

## INVESTIGATING HOW PHYSICAL EDUCATION LINKS TO OTHER SCHOOL SUBJECTS AND CROSS-CURRICULAR ISSUES IN SCHOOLS WITHIN KATIMA MULILO, ZAMBEZI REGION IN NAMIBIA

**Dr Gerald Kela (PhD)<sup>1\*</sup>**

<sup>1</sup>Faculty of Health Sciences & Veterinary Medicine, School of Allied Health Sciences  
Department of Physical and Sport Science (DPSS), University of Namibia, Windhoek Main  
Campus

**Dr Stanley C. Chombo (PhD)<sup>2</sup>**

<sup>2</sup>Faculty of Education and Human Sciences, School of Education, Department of Applied  
Educational Sciences (DAES), University of Namibia, Katima Mulilo Campus, schombo@unam.na

**Julia Lettie Hamutenyah (M.Ed)<sup>3</sup>**

<sup>3</sup>Faculty of Education and Human Sciences, School of Education, Department of Applied  
Educational Sciences (DAES), University of Namibia, Katima Mulilo Campus,  
lhamutenyah@unam.na,

**\*Corresponding author: Dr Gerald Kela (PhD)**

ORCID: <https://orcid.org/0000-0001-9881-0164>

<sup>\*</sup>Faculty of Health Sciences & Veterinary Medicine, School of Allied Health Sciences  
Department of Physical and Sport Science (DPSS), University of Namibia, Windhoek Main  
Campus

### Abstract

Cross-curricular teaching is the use of numerous theoretical disciplines during each class session. This teaching technique works on learners' soft skills, increases engagement, and helps increase learner retention rates. It appears that most physical education teachers integrate these cross-curricular issues in their physical education class sessions. The main aim of this study was to investigate how physical education links to other school subjects and Cross-Curricular Issues in schools within Katima Mulilo, Namibia. This study adopted a qualitative approach to explore required data to close the existing gap within the phenomenon. A total of thirty five (35) physical education teachers from were purposively selected to be part of this study. Data was collected using questionnaires and analysed thematically. The study findings revealed that physical education linked to other school subjects and cross-curricular issues in schools such as; environmental learning, population education, HIV/AIDS, education for human rights and democracy, information and communication technology and road safety. Moreover, the findings further links other subjects to physical education such as; mathematics and sciences, languages, discovery of cultures and history, health issues and nutrition. It is therefore to be concluded from this study that, the integration of numerous cross-curricula issues in physical education increase involvement and engagement of learners in multiple subjects at once, it sanctions learners to think innovatively, it helps with actual world problem solving and critical thinking abilities, by collaborating and blending educational subjects together, learners can combine anything they are passionate about with anything they are not.

**Keywords:** physical education, links, school subjects, cross-curricular issues

## **Introduction**

Much of what happens in education, particularly in schools, is separated up into small, practical sections and offered to learners. Subject divisions are founded to make information easier to understand, agreeing the sections to become progressively ordered and categorized. Though the outcome can be complex like a puzzle, where it is problematic to place the smaller sections composed, as they are not seen relative to the other sections (Earley, 2019).

Drake (2012) discovers how the human brain processes and systematizes data. It seems that the brain classifies new information established on prior experiences and that meaning was developed as a result of those understandings. His research recommended that complete experiences are recalled and remembered easily. According to Groundwater-Smith et al (2015) increase this idea by linking neuropsychology and teaching approaches. They support Cromwell's [11] research by stating that searching for meaningful patterns is a basic process of the brain. Rather, the human may attempt to resist learning units and facts presented in isolation. These investigation instances show that the brain favors the cross curricular methodology due to its probability to produce patters crossways a widespread variation of subject areas.

Earley (2019) proposes that cross-curricular methods generate links and connections between subject content discovered in subject areas and learners understandings outside of learning places, creating education more appropriate, relevant and significant for learners. The cross-curricular method distributes knowledge and abilities from one state to another, giving learners more important and applicable program to curb their interests. There is a minor body of inquiry linked to the special effects an incorporated curriculum has on learner attitudes that propose that the thematic method leads to a rise in conducts and actions that are associated to activity such as drive, attitude and self-route (National Institute for Educational Development, 2016).

