



Ghana's New Physical Education Curriculum for Primary Schools: An Analysis and Future Directions

Seidu Sofo¹ & Eugene F. Asola²

¹ Department of Allied Health, Kinesiology & Sport Sciences, Southeast Missouri State University, USA

² Department of Kinesiology & Physical Education, Valdosta State University, USA
Correspondence: Seidu Sofo, Southeast Missouri State University, USA
Email: ssofo@semo.edu

DOI: 10.53103/cjess.v3i6.182

Abstract

Ghana launched a new physical education curriculum for primary schools in 2019 as part of its educational reforms at the pre-tertiary level. We analyzed the new curriculum in terms of its philosophy and curriculum organization. The strengths of the new curriculum included its comprehensive nature, alignment with the national content standards, and its interdisciplinary learning approach. Two main challenges facing the new curriculum are a lack of teacher support and teacher education. Inservice classroom teachers lacked technical support, teaching-learning resources, and training to implement the curriculum. Teacher education programs at the universities lacked programs or courses that focused on early childhood or primary physical education content and methodologies. In addition to senior high school content, universities need to offer programs and/or courses that focus on early childhood and/or primary physical education. Also, colleges of education should offer specialism physical education programs for kindergarten, primary, and junior high schools to ensure efficient use of manpower and resources.

Keywords: Curriculum, Ghana, Physical Education, Teacher Education

Introduction

Many Sub-Saharan African countries are struggling with their education systems post-political independence. The need for the education systems in these countries to be sensitive to their cultural and social contexts has been well documented (Dei, 2004; Ministry of Education [MOE], 2018). Considering this, Ghana rolled out curriculum reforms at the various levels of pre-tertiary education. One such reform is the physical education curriculum for primary schools, launched in 2019. The new curriculum was part of efforts to improve education in Ghana and ensure holistic learning for its young children (Ministry of Education [MOE], 2019). It seeks to improve students' physical literacy through the medium of developmentally and instructionally appropriate movement programs (MOE, 2019). The International Physical Literacy Association ([IPLA], 2017) defines physical literacy as "... the motivation, confidence, physical competence,

knowledge, and understanding to value and take responsibility for engagement in physical activities for life.” It therefore aims to equip students with the knowledge, skills, and attitudes necessary for physical activity and a healthy lifestyle, as well as positive values such as teamwork, fair play, respect for others, and responsible citizenship.

The new curriculum includes content on basic motor skills and sports, dance, and music (MOE, 2019) The curriculum also recognizes the importance of physical education, and other subjects being integrated to promote interdisciplinary learning. Physical education benefits children in other ways. First, physical education provides children with opportunities for regular physical activity and basic physical fitness (Hardman & Marshall, 2018). Children can improve their motor competence, physical activity levels, and physical fitness by engaging in movement programs that include basic coordination, balancing, and muscular strength activities (Lubans et al., 2016). In addition, regular physical activity among children leads to healthy development and prevention of chronic diseases (Cairney et al., 2018).

Research shows that regular engagement in physical activity improves brain function and information processing (Tompsonski et al., 2015). Thus, movement programs that involve physical activity can improve cognitive skills and academic performance (Donnelly et al., 2016). For example, Diamond and Ling (2016) report a positive relationship between engagement in regular physical activity and executive functioning. Also, regular participation in physical activities in group settings and physical play helps children learn to communicate and cooperate with each other. Furthermore, participation in regular physical activity early in life also promotes engagement in lifelong physical activity in adulthood and the prevention of sedentary lifestyles (Telama et al., 2014).

Theoretical Framework

The analysis utilized the policy implementation theory. The theory provides a framework for understanding how to successfully implement policies. It focuses on strategies and factors that influence the implementation of programs such as curriculum reform (Sabatier & Weible, 2007). Policy implementation theory includes several underlying principles and key factors that shed light on the development of policy implementation in Ghana's new primary school physical education curriculum. The theory recognizes that policies are influenced by wider social, political, and cultural contexts. These contextual factors influence the development, acceptance, and implementation of policies. In Ghana's new physical education curriculum, an understanding of the educational objectives, policy context, and cultural relevance is important to examine the factors that have influenced curriculum development. Another key feature of the theory highlights the importance of stakeholder involvement in the implementation process. This

includes the Ministry of Education, Ghana Education Service, educational administrators, teachers, parents, and community leaders.

