

# Revitalizing Physical Education and Sport: Pioneering Regenerative Paradigm for Holistic Wellness

Arvin A. Andacao

Physical Education Program, Davao Oriental State University, City of Mati, Philippines 8200

Email address: andacao.arvin@dorsu.edu.ph

**Abstract**— This paper advocates for the implementation of a regenerative model at Davao Oriental State University (DOrSU). Positioned as a contextualized approach, this paper aims to create a regenerative physical education and sport model. Using the participatory action research, all students, teaching force, and staff of the university were involved participants of the study. The findings revealed a development of infographics, definition, and cycle process of the regenerative physical education and sport. Moreover, the regenerative PE and sport activities were practiced to instruction, research, community extension, and production to combat sedentary lifestyles, diseases, and environmental issues. Finally, emphasizing inclusivity and friendly competition, the regenerative physical education and sport model creates a sustainable and healthy working environment, fostering collective resiliency and productivity. This innovative approach aligns with the university's vision of excellence and inclusion, aiming to influence global practices in regenerative development and future-oriented thinking beyond traditional sustainability education.

**Keywords**— Physical activities; physical education; regenerative; sports; sustainability.

## I. INTRODUCTION

The field of physical education and sports has continually evolved, encompassing various curriculum models, including personal meaning, humanistic education, developmental education, play education, movement education, skill themes, multi-activity, rhythms and dance, fitness, kinesiological, wellness, elective, sport education, and recreation or adventure education. In response to these diverse pursuits, this study introduces a transformative paradigm shift, heralding a more holistic and sustainable approach to physical education and sports – termed "Regenerative Physical Education and Sport". This emerging model seeks to enhance individual health while also extending its benefits to the broader societies and environments within which these activities are situated.

The motivation for this shift is rooted in pressing issues that confront our society. Sedentary lifestyles and a lack of physical activity [15] [33] have become widespread concerns, alongside health challenges such as respiratory illnesses [30], cardiovascular problems [21], and malnutrition in its various forms [20] [33]. Simultaneously, environmental crises like the COVID-19 pandemic [24], internet addiction [1], and climate change [9] [11] have added urgency to the imperative of adopting a regenerative approach.

This paradigm shift is in alignment with the broader principles and objectives outlined in the United Nations Sustainable Development Goals. These global aspirations, including good health and well-being, quality education, gender equality, and climate action, are envisioned to be realized by 2030. The Philippine Government has echoed these concerns by setting a vision for every Filipino to enjoy a secure and comfortable life by 2040 [27], an endeavor championed by institutions such as the Commission on Higher Education and the Philippine Association of State Universities and Colleges, who emphasize equitable access and quality education.

Davao Oriental State University (DOrSU) has taken up the mantle of these mandates through various avenues, including the Faculty of Teacher Education, the Center of Futures Thinking and Regenerative Development, the Gender Research and Resource Center, the Student Sports and Wellness Center, and the Physical Education program, which collectively offer diverse projects and activities.

Numerous scholars and researchers have delved into these multifaceted issues. The integration of sustainable elements into physical education activates critical and systemic thinking [6]. This perspective is elaborated, contending that holistic physical education is integral to sustainable development [5]. In a different vein, the importance of infusing transformative experiences into the training of pre-service physical education teachers, asserting that this is a cornerstone of success [7]. Recent research recognized the efficacy of diverse pedagogical models, including Sports Education, Cooperative Learning, Teaching Games for Understanding, and Teaching for Personal and Social Responsibility, and their hybridizations across various domains to enhance learning outcomes [8]. However, there is no perfect paradigm to strategically address the sustainable changing landscape of higher education institutions in the domain of physical education.

Of particular significance is the concept of regenerative development [23]. Their approach positions institutions to embrace a future characterized by regeneration and sustainability, guided by the principles of a robust and sustainable environmental system [29]. Recognizing that physical education and sports represent just one facet of a broader movement, this study aspires to forge a new path, one that leads to the creation of a pioneering Regenerative Physical Education and Sport model.

