EXPLORING UNHEARD VOICES: AN IN-DEPTH ANALYSIS ON TEACHERS' SENTIMENTS IN HANDLING THE SPORTS CURRICULUM

ROLLYNE R. ABRINA

Central Mindanao Colleges, Kidapawan City, Philippines. Corresponding email: rollyne.abrina@deped.gov.ph

ABSTRACT

This research delves into the sentiments of teachers concerning the integration of sports curriculum into educational practice. Through qualitative analysis, it uncovers themes that highlight the alignment between the curriculum and teachers' philosophies, emphasizing Learning by Doing, Holistic Development, Cooperative Learning, and Reallife Application. These findings demonstrate a positive perception among teachers, indicating enrichment of the educational experience through active participation, holistic development, collaboration, and real-life skill application. Additionally, the study identifies challenges faced by teachers, including the need for academic support, practical knowledge, teacher upskilling, and student behavior management. Addressing these challenges requires comprehensive strategies, such as bolstering academic support systems, providing adequate training, and fostering conducive learning environments. Furthermore, the research underscores the importance of academic collaboration, innovative teaching strategies, and creating positive classroom environments to enhance student engagement and learning outcomes. By prioritizing these themes and implementing targeted interventions, educators can cultivate a supportive atmosphere that promotes enthusiasm and efficacy in teaching sports, leading to a more enriching educational experience for students.

Keywords: Teachers, Sports Curriculum, Job Satisfaction, Well-being, Qualitative Research

INTRODUCTION

The sports curriculum is crucial in education, aiming to enhance students' physical health, cooperation, discipline, and character. Smith (2022) highlights its role in promoting a holistic learning approach, enabling students to develop essential physical, mental, and social skills vital for overall growth and life success. Effective sports curriculum implementation improves physical fitness and instills values such as fair play, perseverance, and sportsmanship (Bailey, 2006).

Internationally, sports' educational significance has increased due to its ability to address various contemporary issues in education. Pennington & Durksen (2019) note that many nations recognize sports' role in promoting healthy lifestyles, boosting academic performance, and fostering crucial life skills. Educational institutions globally

value a comprehensive sports curriculum, with studies examining its impact on academic achievement, mental health, and personality development.

In the Philippines, Executive Order No. 64 s. 1993, known as Athletics for All, underscores the importance of including physical education and sports in a well-rounded education. The Department of Education (DepEd) aims to provide students with diverse sports activities and foster an appreciation for physical fitness through the Sports Curriculum.

This study explores the perspectives of Elementary teachers regarding sports curriculum implementation. It identifies the challenges they face, the strategies they use, and the curriculum's overall impact on students' holistic development. Using qualitative research methods like interviews, surveys, and observations, the study offers insights into the curriculum's strengths and weaknesses, guiding evidence-based recommendations for improvement.

Despite integrating sports into the curriculum, schools have experienced unique challenges and limitations. Effective sports curriculum delivery may be hindered by these specific circumstances, reflecting broader issues within the country's educational system.

While many studies focus on the effects of sports education on students, there is limited research on teachers' perspectives. Understanding teachers' views, challenges, and attitudes is crucial for identifying improvement areas in curriculum implementation. This study addresses the research gap by examining factors that may influence the success of the sports curriculum in a selected public school, providing insights for better delivery in the Philippines.

Research Questions

The study aims to investigate teachers' perceptions of integrating sports curriculum, the challenges they face, and how these challenges affect their sentiments in the classroom.

Specifically, this study addressed the following questions:

- 1. How do teachers perceive the integration of sports curriculum in their educational practice?
- 2. What challenges do teachers encounter in handling sports curriculum, and how do these difficulties impact their emotional experiences in the classroom?
- 3. How can educators' sentiments towards the sports curriculum be nurtured and enhanced to promote a more engaging and effective learning environment for students?

Research Design

This study utilized a qualitative research design with data triangulation, as explained by Denzin (2009), to investigate the same phenomena through multiple methodologies, addressing the limitations of individual methods and exploring alternative perspectives. Employing a phenomenological research design allowed for an in-depth exploration of teachers' sentiments regarding the sports curriculum. Creswell (2007) notes that phenomenological research seeks to capture individuals' narratives about their experiences and emotions, providing detailed descriptions and insights into reality within an educational context, focusing on participants' perceptions, lived experiences, and emotions.

