FITNESS TRACKERS AND DIGITAL TECHNOLOGY IN PHYSICAL EDUCATION

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Many Filipino teens struggle to stay active, with over 80% not getting enough exercise daily, according to the World Health Organization (WHO, 2022). However, there's a noticeable shift happening among young people who are embracing fitness in exciting ways. We're seeing a new 'running era,' where more teens are joining fun runs, tracking their steps, and using apps to monitor their pace and distance. The rise of fitness trackers, mobile apps, and social platforms like Strava shows how today's youth are blending technology with their physical activity. For high schools in the Philippines, this trend opens up new opportunities to incorporate digital fitness tools into PE classes, helping students stay healthy, motivated, and engaged.

Fitness tracking has become a key part of youth culture worldwide. Recent studies show that about one-third of adolescents globally report using wearable fitness devices (Ng et al., 2022). These devices range from simple pedometers to advanced smartwatches that track heart rate, steps, and energy expenditure. The social aspect of tracking is equally important: adolescents are more likely to stay active when they can share their progress with peers (Ridgers et al., 2020). In the Philippine setting, where social media culture is strong, fitness apps provide a unique avenue for combining physical activity with peer support and digital interaction. Tapping into this enthusiasm, PE teachers can align classroom practices with the realities of students' daily lives.

Wearable technology and fitness applications offer immediate and personalized feedback, thereby enhancing motivation. Devices enable students to monitor their performance in real time, fostering self-regulation and goal setting. Evidence indicates

that the integration of wearables within physical education increases participation rates and supports individualized learning experiences (Liu et al., 2021). Students become more engaged when they can visualize their progress, whether through step counts, distance covered, or heart rate zones. Gamification elements, such as awarding virtual badges or completing challenges, further contribute to enjoyment and persistence in physical activity (Kerner & Goodyear, 2020). From an instructional perspective, fitness data empower educators to design lessons that are responsive to diverse ability levels. For instance, students with lower baseline activity levels can be guided to achieve minimum movement goals, while more active students can pursue advanced objectives. This individualized approach not only enhances fitness outcomes but also deepens students' understanding of the relationship between physical activity and health. Furthermore, fitness trackers promote digital literacy by instructing students in the interpretation of health-related data and its connection to lifestyle choices (Santos et al., 2022).

Despite their promise, the adoption of digital fitness tools in Philippine public high schools raises important issues of accessibility and equity. Many students from low-income families do not own smartphones or wearable devices, creating a digital divide that could prevent them from participating in tech-enhanced PE lessons. Research highlights that the success of wearable integration depends on addressing socioeconomic gaps, as disparities in access can reduce participation and motivation (Kerner & Goodyear, 2020; Santos et al., 2022). Connectivity and infrastructure also present challenges. Schools in rural areas often lack reliable internet and the resources needed to support digital equipment. Furthermore, teachers may feel unprepared to integrate technology into PE, citing the need for professional development and institutional backing (Santos et al., 2022). Without proper training, there is a risk that wearable data will be underused or misunderstood, limiting its educational potential.

Schools must adopt inclusive strategies to ensure digital fitness benefits all students. Shared resources, such as class sets of low-cost pedometers or entry-level fitness bands, can enable students without personal devices to participate in tracking activities. PE programs can also maximize the use of free smartphone apps like Google Fit, which work on most basic Android phones common among Filipino youth. Collaborative activities, such as group step challenges, offer opportunities for students to share devices and promote teamwork, ensuring that no one is excluded from participation. Teacher preparation is equally crucial. Professional development focused on data interpretation, inclusive pedagogy, and privacy safeguards can improve the effective use of fitness technology in schools (Liu et al., 2021). At the policy level, the Department of Education may consider integrating digital fitness practices into the PE curriculum while ensuring guidelines address issues of equity, access, and student well-being. Partnerships with local governments or private sponsors could also provide resources for underfunded schools, making technology-enhanced PE more sustainable.

The emergent "running era" among Filipino youth presents a timely opportunity to reconceptualize physical education through the integration of digital technology. Fitness trackers and mobile applications can transform physical education into a more interactive, personalized, and motivating discipline, thereby bridging the divide between students' digital existence and their physical activity requirements. Nonetheless, the realization of digital physical education's potential is contingent upon addressing issues of access and equity. Strategic investments in shared resources, the utilization of complimentary technologies, and comprehensive training for educators can empower Philippine high schools to employ digital tools that improve fitness outcomes and promote enduring habits of health and self-regulation. A deliberate and thoughtful implementation of digital fitness technologies within physical education can enable Filipino students to become healthier and more engaged learners, thereby converting the current enthusiasm for running into a solid foundation for their future well-being.

References:

Kerner, C., & Goodyear, V. A. (2020). The motivational impact of wearable healthy lifestyle technologies: A self-determination perspective on Fitbits with adolescents. American Journal of Health Education, 51(1), 40–51. https://doi.org/10.1080/19325037.2019.1660288

Liu, Y., Yang, Y., & Hu, X. (2021). Wearable fitness trackers in physical education: A systematic review of benefits and challenges. International Journal of Environmental Research and Public Health, 18(17), 9181. https://doi.org/10.3390/ijerph18179181

Ng, K., Tynjälä, J., Sigmundová, D., & Inchley, J. (2022). Adolescents' use of wearable devices and apps for physical activity in 21 countries. BMC Public Health, 22(1), 157. https://doi.org/10.1186/s12889-021-12346-3

Ridgers, N. D., McNarry, M. A., & Mackintosh, K. A. (2020). Feasibility and effectiveness of using wearable activity trackers in youth: A systematic review. JMIR mHealth and uHealth, 8(11), e15517. https://doi.org/10.2196/15517

Santos, F., Dias, J., & Marques, A. (2022). Digital technology in physical education: Pedagogical opportunities and challenges. Frontiers in Education, 7, 864580. https://doi.org/10.3389/feduc.2022.864580

World Health Organization. (2022). Global status report on physical activity 2022. WHO. https://apps.who.int/iris/handle/10665/363500