## II. METHOD

The author immersed the phenomenon in addressing the call for regenerative development of the Davao Oriental State University, located in the southeasternmost part of Mindanao, Philippines, specifically the physical education course program and sports and wellness development of the university. Using the participatory action research approach, the ideas of creating a new model were injected into students, faculty members, and staff of the university who were collaboratively involved in the research process to achieve regenerative physical education and sports. There were total of 1,800 randomly selected samples out of 14,345 population of the university. This study involved empowerment and participation by stakeholders to bring social change [22]. Relevant documents such as mandates, conducted projects and activities, terminal reports, periodicals, photos, social media, and actual performances were also gathered to support the newly generated model. The newly constructed and contextualized 3F Instrument was also used with overall Cronbach's alpha of 0.971, described as excellent measurement tool to help validate the findings of the study.

The conduct of the study ensured no harm to the participants as the physical activities were part of their academic subjects and university programs. In the class, each physical education student was required to undergo the Physical Activity Readiness Questionnaire Test, provide a medical record if has a chronic disease, and provide a medical certificate to ensure safety and prove that the student is healthy. If activities were done outside the class, students are required to submit an oath of student responsibility, a medical certificate with laboratory results like fecalysis, urinalysis, and chest x-ray, a notarized parent's consent, and a waiver. For faculty members and staff of the university, their sports, health, and physical activities programs were monitored and checked by the university clinic. Furthermore, the Data Privacy Act of 2012 or Republic Act 10173 of the Philippines was also applied to keep secure their personal information. Henceforth, the author observed the universal human protection for all participants.

## III. RESULTS AND DISCUSSION

Regenerative physical education and sport goes beyond the traditional view of sports as a means of physical conditioning or a platform for tournaments. It encompasses a broader understanding of physical activities, emphasizing their potential to rejuvenate, revitalize, and create a positive impact on individuals and the broader society. This new concept recognizes the interconnectedness of physical [10] [16], emotional [14] [19], mental [14] [17] [25] [31], spiritual [26], and social well-being [5] [25] to the role of physical education and sports in fostering holistic health and sustainable development.

In the context of educational institutions like universities and schools, regenerative physical education and sport involve the development of curricula and programs that not only promote physical health and skill development but also instill values of environmental sustainability, community participation, and personal commitment. It recognizes that the

pursuit of well-being is inseparable from the well-being of the natural world and the communities [12] [13].

### A. Regenerative PE and Sport Model

This paper introduces the conceptual model of regenerative physical education and sport, including its definition, cycle process, and regenerative practices. Fig. 1 illustrates the regenerative physical education and sport infographics, where interconnected heptagonal shapes in the inner circle represent various physical education curriculum models. These models offer a range of options, allowing for the selection of a single model or a combination approach to customize the curriculum or program for specific physical activities.



Fig. 1. Regenerative PE and Sport Model

The middle circle embodies the vision, signifying the commitment to sustainable responsibility and fostering a culture of excellence, innovation, and inclusion of the university with a desired theme, 3Fs: Fitness, Fun, and Friendship, which serve as the foundational principles for the recreation of physical activities. Under the vision, the university promotes regenerative education through excellence, innovation, and inclusion. The pursuit of excellence encompasses academic performance, continuing competence, and the delivery of quality administration. The university fosters innovation through research, publication, community engagement, and production. The inclusion component signifies the convergence of cultures and religions. It involves adapting physical activities to accommodate students with additional needs and those facing prohibitive medical conditions. The university is also dedicated to ensuring that all students have equal access to opportunities and resources. In 3Fs, fitness is viewed holistically, going beyond mere physical activities to consider mental alertness, emotional well-being, social interaction, and spiritual growth during physical education, sports, and recreational activities. Fun is integral, as physical activities take the form of enjoyable contests and healthy competitions, providing diverse experiences for students and employees. Friendship is valued, fostering camaraderie, sportsmanship, fair play and common resilience shared during events. The vision of the university together with the 3Fs theme are closely intertwined with the pedagogical PE models, which bring these ideas to life in practical activities.

The outer circle symbolizes the commitment to regenerative development and future thinking. This approach steers in a new direction, fostering leadership, personal resiliency, organizational efficiency, and cultivating good system habits. The regenerative development aspect brings together the vision of the university, the 3Fs theme, and the interspersed designed physical education models, allowing to spawn fresh and innovative physical activities.