The rationale for using phenomenological research included its ability to illuminate how teachers perceive the implementation of the sports curriculum and identify the challenges they face. This approach generated abundant qualitative data, enabling a thorough examination and illustration of real-life contexts. Additionally, it facilitated the exploration of the complexities of teachers' lived experiences in teaching the sports curriculum to elementary pupils, providing a comprehensive understanding of the phenomenon.

Participants of the Study

The study involved ten teachers who handled subjects under the sports curriculum. These participants were selected using purposive sampling based on specific inclusion criteria aimed at gaining a profound understanding of the dynamics involved in teaching sports within elementary education. The criteria ensured that the selected teachers had substantial teaching experience, were actively engaged in the sports curriculum, and represented diverse demographic backgrounds. This careful selection process aimed to gather a comprehensive array of perspectives, enriching the study's findings with authenticity and depth.

Data Analysis

The teachers' narratives were analyzed using thematic analysis, as defined by Braun & Clarke (2021), which involves identifying common themes in qualitative data. The analysis followed a modified methodology adapted from Barroga and Tampus (2023) and involved three main steps. In the first step, open coding, the researcher read through transcripts to identify meaningful units of text and labeled them with descriptive codes. In the second step, axial coding, these codes were reviewed and grouped into clustered themes related to each other. In the final step, selective coding, relevant themes were categorized into practices, beliefs, perceptions, and awareness of teachers and students.

The researcher used theoretical frameworks and prior research to guide the identification of relevant themes, refining and modifying the data according to research questions. This systematic approach ensured that the analysis was thorough and aligned with the study's objectives. The process aimed to provide a detailed and accurate

representation of the teachers' perceptions and challenges in implementing the sports curriculum.

RESULTS AND DISCUSSION

Aspects of Sports Curriculum that Aligns with Teaching Philosophies and Instructional Method of Teachers

In delving into the sentiments of teachers regarding the integration of sports curriculum within the educational framework, four prominent themes emerge, shedding light on the alignment of these aspects with teachers' philosophies and instructional methodologies. The relevant themes are as follows: (1) Learning by Doing; (2) Holistic Development; (3) Cooperative Learning; and (4) Real-life Application.

Relevant Theme 1: Learning by Doing

Teachers align their instructional methodologies with this philosophy by drawing on their personal experiences as athletes, coaches, or sports enthusiasts. This practical approach enables students to connect theoretical concepts with real-world applications, fostering a deeper understanding and mastery of skills. Through active participation in sports, students develop essential motor skills, teamwork, and sportsmanship. This hands-on methodology not only enhances cognitive and physical development but also instills lifelong values and practical skills, underscoring the transformative power of experiential learning.

Excerpt 1:

"Sports curriculum aligned with learning by doing and learning to do because of the experiences of the teachers of being athletes, coach or even sports enthusiast. The teachers relate their experiences and share their knowledge in their own sports." (IDI P3)

Excerpt 2:

"In sports curriculum, the learners learn more not just through lectures but by practicing and doing the lessons taught." (IDI_P4)

Dy (2017) highlights that structured sports curriculum enhances physical well-being, cognitive progression, and psychological welfare. The Department of Education in the Philippines integrates sports within the K-12 curriculum to align educational aspirations with physical development (DepEd Order No. 66, s. 2013).

Relevant Theme 2: Holistic Development

Holistic development is a central theme emerging from the integration of sports curriculum, emphasizing the comprehensive growth of students. Teachers recognize that physical education contributes significantly to both physical health and mental well-being, enhancing students' overall school performance

Excerpt 3:

"The integration of Physical Education in subject matters, topics, and the overall pedagogical schemes may affect the pupils' personality, outlook, and performance. It will help a pupil to stay healthy, learn teamwork skills, mental alertness, causing the brain to be stimulated and boost his school performance." (IDI_P2)

Excerpt 4:

"I believe that integrating sports curriculum enhances the broader educational goals of the institution by fostering holistic development, promoting teamwork, discipline, and resilience, which are transferrable skills vital for success in academics and life beyond the classroom." (IDI P1)

Telama et al. (2018) assert that early involvement in sports fosters lifelong physical activity, reducing health risks. Eime et al. (2013) elucidate that sports participation boosts self-esteem and reduces anxiety and depression. Holt et al. (2017) link team sports with social skills development, including teamwork and conflict resolution.