According to Triolet (2011) found that there are numerous opportunities to support essential content and cross curricular activities in physical education lesson. This effort to support language arts, history, math and science must not derive at the cost of teaching physical education criterions and content. The key is to discover innovative ways to support the fundamental material while keeping true to the objective of teaching the skills and notions related to increasing lifetime movers (Triolet, 2011).

## **Problem statement**

Cross-curricular links between physical education and other school subjects are significant because they can help students understand their learning within their lives out of physical activity and sport. Once students see how different subjects are connected, they are better able to comprehend and recall the material (Myers, 2023). Moreover, research have shown that the cross-curricular subjects in Namibian schools includes: HIV and AIDS, Environmental Learning, Education for Human Rights and Democracy, Population Education, Information and Communication Technology, have been introduced to the formal school program to be implemented within each subject and crossways all grades because each of the matters deals with specific dangers and challenges in our Namibian society (Ministry of Education, Art and Culture, 2017). Therefore this current study aims to investigate how physical education links to other school subjects and Cross-Curricular issues in schools within Katima Mulilo, Namibia.

## **Research questions**

1. How does physical education link to other school subjects and Cross-Curricular Issues in schools?
2. How do teachers deal with physical education cross-curricula issues in extracurricular activities?

## **Literature Review**

Research has shown that cross-curricular learning can improve learners' understanding and remembering of information by associating new knowledge to current knowledge. It can also make

learning more significant and appealing by showing learners how dissimilar subjects interconnect (Creswell, 2023). Suggestively, learners who are exposed to associate or incorporated curricular areas show academic performance equivalent to or better than learners who are showing to discipline-based programs (Drake & Reid, 2010). Also, employing integrative activities crossways dissimilar subject areas has been documented as being actual for nurturing learning, while conserving high levels of learner drive, creativeness, and innovation (Bradford & Schmidt, 2016). Moreover, the benefits from cross-curricular influences as well include: building on earlier knowledge; merging learner learning; replicating real world circumstances and matching the way learners think (Alberta Education, 2007).

Decisively linking competencies from inside or crossways subject areas changes the understanding of significant curricular learning results. On the other hand, Gleddie et al (2018) suggests that although cross-curricular learning means to connect subject areas, teachers' necessity to be familiar with the significance of meeting the exceptional envisioned learning results for each curricular area. It is therefore not true cross-curricular association when one subject area gets an excessive deal of emphasis, while the other subject area gets less. For instance, just for the reason that a teacher takes a Grade 4 lesson outside to search for and gather numerous items associated to a science project, the class is not a 'true' cross-curricular linking to physical education (Gleddie, et al., 2018). When learners are merely asked to go to different spots to gather items such as rocks, pine-cones and leaves, even though physical activity is involved during this class, no learning results associated to physical education are clearly met.

Cross-curricular incorporation saves time for teachers by agreeing for more detailed dialogues while supporting class planning. When a class or activity incorporates two or more subjects, teachers can teach and exercise faster than in two back-to-back lone subject classes. Learners as well benefit from these time-savers, multidimensional learning prospects by being exposed to the inter-linked of diverse subjects which offer a new perception on learning (Banilower et al. 2018). Cross-curricular methods begin by construction and cultivating associations, through the application of opulent learning activities that boost learners to link their learning with other discipline areas, making them more significant and productive.

Research further shows that, the Years 1–10 Physical Education and health main learning area integrates the cross-curricular significances of numeracy, literacy, life skills and a futures perception. Literacy includes a thoughtful of how linguistic works, and an ability to apply linguistic skills in a variety of school and daily social circumstances. Learners develop literateness skills through writing, reading, speaking, seeing and listening. Numeracy involves the capacity to select from well-known mathematical terminologies and skills and to apply them in order to manage with the mathematical strains of coursework and daily life. 'Life skills' is a concept used to define the blend of knowledge, practices, skills and assertiveness that are careful necessary for individuals to function sufficiently in their current and changing existence roles and circumstances. Futures' includes a variety of procedures that aid the growth of understandings and awareness about the present and past, leading to deliberation of the significances of individual and cooperative actions. (Queensland School Curriculum Council, 2015)

### **Research design**

This study used qualitative research approach, according to Ugwu and Eze (2023) illustrates that qualitative research is used to understand how people see their environments. Even though there are many methods to qualitative research, they all share a predisposition to be flexible and emphasise on conserving indepth meaning when understanding data.

