

INNOVATIVE PRACTICES IN PHYSICAL EDUCATION TO ENHANCE STUDENT ENGAGEMENT

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Article Info	ABSTRACT
<p>Article History: Received: 17th January 2026 Accepted: 22nd January 2026 Published: 02nd February 2026</p>	<p>Student engagement in physical education (PE) is critical for promoting lifelong physical activity and holistic development. However, traditional pedagogical approaches often fail to sustain interest and participation. This paper reviews recent innovative practices designed to enhance student engagement in PE, including technology integration, pedagogical models, gamification, differentiated instruction, and teacher creativity. Evidence indicates that these strategies improve motivation, participation, and learning outcomes, suggesting pathways for meaningful curriculum reform.</p>
<p>Keywords: <i>Physical Education, Student Engagement, Technology Integration</i></p>	

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Introduction:

Physical education (PE) plays a vital role in fostering physical competence, social skills, and attitudes toward lifelong fitness. In the technological era students' physical activity has been declined due to several reasons. Physical education class offers opportunity to students to become physically active but at the same time due to enormous reasons the actual students participation and engagement in the physical education class has been reduced. Student engagement remains a persistent challenge, often due to traditional, drill-based instruction that lacks relevance and motivation for diverse learners (Kirk, 2013; Rink, 2010; Ennis, 2011; Ntoumanis, 2001). Many studies have demonstrated the factors affecting their lower engagement in the class. Innovative practices that combine pedagogical reform, technology, and motivational design have emerged as promising solutions to enhance engagement across age groups and abilities. The present study aims to review recent innovative practices designed to enhance student engagement in physical education class.

Student engagement in PE encompasses behavioral, emotional, and cognitive dimensions manifested through active participation, enjoyment, and investment in learning. According to contemporary research, enhancing student engagement requires learning environments that support autonomy, relevance, and challenge, while minimizing inactivity and disengagement (Ntoumanis, 2001; Standage, Duda, & Ntoumanis, 2005; Rink, 2010; Siedentop, Hastie, & van der Mars, 2020).

Innovative Practices in Physical Education:**1. Technology Integration:**

The integration of digital technologies such as wearable devices, mobile applications, virtual reality (VR), and e-modules has been shown to create dynamic and personalized physical education experiences (Kerner & Goodyear, 2017; Casey, Goodyear, & Armour, 2017; Dunser et al., 2019). Wearable fitness trackers and heart-rate monitors provide real-time feedback that supports self-monitoring and goal setting, thereby enhancing motivation and participation (Kerner & Goodyear, 2017; Gao et al., 2019). Virtual and augmented reality further creates immersive environments that increase enjoyment and exploratory learning in physical activity (Dünser et al., 2019; Bacca et al., 2014). Moreover, quantitative research demonstrates that e-modules, teacher creativity, and technology use significantly predict student engagement in sport and physical education, with technology functioning as a moderating variable (Aru Fantiro et al., 2025).

2. Pedagogical Models and Active Methodologies:

Innovative pedagogical models such as Teaching Games for Understanding (TGfU) and Sport Education have been associated with higher engagement levels by shifting focus from rote skill drills to meaningful game play and tactical understanding (Bunker & Thorpe, 1982; Hastie et al., 2011; Kirk, 2013). Empirical research reports that TGfU and hybrid models combining games and sport education enhance both engagement and game performance (Hastie & Curtner-Smith, 2006; González-Víllora et al., 2018).

Differentiated instruction adapting tasks to student ability and interest has been found to significantly increase engagement, intrinsic motivation, and satisfaction with PE among university students (Morgan et al., 2015; Tomlinson, 2014).

3. Gamification and Game-Based Learning:

Gamification is the use of game mechanics such as points, badges, leaderboards, and narrative challenges have emerged as a powerful tool to increase student motivation and participation (Hamari et al., 2014; Sailer & Homner, 2020). Systematic reviews indicate that gamified experiences can improve motivational outcomes and foster collaborative learning environments in PE settings (Koivisto & Hamari, 2019; Sailer & Homner, 2020).

Emerging research also highlights the potential of augmented reality combined with gamification to further enhance engagement, enjoyment, and physical activity levels (Boddy et al., 2022; Dunser et al., 2019).

4. Teacher Creativity and Instructional Design

Teacher creativity including the development of interactive lessons, novel activity sequences, and responsive feedback influences student engagement by making PE content more relevant and stimulating (Casey & Goodyear, 2015; Rink, 2010; Kerner & Goodyear, 2017). Studies show that creative instructional strategies, coupled with technology, significantly predict higher engagement (Casey et al., 2017; Gao et al., 2019).