**B. Definition**

The regenerative physical education and sport of the Davao Oriental State University is defined as recreating exercises, dance arts, games, sports, and physical activities using the interspersed and interconnected physical education curriculum models. This model aims to improve, express, and promote fitness and wellness to all walks of life, regardless of age, condition, gender, religion, and culture, to achieve high results in a fun and friendly competition at all levels with a vision of excellence, innovation, and inclusion. Students, employees such as faculty members and staff, and the academic community are the target beneficiaries of this regenerative development model, making the working environment sustainable to live healthy, with collective resiliency and productive individuals.

**C. Cycle Process**

The regenerative process at the heart of this endeavor is a complex interplay of various elements, namely the physical education curriculum models, the university's vision, the involvement of stakeholders, and a results-based performance approach. Fig. 2 shows the cycle process of regenerative physical education and sport.



Fig. 2. Cycle Process of Regenerative PE and Sport Model

To apply this cycle, we need to understand how these components interact and contribute to the regeneration of physical education and sport.

**Physical Education Curriculum Models.** These models provide the framework and structure for how physical education is designed and delivered. They encompass a range of approaches, each with its own unique strengths. In the regenerative process, these models may be viewed as the building blocks or tools at their disposal.

**University Vision.** The vision of the university establishes comprehensive goals and principles that guide the direction of the institution. In the context of regenerative physical education and sport, the university's vision serves as a North Star, outlining the desired outcomes and values that underpin the entire process.

**Stakeholders.** These are the individuals and groups who have a vested interest in the outcomes of physical education and sport within the university. These include students, faculty members, staff, and potentially the wider community. In the regenerative process, stakeholders play a crucial role as active participants who help shape and implement the vision.

**Results-Based Performance.** The success of the regenerative process is measured by the outcomes achieved. These outcomes may include improved physical fitness, enhanced well-being, and a positive impact on the community and the environment. By taking a results-based approach, we ensure that our efforts lead to tangible and meaningful change.

To implement the cycle process effectively, stakeholders need to follow the hereunder systematic procedures:

1. Combining PE Curriculum Models. The first step is to consider how different curriculum models can complement each other. For instance, elements from skill-based models could be integrated with those from holistic and wellness-focused models to create a comprehensive curriculum.
2. Integration with University Vision. The adapted curriculum should align with the university's vision. This means that the curriculum should reflect the values and goals outlined in the vision statement. If the vision emphasizes holistic well-being, for example, the curriculum should prioritize this aspect.
3. Adaptation to Stakeholders. The adapted curriculum needs to be contextualized to the specific needs and preferences of the stakeholders. Students may have different expectations and abilities, and faculty and staff may bring unique perspectives. The curriculum should be flexible and responsive to these diverse requirements.
4. Demonstration and Knowledge Transfer. The stakeholders will play a role in demonstrating the curriculum's effectiveness. They will engage in appropriate methods and activities to showcase how the curriculum translates into improved knowledge, skills, and physical performance.
5. Regeneration of Physical Education and Sport. The ultimate goal is to achieve regeneration, where physical education and sport are not just sustained but continually improved. The process should result in positive changes in individuals, the community, and the environment.

In essence, the regenerative process involves a dynamic and iterative approach to reshaping physical education and sport. It leverages diverse curriculum models, aligns with the university's vision, engages stakeholders, and focuses on achieving tangible results. By constantly adapting and refining the process, we can create a sustainable and continually evolving approach to physical education and sport.

**D. Regenerative Practices**

The regenerative practices in the context of physical education, sports, and wellness development seamlessly align

with the four key functions of the university: instruction, extension, research and publication, and production.

**Instruction.** When it comes to quality instruction, the university adheres to well-structured lessons that closely follow approved syllabi. However, the teaching and learning activities within these lessons are versatile and adaptive. This flexibility allows instructors to cater to various learning styles and intelligences among the students, all while striving to meet the prescribed course learning outcomes. Injecting regenerative principles into the teaching of physical education and sport, both the program and the university leverage contextualized activities. These activities are carefully designed to ensure that students not only acquire theoretical knowledge but also gain the practical performance outcomes they need. This approach allows for a more holistic and regenerative educational experience, aligning the educational process with real-world, practical skills and competencies.

