Curriculum Reforms

Integrating digital literacy and sustainability awareness into teacher training programs.

Future Directions

- **Health Monitoring & Prevention:** Leveraging big data for predictive health trends and reduced healthcare costs.
- **Environmental Education:** Gamified apps promoting eco-friendly sports and sustainability awareness.
- **Balanced Development:** Integrating teacher capacity-building, equitable access, and ethical AI frameworks for holistic innovation.

CONCLUSION

Shaping a Sustainable Future Through Digital Education

The digital reorganization of PE in Chinese higher education exemplifies how universities can drive the SDGs.

Bridge the Divide

Ensuring equitable access to digital resources for all institutions.

Empower Educators

Providing comprehensive training in advanced digital pedagogies.

Green Solutions

Adopting energy-efficient technologies to minimize environmental impact.

Higher education can lead the way toward a future where quality education, health, and sustainability are mutually reinforcing.

As researchers, we must actively contribute to evidence-based, inclusive, and ethically grounded solutions.

**Thank you for
your
attention!!!
Ready to
answer your
questions 😊**