### **Population and sample**

The population of this study consisted of all teachers within Katima Mulilo circuit, Shukla (2020) defines population as a set or cluster of all the items on which the outcomes of the research are to be applied. Whilst the sample size of this study consisted of thirty five (35) physical education teachers who were purposively selected to be part of this study, Shuklu (2020) defines sample as the small amount of something that gives the information about the thing, it is taken from. It means, the parts, carefully chosen from the population as a model, must signify all kind of features of dissimilar types of parts of population.

### **Data collection methods**

This study used questionnaires designed by the research to collect its data. According to Taherdoost (2021) data collection is the method of gathering information targeting to gain perceptions concerning the reaserch phenomenon.

### **Data analysis**

Data was analysed thematically, according to Braun and Clarke (2012) defines thermatic analysis as a process for scientifically identifying, arranging, and present perception into, outlines of meaning (themes) through a dataset. Through concentrating on meaning through a dataset, thermatic analysis lets the researcher to forsee and make sense of shared or collective meanings and understandings.

### **Research results**

The main aim of this study was to current study aims to investigate how physical education links to other school subjects and Cross-Curricular issues in schools within Katima Mulilo, Namibia. The initial first question was:

#### **How does physical education link to other school subjects and Cross-Curricular Issues in schools?**

The majority of teachers indicated that:

Physical education can link to other school subject such as mathematics and science by integrating topics such as force, distance, speed and body systems during physical activities. Learners can also learn to use figures or numbers when measure and record what they do correctly for instance, how faraway they can toss a ball and learners additional develop their counting abilities by keeping total during group games.

On the same question other physical education teachers said:

Languages can be incorporated in physical education lessons in which learners write about their sports experiences or learn new terminology related to fitness and sports.

Other teachers said that:

Physical education can be used as a stand to discover diverse cultures and history, for example learners can talk over the origins of diverse sports or customary traditional games from all over the world.

Moreover, some teachers concurred by saying that:

Physical education is appropriate for teaching about healthiness issues and nutrition, topics such as the importance of regular exercise and balanced diet.

Majority of teachers concurred that:

Physical education can be integrated in fighting of social challenges such as HIV/AIDS when teachers teach health issues to learners.

Teachers supplementary suggested that:

Environmental learning in physical education can address topics such as minimize energy usage through using green practices such as sleep mode, level brightness and the use of power mode save.

Teacher further suggested that:

Road safety can be taught in physical education in which learners are taught how to stop, look, listen and think before crossing the road, wearing of bright reflective clothes, holding hands while walking on the pavement.

Teachers further reiterated that:

Population education can be integrated in physical education in which learners are taught demographic important aspects of the population such as age, gender, height, and ethnicity.

Teachers added that:

Education for human rights and democracy can be integrated in physical education while teaching physical activities. Teachers can incorporate activities that encourage learners to act against prejudice, discrimination, injustice and stereotypes.

Teachers concluded by saying that:

Physical education can incorporate information and communication technology, for instance video recording can be used to give immediate feedback on student physical performance as information and communication technology (ICT) applications can increase the learning process in physical education at ease and precise.

The second question dealt with physical education cross-curricular issues that can be used in extracurricular activities, below is the question and teachers' responses to the question.

### **How do teachers deal with physical education cross-curricula issues in extracurricular activities?**

Teachers indicate that:

Environmental learning can be integrated in physical education lesson under extracurricular activities such as school cleaning-up campaigns.