The program has successfully introduced two impactful regenerative activities that have expanded their reach from program-based initiatives to university-wide endeavors. These initiatives, namely DOrSU Fit and SPEAR/Fitness Day, have made a significant impact.

DOrSU Fit, launched in 2018, transitioned from leisurely sports to virtual runs in 2021 amid the COVID-19 pandemic. Participants completed 50 or 100 kilometers, monitored via Strava. The initiative expanded to include cycling, combating boredom, and reducing carbon footprint. Engagement increased, fostering community spirit among students, staff, faculty, and community members.

Since 2018, SPEAR/Fitness Day has served as the university-wide final practical examination for physical education students. It involves class-level group presentations and inter-class performances overseen by instructors. Approximately 5,000 students participated, showcasing various activities aligned with lesson outcomes, including exercises, dance genres, sports tournaments, adaptive physical activities, recreational pursuits, and traditional games. This event reflects a commitment to holistic learning and the regenerative principles of physical education.

**Community Extension.** In the community extension activities, six notable pursuits are recorded: Siglakas, BPEd League, Meet and Greet, Convergence of Cultures, *Hataw*, and invitational events.

Siglakas, the university's annual intramural program, epitomizes vigor and strength, fostering holistic development through sports and socio-cultural competitions. Guided by the ethos of "Fitness, Fun, and Friendship," it instills positive Filipino and universal values while nurturing skills and understanding within a regenerative framework. Siglakas empowers officials to craft transformative sports programs and coaches to develop competitive athletes, ensuring sustainability and inclusivity.

Amid the adversities posed by the mid-pandemic phase of COVID-19, the inception of the BPEd League marked a pivotal juncture for specialized physical education students. Collaborating with a consortium of 12 higher education institutions, this initiative aimed to cultivate practical aptitudes and leadership competencies at the regional level. Commencing

with virtual contests, such as digital poster making and a Mobile Legends Tournament, the league swiftly evolved in 2022, diversifying into novel activities like Vocal Duet contests and original song composition. The latest iteration, BPEd League version 3.0, witnessed a resurgence with the introduction of multiple sports and cultural events, including Dance Sports and Contemporary Dance Duo. The league's regenerative ethos underscores its efficacy and serves as a model for emulation. Its adaptive evolution and its diversified repertoire of activities underscore a commitment to innovation, ensuring its status as a dynamic and influential platform for nurturing the talents and capabilities of physical education students within the region.

The "Meet and Greet" initiative emerged within the university's physical education program amidst the COVID-19 pandemic, grounded in the principle of Pakighimamat, or meeting. Initially confined to the program's "PEmilya" framework, it encompassed activities like the PEmilya Dance Craze and reflective gatherings. This initiative expanded to the university-wide level, named "Panaghigalaay (Friendship)," to address mental health concerns through various innovative activities. Further evolving into the regional "Bugsay Panaghigalaay (Good friendship)," it fostered collaboration among higher education institutions, showcasing resilience and creativity in promoting camaraderie and well-being.

The Convergence of Cultures initiative at Davao Oriental State University began in 2021, focusing on preserving Mandaya and Kagan tribal dances. By 2022, it expanded to include folk dancing, and in 2023, diversified further to encompass various dance genres, from traditional to contemporary, fostering cultural preservation, education, and inclusivity.

"Hataw" embodies a Tagalog concept aimed at revitalizing the well-being of employees and students through enjoyable sports and physical activities. These sessions, featuring diverse exercises and sports, are strategically scheduled during leisure time to promote physical fitness, camaraderie, resilience, and overall well-being. Participation fosters a supportive community, transcending routine responsibilities and nurturing holistic health.

The university's specialized physical education students participate in diverse invitational events, fostering skill development and community bonds. These include sports tournaments, cultural festivals, and hosting the Mindanao Association of State Tertiary Schools Friendship Games, promoting healthy competition and cultural exchange among regional institutions.