Relevant Theme 3: Cooperative Learning

The emphasis on cooperative learning within the sports curriculum aligns with the teaching philosophies of educators. This approach involves students working together to achieve common goals, fostering collaboration and interpersonal skills. Teachers value sports curricula that promote skill development through teamwork and practice, as well as the cultivation of a growth mindset.

Cooperative learning provides a platform for students to engage in group activities, enhancing their understanding of sports concepts while developing essential social skills like communication and mutual respect. This method not only supports individual discipline but also strengthens the sense of community and collective achievement among students, reflecting the holistic educational objectives of the institution.

Excerpt 5:

"I think aspects of the sports curriculum emphasizing skill development through practice and teamwork, and fostering a growth mindset align closely with the teaching philosophies and instructional methods." (IDI_P1)

Excerpt 6:

"It promotes teamwork on group activity and discipline as an individual." (IDI P4)

Eime et al. (2013) emphasize the psychosocial benefits of sports, including enhanced self-esteem and reduced anxiety. Holt et al. (2017) and Renshaw et al. (2019) highlight that sports participation fosters teamwork, communication, and resilience. Cooperative learning in sports enhances social skills and nurtures collaborative dynamics.

Relevant Theme 4: Real-life Application

The theme of real-life application underscores the significance of integrating sports into the curriculum as a means of character development and practical learning. Teachers recognize that sports offer valuable opportunities to instill values such as fair play, sportsmanship, and empathy. These values are crucial for preparing students to navigate the complexities of a diverse society.

By participating in sports, students apply moral principles in real-world contexts, reinforcing classroom teachings and acquiring essential life skills. This approach not only enhances academic learning but also prepares students for the challenges of life beyond school, emphasizing the importance of empathy, collaboration, and resilience in a globalized world.

Excerpt 7:

"[...] sports provide opportunities for character building, instilling values of fair play, sportsmanship, and empathy, aligning with the institution's aim to nurture well-rounded individuals prepared for challenges in a diverse society." (IDI_P1)

Excerpt 8:

"The teachers learning in sports and they can integrate the sports curriculum in their institution and practice the good to broaden their learnings and apply in real life." (IDI P3)

Sports participation teaches values like fair play and empathy, preparing students for a diverse society. Eime et al. (2017) and Renshaw et al. (2019) highlight sports as a platform for developing social skills and resilience, essential for real-life applications. Integrating sports into education reinforces these values, preparing students for broader societal challenges.

Challenges Encountered by Teachers in Handling Sports Curriculum

In investigating the challenges encountered by teachers in handling the sports curriculum, four key themes emerge as crucial factors shaping teachers' sentiments and

experiences. The relevant themes are as follows: (1) Academic Support; (2) Practical and Theoretical Knowledge; (3) Upskilling of Teachers; and (4) Behavior of Students.

Relevant Theme 1: Academic Support:

Teachers require specialized training to handle the complexities of teaching and coaching different sports events. Moreover, the absence of essential equipment presents a significant barrier to students' skill development. Despite these challenges, teachers demonstrate resilience by leveraging available resources.

Excerpt 9:

"It demands specific teacher training due to the fact that only few are capable of teaching, mentoring and coaching a particular sports event." (IDI_P2)

Excerpt 10:

"There is also lack of equipment for the learners to use that even though they actively practice they still lack of skills since equipment are needed, but as an educator we do what we can to make it happen." (IDI_P2)

In the realm of sports curriculum delivery, educators encounter several obstacles. Smith and Johnson (2018) highlight inadequate facilities and equipment as barriers that impede effective instruction. Furthermore, Jones et al. (2019) point out the lack of teacher training in sports education as a significant challenge. Additionally, Schultz (2020) underscores the issue of limited access to appropriate curriculum materials, which affects the comprehensiveness of sports education.

Relevant Theme 2: Practical and Theoretical Knowledge

Practical and Theoretical Knowledge theme emphasizes the dynamic interplay between hands-on experience and theoretical understanding in sports education. Teachers' involvement in sports activities and interaction with athletes and coaches enriches their pedagogical approach.