Two implementation models were of importance to this paper: the top-down and down-up models (Sabatier, 1986). Advocates of the top-down model (Sabatier & Mazmanian, 1980) view public support, support systems, availability of resources, commitment, and leadership skills of implementing personnel to be essential. According to Hill (2005), the top-down model assumes that policy objectives are clear, which is not always the case. In contrast, the down-up model (Hull & Hjern, 1982) begins at the bottom, with the implementers who bring the policy to fruition. Pulzl and Treib (2007) described the top-down model as elitist, and the bottom-up model as participatory.

Aim of the Paper

Our analysis of the new physical education curriculum for primary school covered its philosophy, competencies, and curriculum organization. The documents analyzed included: the new physical education curriculum, the national pre-tertiary education curriculum framework, national teachers' standards for Ghana, guidelines, and course offerings at teacher education institutions of higher learning in the country.

Analysis of Ghana's New Physical Education Curriculum for Primary Schools

In this section, we analyzed the philosophy, curriculum standards, and strands (content) and suggested revisions to the standards and strands. In addition, we provided a rationale for each suggested revision.

Philosophy and Curricular Aims

The new curriculum is a change from the old objective-based to a standard-based curriculum which seeks to improve students' cognitive skills through critical thinking and problem-solving movement activities (MOE, 2018; MOE, 2019). Based on constructivism (Valdez, et al., 2020), the curriculum is intended to empower students to be responsible for their own learning, thereby moving learning from a didactic acquisition of knowledge to a state of application of knowledge to real-life problems (MOE, 2019).

Alignment with National and International Standards

There are five standards in the new physical education curriculum. The standards were adopted from SHAPE America and Human Kinetics (2014) and the International Council for Health, Physical Education, Recreation, Sport, and Dance (2012).

Standard 1

Standard 1 reads, “Demonstrate competence in the motor skills and movement patterns needed to perform a variety of physical activities (games, athletics gymnastics, and dance)” (MOE, 2019, p. 2).

Proposed revision: We propose the deletion of the portion of the standard in parenthesis: “games, athletics, gymnastics, and dance” (See Table 1). The standard should read, “Demonstrate competence in the motor skills and movement patterns needed to perform a variety of physical activities.” This standard addresses the psychomotor (physical) domain.

Rationale: The deletion of “games, athletics gymnastics, and dance” would make the standard more inclusive of all forms of movement.

Standard 2

Standard 2 reads, “Demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities” (MOE, 2019: 11). This standard addresses the cognitive domain.

Proposed revision: None.

Rationale: None

Standard 3

Standard 3 reads, “Assess and maintain a level of physical fitness to improve health and performance” (MOE, 2019: 13).

Proposed revision: The proposed revision reads, “Apply knowledge of physical fitness concepts to attain and maintain levels of physical fitness to improve health and performance” (See Table 1). The standard addresses both the psychomotor and cognitive domains.

Rationale: The intent of the standard is to emphasize the application of student’s knowledge of physical fitness concepts to develop and maintain health-related physical fitness and performance.

Standard 4

Standard 4 reads, “Demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.” (MOE, 2019: 14).

Proposed revision: The proposed revision reads, “Demonstrate personal and social responsibility.” (See Table 1). This standard addresses the social domain.

Rationale: The application of knowledge of physical fitness concepts to improve health and performance has already been addressed in the proposed revision of Standard 3.

The focus on “personal and social responsibility” as a standard would require teachers to be deliberate about teaching social skills in physical education.

Standard 5

Standard 5 reads, “Demonstrate value and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.” (MOE, 2019: 15)

Proposed revision: The proposed revision reads, “Value the role of physical activity for health, social and emotional development” (See Table 1). This standard addresses the affective domain.

Rationale: We propose rephrasing the standard to reflect the notion that regular participation in physical activity can promote psychological and sociological development.

Table 1: Proposed Ghana standards for physical education for primary schools

STANDARD	PROPOSED STANDARD
Standard 1: Demonstrate competence in the motor skills and movement patterns needed to perform a variety of physical activities (games, athletics gymnastics, and dance).	Standard 1: Demonstrate competence in the motor skills and movement patterns needed to perform a variety of physical activities.
Standard 2: Demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.	Standard 2: Demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.
Standard 3: Assess and maintain a level of physical fitness to improve health and performance.	Standard 3: Apply knowledge of physical fitness concepts to attain and maintain levels of physical fitness to improve health and performance.
Standard 4: Demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.	Standard 4: Demonstrate personal and social responsibility
Standard 5: Demonstrate value and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.	Standard 5: Value the role of physical activity for health, social and emotional development.