Additionally, teachers further said that:

Learners can also learn environmental issues such as creating sports equipment from recyclable materials in physical education

On the other hand teachers said that:

Education for human right issues such as activities to celebrate diversity can be learnt in physical education as extracurricular activities.

Teachers suggested that:

Education for human rights issues such as age appropriate anti-bullying activities can be integrated in physical activities.

### **Discussions**

The main aim of this study was to current study aims to investigate how physical education links to other school subjects and Cross-Curricular issues in schools within Katima Mulilo, Namibia. This study results show that physical education can be incorporated in other school such as mathematics and sciences in which learners are taught how calculate force, distance, speed and body systems. These results concur with Quigley (2021) who revealed that intergrating mathematics in physical education activities teaches learners how to understand numerical concepts such as measurement, distance and recording accuracy. This study's results further shows that languages can be incorporated in physical education lessons in which learners write about their sports experiences or learn new terminology related to fitness and sports. These results are supported by Olsson and Tvena (2023) who revealed that intergrating language in physical education improve learner's vocabulary acquisition and aspects of sentence construction. Moreover, the above results are further supported by Hwang et al. (2023) who found that through jumping, dancing and stationary bicycling have shown and seem to improve numerous areas of language including; acquisition of vocabulary, sentence construction, word withholding and learner motivation.

This study results further shows that through the intergration of other subjects in physical education learners can discover different cultures and history. These results aligns with Quennerstedt and Larsson (2015) findings which revealed that physical education can be used a tool to discover

different culture and history when learners are allowed to show case their different cultural diversities. moreover, this further established that Physical education is appropriate for teaching about healthiness issues and nutrition, topics such as the importance of regular exercise, balanced diet.. These results are supported by Trigueros (2024) who established that physical education classes are therefore an ideal way to raise awareness among children and families about nutrition, healthy and balanced diet. This study results further shows that Physical education can be integrated in fighting of social challenges such as HIV/AIDS when teachers teach health issues to learners. These results concur with Njelesani (2011) whose findings shows that HIV/AIDS can be intergrated in physical education and sports activities to campaign against the spread of HIV/AIDS pandemic. The results of this study shows that environmental learning can be intergrated in physical education to address topics such as minimize energy usage through using green practices such as sleep mode, level brightness and the use of power mode save. The results are support by Ministry of Education, Art and Culture (2017) which suggested that enviromental learning can be incorporated in physical activities to enhance teaching and learning. Likewise, activities such as creating sports equipment from recyclable materials, and school cleaning-up campaigns can be taught in physical education. This research outcome further shows that road safety can be taught in physical education in which learners are taught how to stop, look, listen and think before crossing the road, wearing of bright reflective clothes, holding hands while walking on the pavement. This research outcomes is supported by Saunders and Miller (2009) road safety can be intergrated in physical activities by teaching learners the importance of passenger safety, pedestrian safety, playing safely and sensing traffic.

Moreover, results further shows that population education can be integrated in physical education in which learners are taught demographic important aspects of the population such age differences, gender differences, height differences, and ethnicity diversity. These results aligns with the Ministry of Education, Arts and Culture (2022) which emphasised that population education can be intergrated in physical education by teaching issue population demographics, nutrition and knowing oneself's body. Lastly the study results shows that physical education can incorporate information and communication technology, for instance video recording can be used to give immediate feedback on student physical performance as information and communication technology (ICT) applications can increase the learning process in physical education at ease and precise. These results concur with Suriya and Arumugam (2020) incorperating of technology in physical education can play a positive role in physical education by monitoring the student's health and progress while keeping them engeged with fun activities for instance technological gadgets such as heart rate monitors, exercise videos, pedometers and dance games can help learners towards fitness.

### **Conclusions and Recommendations**

The main aim of this study was to investigate how physical education links to other school subjects and Cross-Curricular issues in schools within Katima Mulilo, Namibia. It is therefore to be concluded from this study that, the integration of numerous cross-curricula issues in physical education increase involvement and engagement of learners in multiple subjects at once, it sanctions learners to think innovatively, it helps with actual world problem solving and critical thinking abilities, by collaborating and blending educational subjects together, learners can combine anything they are passionate about with anything they are not.