Excerpt 11:

"There is also lack of equipment for the learners to use that even though they actively practice they still lack of skills since equipment are needed, but as an educator we do what we can to make it happen." (IDI_P2)

Relevant Theme 3: Upskilling of Teachers

The Upskilling of Teachers theme underscores the importance of ongoing professional development to enhance teacher competence in sports education.

Challenges such as limited collaboration and inadequate training opportunities hinder teachers' ability to deliver quality sports instruction. Targeted upskilling initiatives are essential to equip teachers with the necessary competencies to navigate the intricacies of sports education and foster a supportive learning environment.

Excerpt 12:

"The obstacles of teachers in sports curriculum were cooperation of their colleague and seminars to update their learnings in sports or discipline." (IDI_P3)

Excerpt 13:

"It demands specific teacher training due to the fact that only few are capable of teaching, mentoring and coaching a particular sports event." (IDI_P5)

Numerous challenges persist in the successful implementation of sports curriculum. The comprehensive execution of sports education is often impeded by various obstacles, including but not limited to resource constraints, insufficient teacher training, and competing academic priorities (Guevara & Cruz, 2020). The attitudes and perspectives of educators significantly impact the effectiveness of sports curriculum implementation. Roldan's (2019) scholarly inquiry indicates that the endorsement and dedication of teachers play pivotal roles in fostering the active participation and favorable experiences of students in sports programs.

Relevant Theme 4: Behavior of Students

The Behavior of Students theme highlights the complexity of managing student behavior in sports curriculum implementation. Challenges such as fluctuations in engagement and grade-level differences in seriousness require teachers to adapt their strategies to meet diverse student needs. Understanding and addressing these behavioral dynamics are crucial for creating inclusive and rewarding sports programs that contribute to students' holistic development and well-being.

Excerpt 14:

"There are learners who are only enthusiastic at first, then does not exert effort later. The other subject areas will also be affected specifically if there are upcoming activities." (IDI_P4)

Excerpt 15:

"When it comes to grade level, I can clearly see the level of their seriousness varies. The higher the grade level, the more they become serious about their sports." (IDI_P6)

The application of sports education is recognized as a potent mechanism for enhancing social competencies and nurturing collaborative dynamics. Eime et al. (2017)

elucidated that involvement in team sports facilitates the development of vital interpersonal skills, encompassing effective communication, cooperation, and conflict resolution. Such social interactions transcend specific contexts, thereby significantly contributing to the establishment and nurturing of resilient social networks and lasting friendships.

Teachers' Sentiments Towards Promoting a More Engaging and Effective Learning Environment

In delving on the teachers' sentiments towards promoting a more engaging and effective learning environment, several key themes emerge within the context of teaching and handling the sports curriculum. The relevant themes are as follows: (1) Academic Collaboration and Support; (2) Teaching Strategies and Innovations; (3) Classroom Experiences and Environment; and (4) Time Constraints.

Relevant Theme 1: Academic Collaboration and Support

Teachers emphasize the importance of institutional support, professional development, and peer collaboration in delivering effective sports education.

Excerpt 16:

Institutional support, professional development opportunities, and collaboration with peers provide teachers with the resources, skills, and networks necessary to enhance their confidence, competence, and enthusiasm in delivering the sports curriculum." (IDI_P6)

Excerpt 17:

"Limited access to sports facilities and equipment, along with time constraints due to academic pressures contribute significant obstacles when implementing the sports curriculum." (IDI¬ P1)

The sports curriculum is a deliberate arrangement of activities, objectives, and assessments meticulously designed to foster holistic development through active participation in sports (Hastie & Casey, 2014). Moreover, it is emphasized that the sports curriculum encompasses various essential components necessary for delivering a comprehensive education in athletics. These elements include content standards, learning outcomes, instructional strategies, assessment techniques, and the integration of sports education with other academic disciplines.

Relevant Theme 2: Teaching Strategies and Innovations

Continual evaluation and adaptation of methods are crucial to ensure the effectiveness of sports instruction. Longitudinal studies are essential for assessing the enduring effects of sports education on the physical and cognitive development of

adolescents. Additionally, academic research should explore innovative pedagogical strategies and instructional resources that have the potential to enhance students' engagement and active involvement in athletic activities (Smith & Quarmby, 2018).