Strands And Sub-Strands for Ghana's New Physical Education Curriculum for Primary Schools

Our analysis of the curriculum strands and sub-strands sought to attain content relevance and alignment with the curriculum aims and goals, content standards, and educational outcomes. Additionally, we propose revisions to the strands and/or sub-strands where appropriate. Furthermore, we provided a rationale for each proposed revision.

Strand 1

Strand 1 relates to motor skills and movement patterns. It reads, "Motor Skills and Movement Pattern" (MOE, 2019: xxii). The strand has three sub-strands including locomotor movement, manipulative skills, and rhythmic skills.

Proposed revision: We propose that non-locomotor (or non-manipulative skills) be added to the list of sub-strands for this strand. In addition, movement concepts, body management, and developmental games be added as sub-strands under Strand 1 (See Table 2).

Rationale: Movement concepts qualify the performance of motor skills, and the two should go hand in hand for the efficient performance of movement. The movement concepts qualify the motor skills. For example, the following verbal instruction to children would be incomplete and vague, "On my signal, I want you to run." "Run" will be a motor skill, but the students may ask, for example, "Where should we run to?" "How fast should we run?" For the verbal instruction to be complete and unambiguous, the teacher may say, for example, "On my signal, run in a straight line and as fast as you can to the end of the football (soccer) field." The movement concepts "end of the field" (location as a sub-category of the movement concept space awareness)," "straight line" (pathway as a sub-category of the movement concept space awareness), and "fast" (speed as a sub-category of the movement concept effort) qualify where and how to run.

Strand 2

Strand 2 deals with movement concepts, principles, and strategies: "Movement Concepts, Principles, and Strategies" (MOE, 2019: xxii).

Proposed revision: We propose changing Strand 2 to "Physical Fitness" with the five health-related fitness components as the sub-strands. Additionally, we propose moving "Movement Concepts" to the column for sub-strands under Strand 1 (See Table 2).

Rationale: Teachers need to be deliberate/intentional about developing physical fitness (both health-related and skill-related).

Strand 3

Strand 3 in the new curriculum is “Physical Fitness” (MOE, 2019: xxii).

Proposed revision: We propose that Strand 3 be changed to “Health and Wellness,” with corresponding sub-strands as healthy diet/nutrition, physical activity, safety and injury, and substance use/drug use (See Table 2).

Rationale: Stating healthy diet, safety and injury, and substance use as sub-strands are more appropriately aligned with “health and wellness” than with “physical fitness.”

Strand 4

Strand 4 in the new curriculum is “Physical Fitness Concepts, Principles, and Strategies (MOE, 2019: xxii).

Proposed revision: We propose changing Strand 4 to “Social Concepts, Skills, and Strategies” with corresponding sub-strands as personal and social responsibility, social interaction, group dynamics, and respect for self and others (See Table 2).

Rationale: It is important to make a distinction between social and affective goals, with Strand 4 focusing on social skills. It is not uncommon to see instances of intolerance and disrespect for others among adults in our society these days. Today’s adult generation in Ghana needs to serve as role models to our children and the youth. Our airwaves and TV programs are filled with insults and foul language from adult guests daily. It has become common practice for political party communicators and activists to trade insults for political expediency. Yet, the adult generation is quick to blame the youth for being disrespectful.

Strand 5

Strand 5 in the new curriculum reads, “Value and Psycho-Social Concepts, Principles, and Strategies” (MOE, 2019: xxii)

Proposed revision: We propose changing Strand 5 to “Values and Emotional Goals and Strategies.” Further, we propose the following sub-strands for Strand 5: conflict resolution, feelings, self-control, and self-motivation (See Table 2).

Rationale: We propose that this strand focuses on affective outcomes as distinct from social outcomes in Strand 4.