**Research and Publication.** The Physical Education program conducts research in areas such as physical activity interventions [28], alcohol consumption's effect on academic performance [2], adaptability among female athletes [3], physical education graduate performance trends [4], and mental health effects to dance [18]. These efforts reflect a commitment to enhancing the program's quality and contributing to broader knowledge.

**Production.** The university's Physical Education program actively produces copyrighted periodicals, including the "Singadi" magazine and "Perfect Example" newsletters, chronicling events and activities. Efforts extend to securing

copyright protection for instructional materials and showcasing a commitment to knowledge dissemination and educational excellence within the university community.

#### IV. IMPLICATION

The study introduces a transformative paradigm shift towards Regenerative Physical Education and Sport, addressing pressing societal issues while aligning with global sustainability goals and the vision of the Philippine Government. By integrating participatory action research methodologies and engaging stakeholders, the study outlines a comprehensive model that goes beyond traditional views of physical education and sports. Regenerative Physical Education and Sport emphasizes holistic health, sustainability, and community involvement. It integrates diverse curriculum models, aligns with the university's vision, and fosters collaboration among students, faculty, staff, and the wider community. Through initiatives like DOrSU Fit, SPEAR/Fitness Day, and community extension activities, the model demonstrates its commitment to excellence, innovation, and inclusion. Moreover, the study highlights the importance of continuous adaptation and regeneration in reshaping physical education and sport. By leveraging diverse curriculum models, engaging stakeholders, and focusing on tangible outcomes, the model aims to create a sustainable and continually evolving approach to physical education and sport. Overall, Regenerative Physical Education and Sport at Davao Oriental State University offers a promising framework for promoting individual health, community well-being, and environmental sustainability. It serves as a beacon for other institutions seeking to redefine their approach to physical education and sport in alignment with broader societal and global aspirations.

#### V. RECOMMENDATIONS

It is recommended to conduct further studies utilizing quantitative analyses and robust arguments to bolster the Regenerative Physical Education and Sport model. By creating a measurement tool, we can provide empirical evidence to strengthen the efficacy of the model and its impact on various stakeholders. Additionally, such studies can contribute valuable insights to policy development, informing decision-makers on the importance of integrating regenerative practices into physical education and sports programs.

#### ACKNOWLEDGMENT

This research was supported by Davao Oriental State University. Special acknowledgment to Dr. Roy G. Ponce, SUC President III for his steadfast provision and insights.