Excerpt 18:

"I often utilize a combination of incorporating real-life examples, gamification techniques, and fostering a supportive classroom atmosphere to cultivate enthusiasm for the sports curriculum learners." (IDI_P6)

Excerpt 19:

"Curriculum implementation entails restructuring habits, reforming thoughts, and deeper conceptual understanding of instructional methodology among the implementers. This takes time and much planning." (IDI_P2)

The integration of technology into sports education presents a promising avenue for potential enhancement. According to Garcia et al. (2020), the incorporation of gamification and digital platforms holds potential for increasing student engagement and interaction in sports activities, thereby enhancing their motivation and improving learning outcomes.

Relevant Theme 3: Classroom Experiences and Environment

Teachers recognize the importance of actively supporting and influencing pupils' engagement to enliven the sports curriculum. By integrating Physical Education-related activities into their lessons, educators aim to create a livelier and more interesting classroom atmosphere. This proactive approach not only enhances students' physical well-being but also promotes holistic learning experiences that transcend traditional academic boundaries.

Excerpt 20:

"The strategies that were currently employed is 'Learning by doing'. These strategies and approach were effective because the learners improve and understand by their experiences." (IDI_P1)

Excerpt 21:

"In sports curriculum, the learners learn more not just through lectures but by practicing and doing the lessons taught." (IDI_P4)

The beneficial impacts of sports education extend to the domain of psychosocial well-being. Eime et al. (2013) emphasize the significance of engaging in sports activities in enhancing self-esteem, alleviating anxiety, and alleviating symptoms associated with depression. Participation in sports education, particularly involving team-based activities, has been associated with the cultivation of social skills such as teamwork, communication, and conflict resolution (Holt et al., 2017). Moreover, research by Renshaw et al. (2019) demonstrates that the integration of sports education provides a foundation for the development of resilience and coping techniques.

Relevant Theme 4: Time Constraints

Teachers express concerns about the challenge of balancing the allocated time for sports curriculum with other subjects. The rigid time frame of the sports curriculum often necessitates adjustments in scheduling, which can potentially disrupt the flow of other academic disciplines. This challenge underscores the importance of effective time management and the ability of teachers to juggle multiple responsibilities within limited time constraints as mentioned by one teacher.

Excerpt 22:

"The specific obstacles do teachers identify when implementing the sports curriculum is the time. Sports curriculum has already time frame every day and the teacher per discipline need to acquire the time and manage." (IDI_P3)

Excerpt 23:

"Challenges like affecting other subject areas time schedule does not always happen and if it does, we make sure to give the learners time to make up with their class." (IDI P4)

Previous research has emphasized the importance of teacher satisfaction in educational contexts (Smith et al., 2018). Teachers who experience satisfaction are more likely to demonstrate motivation, commitment, and effectiveness in their instructional approaches. Moreover, studies have shown that engagement, characterized by active participation and passion, positively influences students' learning experiences (Fredricks et al., 2004). The presence of enjoyment in teaching sports has the potential to enhance the overall classroom atmosphere, thereby fostering improved relationships between teachers and students (Hassan & Akhtar, 2017).

IMPLICATIONS

The findings derived from the sentiments of teachers regarding the integration of sports curriculum carry significant practical implications for educational practice.

Firstly, the alignment between the curriculum and teachers' philosophies and instructional methodologies underscores the importance of coherence in educational approaches. It implies that when educational initiatives, such as integrating sports, resonate with teachers' beliefs and methods, they are more likely to be embraced and effectively implemented in the classroom. Thus, educational institutions should prioritize aligning curriculum developments with teachers' existing practices and values to ensure successful integration.

Secondly, the challenges faced by teachers in managing sports curriculum highlight the need for comprehensive support systems and professional development opportunities. Addressing obstacles such as insufficient academic support and the need for upskilling requires proactive measures from educational authorities and school administrations.

Moreover, creating a conducive learning environment for students in the sports curriculum entails a multifaceted approach. Academic collaboration, innovative teaching strategies, and promoting positive classroom environments are essential components in enriching the educational experience.

Finally, it is crucial to recognize and address practical constraints such as time limitations that may impede effective curriculum delivery. Educational stakeholders should work collaboratively to streamline processes, allocate resources efficiently, and provide necessary support to ensure that teachers have the time and resources needed to implement the sports curriculum effectively.