Table 2: Proposed scope and sequence showing strands and sub-strands for Ghana's physical education curriculum for primary schools

STRANDS	SUB-STRANDS		PROPOSED STRANDS	PROPOSED SUB-STRANDS
Motor Skills and Movement Pattern (MOE, 2019: xxii)	Locomotor movements Manipulative Skills Rhythmic Skills		Motor Skills and Movement Patterns	Locomotor skills Non-Locomotor skills Manipulative Skills Rhythmic skills Body management Developmental games Movement concepts (Space awareness, effort, and relationships)
Movement Concepts, Principles, and Strategies (MOE, 2019: xxii)	Space Awareness Dynamics Relationships Body Management Strategies		Physical Fitness	<u>a.</u> Health-Related Physical Fitness: Aerobic Capacity; Muscular Strength; Muscular Endurance; Flexibility; Body Composition <u>b.</u> Performance/Skill-Related Physical Fitness: Speed; Agility; Power; Balance; Coordination
Physical Fitness (MOE, 2019: xxii)	Aerobic Capacity Strength Endurance Flexibility Body Composition		Health and Wellness	Healthy diet/nutrition Physical activity Safety and injury [general/personal space] Substance use/drug use
Physical Fitness Concepts, Principles, and Strategies (MOE, 2019: xxii)	Healthy Diet Safety and injury Substances		Social concepts, skills, and strategies	Personal and social responsibility Social interaction Group dynamics Respect for self and others
Value and Psycho-Social Concepts, Principles, and Strategies (MOE, 2019: xxii)	Self-Responsibility Social interaction Group Dynamics Critical Thinking		Values and Emotional goals and strategies	Conflict resolution Feelings Self-control Self-motivation

Strengths and Weaknesses of Ghana's New Physical Education Curriculum for Primary Schools

Strengths

The first potential strength is that the curriculum takes a comprehensive approach to physical activity including basic physical fitness, games and sports, gymnastics, dance, and fitness (MOE, 2019). Second, the curriculum is aligned with the national content educational standards and guidelines set by the Ministry of Education in Ghana (MOE, 2019). Third, it considers the Ghanaian context through the teaching of traditional African games, music, dances, and practices (MOE, 2019; Ntumi et al., 2023). Finally, there is the integration of cross-subject links. The curriculum emphasizes cross-links with other subjects such as mathematics, science, social studies, language arts, and health education (MOE, 2019). For example, during a physical education unit on balancing, students would have the opportunity to apply concepts of equilibrium, center of gravity, and base of support from their science lessons.

Weaknesses

The importance of fundamental motor skills during the primary years necessitated the new Ghana curriculum. However, few African countries implement their physical education programs by policy (Hardman, 2008) due to challenges they encounter during the implementation of the policies. Two major challenges that emerged from our analysis of the new curriculum were: the lack of support and teacher education. Ntumi et al. (2023) reported that limited resources were available to teachers for the implementation of Ghana's national pre-tertiary education curriculum framework. The researchers noted that the teachers in their study were not abreast with the framework, even as they were already implementing it in their classrooms (Ntumi et al., 2023). Another study on the concerns of Ghanaian teachers on the implementation of the standards-based curriculum in Ghana reported that teachers sought information on how they could offer or be offered technical support in the implementation of the standards-based curriculum (Agbofa et al., 2023). Additionally, teachers expressed concern about the lack of teaching and learning materials for implementing the new educational curriculum in Ghana (Aboagye & Yawson, 2020; Ntumi et al. (2023). For example, 50% of trained Ghanaian primary classroom teachers indicated their preservice teacher education programs did not adequately prepare them to teach physical education. Furthermore, there was a significant positive association between the quality of preservice teacher education and the frequency with which the subject (physical education) was taught in public primary schools (Donkor. 2021).

However, the country continues to implement a policy that makes classroom non-specialist physical education teachers responsible for teaching the subject. This has resulted in a persistent lack of qualified teachers for primary school physical education in Ghana.

This is exacerbated by the gap between teacher education and curriculum expectations for primary physical education. As Sofo et al. (2021) noted, the three universities in Ghana mandated to prepare physical education specialists do not offer physical education programs with emphasis on early childhood or primary content and methodology. The graduates from these institutions, in turn, are responsible for preparing colleges of education trainees to teach primary school physical education. Therefore, it is reasonable to assert that the physical education tutors in the colleges of education would most likely have inadequate training in early childhood and/or primary physical education (Sofo et al., 2021). It is worth noting that young children have different developmental needs from adolescents and teenagers, and therefore deserve developmentally and instructionally appropriate physical education experiences. Otherwise, the goal of holistic development of our children would only be a mirage. The preceding discussions on the weaknesses of the curriculum warrant that the Ghana Education Service should identify measures that would address the potential weaknesses.

Teacher Support

Classroom teachers would need lots of resource allocation to successfully implement the curriculum. Classroom teachers need regular training and continuous professional development in the new physical curriculum. Related to professional development is teacher involvement in curriculum development. As the implementers, teachers play a crucial role in the success of the new curriculum.