#### REFERENCES

- [1] Abad Santos, P.M.T., Cleofas, J.V., Austria, A.G.O., De Guzman, A.K.B. & Sarile, B.A.F. (2023). The double-edged impact of Internet use on mental health outcomes among Filipino university students: the mediating role of online social support. *Frontiers in Sociology*, 8, 75. <https://doi.org/10.3389/fsoc.2023.1132523>
- [2] Andacao, A.A. & Lad, F.M. (2021). Alcohol consumption and scholastic performance of collegiate physical education students. *Jurnal Pendidikan Jasmani dan Olahraga* 6, no. 1: 32-43. <https://doi.org/10.17509/jppo.v6i1.30804>
- [3] Andacao, A.A. & Lingamay, C.J.B. (2021). Leaping through hurdles: adaptability among female athletes. *International Journal of Human Movement and Sports Sciences*, Vol. 9, No. 4A, pp. 45 – 52. <https://doi.org/10.13189/saj.2021.091308>.
- [4] Andacao, A.A. & Lugo, M.G. (2022). The performance trend of Davao Oriental State College of Science and Technology (DOSCST) in board licensure examination for professional teachers. *Davao Research Journal*, 13(2), 22-31. <https://doi.org/10.59120/drj.v13i2.86>
- [5] Baena-Morales, S. & González-Villora, S. (2023). Physical education for sustainable development goals: Reflections and comments for contribution in the educational framework. *Sport, Education and Society*, 28(6), pp.697-713. <https://doi.org/10.1080/13573322.2022.2045483>
- [6] Baena-Morales, S., Merma-Molina, G., & Ferriz-Valero, A. (2023). Integrating education for sustainable development in physical education: Fostering critical and systemic thinking. *International Journal of Sustainability in Higher Education*. <https://doi.org/10.1108/IJSHE-10-2022-0343>
- [7] Calderón, A., & MacPhail, A. (2023). Seizing the opportunity to redesign physical education teacher education: blending paradigms to create transformative experiences in teacher education. *Sport, Education and Society*, 28(2), pp.159-172. <https://doi.org/10.1080/13573322.2021.1997981>
- [8] Cereda, F. (2023). Methods and models in the context of physical activity and physical education: strength, weakness and gaps. *Journal of Physical Education and Sport*, 23(5), pp.1064-1075. <https://doi.org/10.7752/jpes.2023.05133>
- [9] Chen, F., Zhang, X., & Chen, Z. (2023). Behind climate change: Extreme heat and health cost. *Structural Change and Economic Dynamics*, 64, 101-110. <https://doi.org/10.1016/j.strueco.2022.12.007>
- [10] Cheng, M., Wang, S., Wang, Y., Zhang, R., & Qin, L. (2023) Physical activity reduces internet addiction among “post-00” college students: The mediating role of coping styles. *Frontiers in Psychology*, 13, p.1052510. <https://doi.org/10.3389/fpsyg.2022.1052510>
- [11] Chevance, G., Fresán, U., Hekler, E., Edmondson, D., Lloyd, S. J., Ballester, J., Litt, J., Cvijanovic, I., Araújo-Soares, V., & Bernard, P. (2023). Thinking Health-related Behaviors in a Climate Change Context: A Narrative Review. *Annals of Behavioral Medicine : a publication of the Society of Behavioral Medicine*, 57(3), 193–204. <https://doi.org/10.1093/abm/kaac039>
- [12] Clark, J., & Kearns, A. (2014). The Glasgow 2014 Commonwealth Games: A Prospective Assessment of Regeneration for a Physical Activity Legacy. University of Glasgow.
- [13] Clark, J., & Kearns, A. (2015). Pathways to a physical activity legacy: Assessing the regeneration potential of multi-sport events using a prospective approach. *Local Economy*, 30(8), pp.888-909. <https://doi.org/10.1177/0269094215601993>
- [14] Clayton, S.D., Pihkala, P., Wray, B., & Marks, E. (2023). Psychological and emotional responses to climate change among young people worldwide: Differences associated with gender, age, and country. *Sustainability*, 15(4), p.3540. <https://doi.org/10.3390/su15043540>
- [15] De Araújo, L.V.B., De Sousa Santos, A.Q., De Abreu, E.A.B., De Carvalho Santos, T.T., Lins, L.D., Dos Santos, I.S.P., & Dos Santos Barbosa, A. (2023). Damage of Sedentary Lifestyle in Adult Life Because of The Lack of Practice of Activities in Physical Education Discipline in the Contemporary World. *European Journal of Development Studies*, 3(1), 52-57. <https://doi.org/10.24018/ejdevelop.2023.3.1.183>.
- [16] Deng, Y., Hwang, Y., Campbell, S., McCullick, B.A., & Yli-Piipari, S. (2023). Institutional factors associated with college students' healthy physical activity and body composition: A first semester follow-up. *Journal of American College Health*, 71(4), pp.1134-1142. <https://doi.org/10.1080/07448481.2021.1922416>
- [17] Deyo, A., Wallace, J., & Kidwell, K.M. (2023). Screen time and mental health in college students: Time in nature as a protective factor. *Journal of American College Health*, pp.1-8. <https://doi.org/10.1080/07448481.2022.2151843>
- [18] Fantiro, F.A., Saputra, S.Y., Arifin, B., Salsabilla, L., Mukhlshina, I., Muzakki, A., Deguma, J.K., Isogon, E.J., Dimo, S., Andacao, A.A., Pajo, L.S.H., Govindasamy, K., Setiawan, E., Lobo, J., & Ram, J. (2023). *Mental health effects of dance to undergraduate students: A preliminary*

survey comparative analysis. *Ibero-American Journal of Exercise and Sports Psychology*.