In order to develop and implement cross-curricular teaching, physical education teachers must have the necessary intellectual, human and material resources. Therefore, based on this study's findings the following issues have been recommended: Cross-curricular learning and teaching must be incorporated clearly in the national school programs. School programs should stay malleable enough to keep the independence of teachers when they offer cross-curricular teaching. Teachers must have the required resources to implement cross-curricular teaching. Cross-curricular teaching should be evaluated with suitable assessment tools. Cross-curricular teaching and learning public development should be reinforced.

## References

1. Alberta Education. (2007). Primary programs framework – Curriculum integration: Making connections. Alberta, Canada: Alberta Education.
2. Banilower, E.R., Smith, P.S., Malzahn, K.A., Plumley, C.L., Gordon, E.M., Hayes, M.L. (2018). Report of the 2018 NSSME+. NSSME.
3. Bradford, B. & Schmidt, E. (2016). Making cross-curricular connections. . Canadian Teacher Magazine, 16-17.
4. Creswell, L. (2023). Incorporating Cross-Curricular Learning in Primary PE. Cheltenham: PE PPES.
5. Drake, S. (2012). Creating Standards-based integrated curriculum: the common core state standards edition. CA: Thousand Oaks.
6. Drake, S.M., & Reid, J. (2010). Integrated curriculum: Increasing relevance while maintaining accountability. The Literacy and Numeracy Secretariat.
7. Earley, S. (2019). An Investigation into the Implementation of a Cross-Curricular Approach in an Irish Primary School Classroom. International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), 10(2) 4031-4040.
8. Gleddie, D., Hickson, C., Bradford, B. (2018). Physical education for elementary school teachers: Foundations of a physical literacy journey. Alberta, Canada.: Ripon Publishing.
9. Groundwater-Smith, S., Dockett S, and Bottrell, D., . (2015). Participatory Research with Children and Young People,. London: Sage.
10. Hwang, W.Y., Shih, T. K., Yeh, S.C., Chou, K.C., Ma, Z.H., & Sommoool, W. (2023). Recognition-Based Physical Response to Facilitate EFL Learning. Educational Technology & Society, 17(4), 432–445. <http://www.jstor.org/stable/jeductechsoci.17.4.432>.
11. Ministry of Education, Art and Culture. (2017). Physical Education Syllabus Senior Primary Phase 5 - 7. Windhoek: National Institute for Educational Development (NIED).
12. Ministry of Education, Arts and Culture . (2022). Physical Education 4 life: A Physical Education Guide for Educators in Namibia Pre-Primary to Grade 3. Windhoek: Ministry of Sport, Youth and National Service.
13. National Institute for Educational Development. (2016). The national curriculum for basic education. Windhoek: Ministry of Education, Arts and Culture.
14. Njelesani, D. (2011). Preventive HIV/AIDS Education through physical education: reflections from Zambia. Third World Quarterly, 435-452.
15. Olsson, A., Tben, A. (2023). Physically oriented learning meets vocabulary acquisition and motivation: how the ESL classroom can combine with PE through cross-curricular collaboration. Masters Thesis. City of Malmo, Sweden: Malmo Universitet.
16. Queensland School Curriculum Council. (2015). Health and Physical Education. Queensland: Publishing Services, Education Queensland.
17. Quennerstedt, M., Larsson, H. (2015). Learning movement culture in physical education practice. Sport, Education and Society, 20(5), 565–572. <https://doi.org/10.1080/13573322.2014.994490>.
18. Saunders, M., Miller, A. (2009). Principles for School Road Safety Education. Western Australia: School Drug Education and Road Aware.
19. Suriya, P., Arumugam, S. (2020). Technology in Physical Education. Journal.waims.co.in, 9(4) 9413-9416.
20. Trigueros, R. (2024). Health and balanced nutrition for children through physical education classes. PMC PubMed Central, 11(7) 678.
21. Triolet, C. (2011). Crossing the Curriculum in Physical Education. VA: PE Blog.