Discussion:

The reviewed literature consistently shows that innovative practices can transform PE from a traditional, often passive experience into an interactive and motivating context. Technology supports personalized learning and feedback; pedagogical models deepen strategic and cognitive engagement; gamification leverages intrinsic motivation; and differentiated teaching ensures inclusivity. However, successful implementation depends on teacher training, infrastructure, thoughtful design, and consideration of student needs.

Conclusion:

Innovative practices in PE particularly those integrating technology, novel pedagogies, and motivational designs have demonstrable benefits for student engagement. Continued research and teacher professional development are essential to support scalable implementation across diverse educational contexts.

References:

- Aru Fantiro, F., Muzakki, A., Prakoso, B. B., Saputra, S. Y., & Putri, A. D. C. (2025). Enhancing student engagement in sports learning: The role of e-modules, teacher creativity, and technology. *SPORTIF Journal: Jurnal Penelitian Pembelajaran*.
- Augmented reality in physical education: A gamified approach to enhanced learning (2025). *International Journal of Research and Innovation in Social Science*.
- Bacca, J., Baldiris, S., Fabregat, R., Graf, S., & Kinshuk. (2014). Augmented reality trends in education: A systematic review. *Educational Technology & Society*, 17(4), 133–149.
- Bunker, D., & Thorpe, R. (1982). A model for the teaching of games in secondary schools. *Bulletin of Physical Education*, 18(1), 5–8.
- Casey, A., & Goodyear, V. A. (2015). Can cooperative learning achieve the four learning outcomes of physical education? *Physical Education and Sport Pedagogy*, 20(5), 542–558. Rink, J. E. (2010). *Teaching physical education for learning* (6th ed.). McGraw-Hill.
- Casey, A., Goodyear, V. A., & Armour, K. M. (2017). *Digital technologies and learning in physical education: Pedagogical cases*. Routledge.
- Dunser, A., Walker, L., Horner, H., & Bentall, D. (2019). Creating interactive outdoor learning experiences using augmented reality. *Computers & Education*, 128, 41–53.
- Ennis, C. D. (2011). Physical education curriculum priorities: Evidence for education and skillfulness. *Quest*, 63(1), 5–18.
- Gamification in physical education: A systematic review (2024). MDPI Education Sciences.
- Gao, Z., Lee, J. E., Pope, Z., & Zhang, D. (2019). Effect of active video games on children's physical activity and motivation. *Journal of Sport and Health Science*, 8(1), 1–10.
- Gong, J., Castro, D., & Chen, Y. (2024). Influence of technology integration on students' engagement in physical education. *Journal of Education and Educational Research*, 9(2), 265–274.
- Gonzalez-Víllora, S., Evangelio, C., Sierra-Díaz, M. J., & Fernandez-Rio, J. (2018). Hybridizing the Teaching Games for Understanding and Sport Education models: Effects on student motivation and sport performance. *European Physical Education Review*, 24(4), 1–15.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies. *Proceedings of the 47th Hawaii International Conference on System Sciences*, 3025–3034.
- Hastie, P. A., & Curtner-Smith, M. D. (2006). Influence of a hybrid Sport Education–Teaching Games for Understanding unit on one teacher and his students. *Physical Education and Sport Pedagogy*, 11(1), 1–27.

- Hastie, P. A., de Ojeda, D. M., & Luquin, A. C. (2011). A review of research on Sport Education. *Physical Education and Sport Pedagogy*, 16(2), 103–132.
- Kerner, C., & Goodyear, V. A. (2017). The motivational impact of wearable healthy lifestyle technologies. *Computers & Education*, 112, 196–208.
- Kirk, D. (2013). Educational value and models-based practice in physical education. *Educational Philosophy and Theory*, 45(9), 973–986.
- Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45, 191–210.
- Morgan, P. J., Lubans, D. R., Collins, C. E., Warren, J. M., & Callister, R. (2015). Engaging men in weight loss: The role of differentiated instruction and motivation in physical education and health settings. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 1–12.
- Ntoumanis, N. (2001). A self-determination approach to the understanding of motivation in physical education. *British Journal of Educational Psychology*, 71(2), 225–242.
- Rink, J. E. (2010). *Teaching physical education for learning* (6th ed.). McGraw-Hill.
- Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review*, 32(1), 77–112.
- Siedentop, D., Hastie, P. A., & van der Mars, H. (2020). *Complete guide to sport education* (3rd ed.). Human Kinetics.
- Singh, R., & Awasthi, S. (2024). Technology integration in physical education: Exploring the use of wearable devices and virtual reality. *Innovative Research Thoughts*, 10(2), 70–74.
- Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology*, 75(3), 411–433.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). ASCD.