University Programs

The teacher education universities in Ghana need to reconfigure their physical education teacher education programs to meet the curricular expectations of the new pre-tertiary physical education curriculum. Specialist physical education teachers should be made responsible for teaching kindergarten through senior high school (KG-SHS) physical education. The undergraduate and graduate physical education programs at the University of Cape Coast, Ghana, for example, prepare teachers for all grade levels. However, the institution does not offer any courses that focus on physical education content and methodology specifically for the early years or primary grades. That is, for its graduates to provide quality physical education instruction to kindergarten or primary grades, it must include some courses that target these grade levels. Similarly, the University of Education, Winneba which prepares physical education teachers for senior high schools does not offer courses in early childhood or primary physical education content and methodology. Additionally, the graduates from these institutions would most likely be future tutors to the colleges of education responsible for preparing teachers for early childhood, primary, and junior high schools. Furthermore, some of the graduates from the two institutions may

serve as Metropolitan/Municipal/District Physical Education Coordinators, who would coordinate the teaching of physical education in primary and junior high schools. The third institution, the University of Ghana's Department of Physical Education and Sports has a program in Sport and Physical Culture Studies, not physical education pedagogy.

Colleges of Education Programs

The colleges of education in Ghana produce two types of teachers to teach physical education. The first group comprises classroom teacher trainees who would be responsible for teaching physical education to early childhood and primary grades in the future. The second group consists of teacher trainees who are being prepared as physical education specialists to teach in junior high schools. Even though the early childhood curriculum employs a thematic approach, especially in kindergarten settings, trainees are not well-prepared to teach physical education in those grades. Opoku (2020), for example, reported that teacher trainees were concerned that tutors at the colleges of education would teach theory topics and leave out practical topics. The teacher trainees also indicated that they did not select physical education as a specialism area because of limited job opportunities.

Recommendations

The foregoing analysis of Ghana's new primary school physical education curriculum revealed its potential strengths and weaknesses. Based on the analysis, we recommend the following measures.

1. The Ghana Education Service should provide teachers with the necessary support for effective teaching of physical education. Teachers need teaching and learning resources such as teacher guides/manuals, textbooks, and adequate physical education equipment.
2. Classroom teachers need the appropriate training in the new curriculum to enable them to provide effective physical education instruction to their students.
3. The Ministry of Education should require that physical education specialists teach the subject at all pre-tertiary levels- from kindergarten to senior high schools (KG-SHS). The current policy that requires classroom teachers to teach physical education is ineffective and counterproductive.
4. Universities preparing teachers for all grades (KG-SHS) should include courses that will equip their graduates with content and instructional strategies in early childhood and primary physical education.
5. Colleges of Education should offer physical education specialism programs that would prepare teachers for kindergarten and junior high schools (KG-JHS), and not for JHS only. This would ensure efficient use of manpower and resources (Opoku, 2020). For

example, a physical education teacher with KG-JHS certification would serve schools with JHS and primary grades under the same administration.

Conclusions

The analysis of Ghana's new physical education curriculum for primary schools in this paper revealed potential strengths and weaknesses. One potential strength was its comprehensive nature- it comprises a variety of physical education contents. Another strength was that the curriculum was based on the Ghanaian context. A third strength is the use of curriculum integration- utilizing cross-link subjects. Conversely, the analysis identified two potential weaknesses- the lack of support and a disconnect between curriculum expectations and teacher education. We recommend that the Ministry of Education reconsiders the requirement that classroom teachers be responsible for teaching physical education in primary schools. Finally, it is imperative that teacher education programs in the universities offer programs and/or courses that would equip their graduates with the requisite knowledge and pedagogy in early childhood and primary school physical education.

References

- Aboagye, E., & Yawson, J. A. (2020). Teachers' perception of the new educational curriculum in Ghana. *African Educational Research Journal*, 8(1), 6-12.
- Agbofa, F. J. K., Mensah, D. K. D., Opoku-Amankwaah, K., Kyeremeh, S., & Adu-Boahen, A. O. (2023). Teachers' concerns on the implementation of the standards-based curriculum in Ghana: A Case of New Juaben North Municipal. *Creative Education*, 14(5), 1076-1093.
- Cairney, S. A., El Marj, N., & Staresina, B. P. (2018). Memory consolidation is linked to spindle-mediated information processing during sleep. *Current Biology*, 28(6), 948-954.
- Dei, G. J. S. (2004). *Schooling and education in Africa: The case of Ghana*. Africa World Press.
- Donkor, S. K. (2021). Adequacy of pre-service teacher education for teaching physical education curriculum in public primary schools: A study of teachers from six selected educational circuits. *International Journal of Physiology, Nutrition and Physical Education*, 6(2), 259-264.
- Diamond, A., & Ling, D. S. (2016). Conclusions about interventions, programs, and approaches for improving executive functions that appear justified and those that, despite much hype, do not. *Developmental Cognitive Neuroscience*, 18, 34-48.
- Donnelly, J. E., Hillman, C. H., Castelli, D., Etnier, J. L., Lee, S., Tomporowski, P., ... & Szabo-Reed, A. N. (2016). Physical activity, fitness, cognitive function, and