[19] Hicks, S.J., & Cohen, D.J. (2023). The pandemic not only increased depression and PTSD in college students, but also changed how they categorize emotions. *Journal of American College Health*, pp.1-12. <https://doi.org/10.1080/07448481.2023.2185074>

[20] Hsu, W.C., de Juras, A.R., & Hu, S.C. (2023). Prevalence and Determinants of Multiple Forms of Malnutrition among Adults with Different Body Mass Index: A Population-Based Survey in the Philippines. *BioMed Research International*, 2023, 3182289. <https://doi.org/10.1155/2023/3182289>

[21] Li, Y., Cao, G.Y., Jing, W.Z., Liu, J., & Liu, M. (2023). Global trends and regional differences in incidence and mortality of cardiovascular disease, 1990–2019: findings from 2019 global burden of disease study. *European Journal of Preventive Cardiology*, 30(3), 276-286. <https://doi.org/10.1093/eurjpc/zwac285>

[22] Liebenberg, L. (2018). Thinking Critically About Photovoice: Achieving Empowerment and Social Change. *International Journal of Qualitative Methods*, 17, 160940691875763. <https://doi.org/10.1177/1609406918757631>

[23] Mang, P., & Reed, B. (2013). Regenerative Development and Design. In: Loftness, V., Haase, D. (eds) *Sustainable Built Environments*. Springer, New York, NY. [https://doi.org/10.1007/978-1-4614-5828-9\\_303](https://doi.org/10.1007/978-1-4614-5828-9_303)

[24] Maravilla, J., Catiwa, J., Guariño, R., Yap, J.F., Pagatpatan, C., Orolfo, D.D... & Lopez, V. (2023). Exploring indirect impacts of COVID-19 on local health systems from the perspectives of health workers and higher education stakeholders in the Philippines using a phenomenological approach. *The Lancet Regional Health–Western Pacific*, 30, 100585. <https://doi.org/10.1016/j.lanwpc.2022.100585>

[25] Marczak, M., Winkowska, M., Chaton-Østlie, K., Morote Rios, R., & Klöckner, C.A. (2023). “When I say I’m depressed, it’s like anger.” An exploration of the emotional landscape of climate change concern in Norway and its psychological, social and political implications. *Emotion, Space and Society*, 46, 1-8. <https://doi.org/10.1016/j.emospa.2023.100939>

[26] Narbaeva, T., Musurmanova, A., & Ismailova, Z. (2023). Priority areas of spiritual, moral and physical education of youth in the family. *Science and innovation*, 2(B9), pp.49-59. T. <https://doi.org/10.5281/zenodo.7517187>

[27] National Economic Development Authority (2016). *AmBisyon Natin 2040. Retrieved on November 16, 2022 from https://2040.neda.gov.ph/*

[28] Pajo, L.S.H., & Biong, C.T. (2013). Development of a physical activity program for delinquent out-of-school-youth: intervention for violence. *Mediterranean Journal of Social Sciences*, 4(9), 566. 10.5901. <https://doi.org/mjss.2013.v4n9p566>

[29] Ponce, R., & Villegas, J. (2022). Beyond Sustainability: Positioning Regenerative Futures in a Philippine State University. *Discourse and Communication for Sustainable Education*, 13(2) 5-12. <https://doi.org/10.2478/dcse-2022-0014>

[30] Rönner, A.C., Jakobsson, A., & Gericke, N. (2023). Cough, sneeze, pass it on—pupils’ understanding of infectious diseases in the aftermath of COVID-19. *Journal of Biological Education*, 1-13. <https://doi.org/10.1080/00219266.2022.2159492>

[31] Salimi, N., Gere, B., Talley, W., & Iriogbe, B. (2023). College students mental health challenges: Concerns and considerations in the COVID-19 pandemic. *Journal of College Student Psychotherapy*, 37(1), pp.39-51.

[32] Sustainable Development Goals: United Nations Development Programme (2023). UNDP. Retrieved on October 24 2023 from <https://rb.gy/2yx11i>

[33] Wibowo, D.P., Prahasanti, K., Utama, M.R., Paramitasari, A., & Secka, A. (2023). Sedentary Lifestyle Phenomenon and Obesity Risk on Students at School and College during Transitions from Conventional School to Online School. *MAGNA MEDIKA: Berkala Ilmiah Kedokteran dan Kesehatan*, 10(1), 93-108. <https://doi.org/10.26714/magnamed.10.1.2023.93-108>