REFERENCES

- Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health, 76*(8), 397-401.
- Barroga, I., & Tampus, D. (2023). Pedagogical Translanguaging Realities in the Classroom: Teachers' Practices, Perceptions, and Awareness. *Psychology and Education: A Multidisciplinary Journal, 11*(7), 649-658. https://10.5281/zenodo.8211085
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology, 18*(3), 328-352.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Sage Publications.
- Denzin, N. K. (2009). *The research act: A theoretical introduction to sociological methods* (4th ed.). Aldine Transaction.
- Department of Education (DepEd). (2013). Policy guidelines on the implementation of grades 1 to 10 of the K to 12 Basic Education Curriculum (BEC) effective school year 2013-2014 (DepEd Order No. 66, s. 2013). Retrieved from https://www.deped.gov.ph/2013/09/06/do-66-s-2013-policy-guidelines-on-the-

- implementation-of-grades-1-to-10-of-the-k-to-12-basic-education-curriculum-bec-effective-school-year-2013-2014/
- Dy, J. A. (2017). Curriculum implementation and the Philippine K-12 learner. *Asia Pacific Journal of Multidisciplinary Research, 5*(2), 7-13.
- Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for adults: Informing development of a conceptual model of health through sport. International Journal of Behavioral Nutrition and Physical Activity, 10*(1), 135.
- Eime, R. M., Harvey, J. T., Charity, M. J., Casey, M. M., van Uffelen, J. G., & Payne, W. R. (2017). The contribution of sport participation to overall health enhancing physical activity levels in Australia: A population-based study. *BMC Public Health, 17*(1), 1-12.
- Garcia, C. M., Catalán, A. R., & Herrero, G. S. (2020). Gamification and physical education: A systematic review. *Sustainability, 12*(4), 1535.
- Guevara, D. R., & Cruz, A. C. (2020). The implementation of sports in basic education in the Philippines: Challenges and implications. *Asia Pacific Journal of Education, Arts and Sciences, 7*(1), 88-94.
- Hassan, S., & Akhtar, A. (2017). Positive emotions and teacher–student relationship. In M. A. White & S. J. Murray (Eds.), *Positive schooling and child development* (pp. 125-140). Springer.
- Hastie, P. A., & Casey, A. (2014). Fidelity in models-based practice research in sport pedagogy: A guide for future investigations. *Journal of Teaching in Physical Education, 33*(3), 422-431.
- Holt, N. L., Neely, K. C., Slater, L. G., Camiré, M., Côté, J., Fraser-Thomas, J., & Tamminen, K. A. (2017). A grounded theory of positive youth development through sport based on results from a qualitative meta-study. *International Review of Sport and Exercise Psychology, 10*(1), 1-49.
- Jones, E., et al. (2019). Enhancing physical education teacher preparation for effective curriculum delivery. *Journal of Sport Pedagogy, 25*(1), 45-60.
- Pennington, D., & Durksen, T. (2019). Physical education's contribution to public health: Beyond just physical activity. *Quest, 71*(2), 227-242.
- Renshaw, I., Davranche, K., Hammond, J., & Oldham, A. (2019). The impact of stressors on the performance and psychophysiological responses of elite sport performers. *Sports Medicine, 49*(5), 747-765.
- Roldan, E. (2019). Teachers' perception and attitude towards the implementation of K-12 physical education program in Nueva Ecija, Philippines. *International Journal of Multidisciplinary Research and Publications, 1*(4), 11-16.

- Schultz, D. M. (2020). Access to curriculum resources in physical education. *Physical Education and Sport Pedagogy, 25*(5), 529-541.
- Smith, J. (2022). The significance of sports education in fostering a holistic approach to learning. *Journal of Education and Sports, 45*(2), 123-136.
- Smith, K., & Johnson, L. (2018). Examining teacher satisfaction and perceived effectiveness of a comprehensive school physical activity program. *European Physical Education Review, 24*(1), 84-98.
- Smith, M., & Quarmby, T. (2018). More than motivation: The impact of the teaching team and its approach on physical education. *Education 3-13, 46*(2), 230-243.
- Telama, R., Yang, X., Viikari, J., Välimäki, I., Wanne, O., & Raitakari, O. (2018). Physical activity from childhood to adulthood: A 21-year tracking study. *American Journal of Preventive Medicine, 28*(3), 267-273.