- academic achievement in children: A systematic review. *Medicine and Science in Sports and Exercise*, 48(6), 1197.
- Hardman, K. (2008). Physical education in schools: A global perspective. *Kinesiology*, 40(1), 5-28.
- Hill, M. (2005). *The public policy process (4th Ed)*. Harlow, England: Pearson Longman.
- Hull, C., & Hjern, B. (1982). Helping small firms grow: An implementation analysis of small firm assistance structures. *European Journal of Political Research*, 10(2), 187-198.
- International Council for Health, Physical Education, Sport, and Dance (2012). International standards for physical education and sport for school children. <http://www.ichpersd.org/index.php/standards/international-standards>.
- International Physical Literacy Association. (2017). Physical literacy definition. <https://www.physical-literacy.org.uk/>
- Lubans, D., Richards, J., Hillman, C., Faulkner, G., Beauchamp, M., Nilsson, M., ... & Biddle, S. (2016). Physical activity for cognitive and mental health in youth: A systematic review of mechanisms. *Pediatrics*, 138(3).
- Ministry of Education (2018). National pre-tertiary curriculum framework for developing subject curricula. National Council for Curriculum and Assessment, Ministry of Education, Accra, Ghana.
- Ministry of Education (2019). Physical education curriculum for primary schools (Basic 1-6). National Council for Curriculum and Assessment, Ministry of Education, Accra, Ghana.
- Ntumi, S., Agbenyo, S., Tetteh, A., Yalley, C. E., Yeboah, A., & Nimo, D. G. (2023). Teacher preparedness and implementation of the national pre-tertiary education curriculum framework in Ghana. *Journal of Educational Research and Practice*, 13(1), 251-269. doi: 10.5590/JERAP.2023.13.1.18
- Opoku, I. O. (2020). Attitude and perception of college of distance education students towards the learning of physical education in Ghana. *GSJ*, 8(10), 2205-2235.
- Pulzl, H., & Treib, O. (2007). Implementing public policy. In F. Fischer, G. Miller, & M. Sidney (Eds.), *Handbook of public policy analysis*. Boca Raton: Taylor & Francis Group.
- Sabatier, P. A. (1986). Top-down and bottom-up approaches to implementation research: A critical analysis and suggested synthesis. *Journal of Public Policy* 6(1), 21-48.
- Sabatier, P. A., & Mazmanian, D. A. (1980). The implementation of public policy: A framework for analysis. *Policy Study Journal*. 8 (Special Journal), 538-560.
- Sabatier, P. A., & Weible, C. M. (2007). The advocacy coalition framework. *Theories of the policy process*, 2, 189-220.
- SHAPE America & Human Kinetics (2014). National standards and grade-level outcomes for K-12 physical education.

<http://www.shapeamerica.org/standards/upload/National-Standards-Flyer-rev.pdf>

Sofo, S., Asola, E. F., & Thompson, E. (2021). Ghanaian classroom teacher trainees' perceived competence and intrinsic motivation in physical education. *International Journal of Educational Technology & Learning*, 10(1), 47-55.

DOI:10.20448/2003.101.47.55.

Telama, R., Yang, X., Leskinen, E., Kankaanpää, A., Hirvensalo, M., Tammelin, T., ... & Raitakari, O. T. (2014). Tracking of physical activity from early childhood through youth into adulthood. *Medicine & Science in Sports & Exercise*, 46(5), 955-962.

Tomporowski, P. D., McCullick, B., Pendleton, D. M., & Pesce, C. (2015). Exercise and children's cognition: The role of exercise characteristics and a place for metacognition. *Journal of Sport and Health Science*, 4(1), 47-55.

Valdez, A. A., & Reed, K. (2020). A student's approach to constructivist curriculum design. *Curriculum & Teaching Dialogue*, 22(1/2), 107-120.