

Pedagogical Understanding in Physical Activities and the Extended Concept for Sport Learning

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*WEBINAR SEMINAR – PEDAGOGICAL POSSIBILITIES IN
SCHOOL PHYSICAL EDUCATION
FEDERAL UNIVERSITY OF JUIZ DE FORA*



Macao Special Administrative Region

Administered by the Portuguese Empire and its inheritor states from the mid-16th century until December 1999

Colony of Portugal for about 450 years

About the population of 650,000 people in 2020

Now officially known as the Macao Special Administrative Region of the People's Republic of China when it returned to China in 1999 December

Macao owns its government on tax, education, economic activities but not the defense and foreign diplomat right

Gaming and leisure industry is the main economic activities in Macau.




Macau – the city



University of Macau



Presentation Content

1. The spread of physical inactivity
 2. The reality and barriers in having quality program for physical education
 3. The research in Quality Physical Education (QPE) and data from Juiz de Fora
 4. Pedagogical Understanding in Physical Activities
 5. The extended concept for opportunities development in sport learning
 6. Conclusive remarks
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The spread of physical inactivity

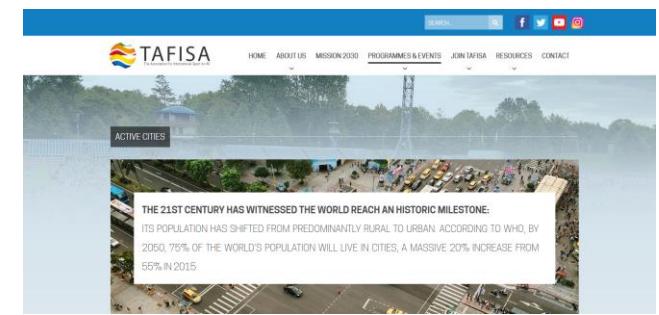
The spread of the epidemic disease of Inactive Behavior

Lack of physical activity, development of a sedentary lifestyle, and increasing obesity rates have become the health issues in many countries worldwide.

- **1.9 billion adults** (aged 18 and above) were classified as **overweight in 2016** and, of this number, over **650 million were obese**. (WHO Fact Sheet, 2018)
- **Brazil** is challenged by high rates of physical inactivity, which represent a crucial public health issue. According to the Global PA Observatory, **13.2% of all deaths in the country are due to physical inactivity**, well above the global rate. Alarming data reveal that only **one-fifth of Brazilian adolescents** are considered **physically active**, while almost **half of the adult population *does not reach*** the recommended **levels of PA** (Tenorio et al, 2022)
- **Obesity** is a community '**disease**' as commented by The Obesity Society (Allison et al., 2008).
Solving the health problem relies on the successful promotion of a physically active lifestyle with approximately 60 minutes of exercise per day. (WHO, 2010, 2018).

We Fight Back

- EU Physical Activity Guide
- Educating the Student Body (Kohl III and Cook, 2013)
- Designed to Move (Nike, 2012)
- Review of Best Practice in Interventions to Promote Physical Activity in Development Countries (WHO 2005)
- Canada's Physical activity Guide
- Active City (TAFISA)



Review of Best Practice in Interventions to Promote Physical Activity in Developing Countries

Background Document prepared for the WHO Workshop on Physical Activity and Public Health

24-27 October 2005
Beijing, People's Republic of China



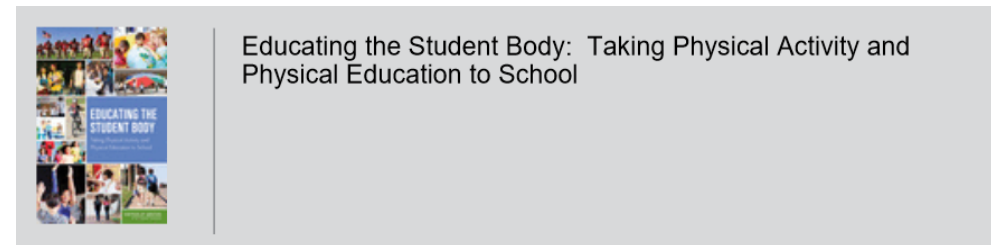
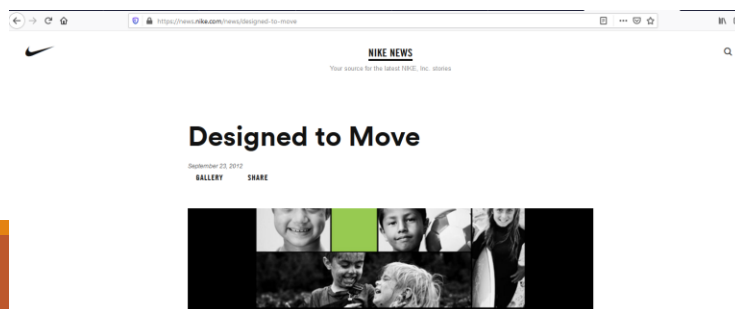
Brussels, 10 October 2008

EU Physical Activity Guidelines

Recommended Policy Actions in Support of Health-Enhancing Physical Activity

Approved by the EU Working Group "Sport & Health" at its meeting on 25 September 2008

Confirmed by EU Member State Sport Ministers at their meeting in Biarritz on 27-28 November 2008



Educating the Student Body: Taking Physical Activity and Physical Education to School

Adoption of New Concepts and Innovative Methods in Teaching and Learning of physical education

1. **Games Learning Approach** - Teaching Games for Understanding, Games Learning, Games Approach, Game Based Learning ... (*David Bunker & Rod Thorpe*)
2. **Mosston's Teaching Spectrum in Physical Education** - Enquiry Model in Learning, Teacher vs Student Center Approach, Productive vs Reproductive Concept in Learning ... (*Muska Mosston & Sara Ashworth*)

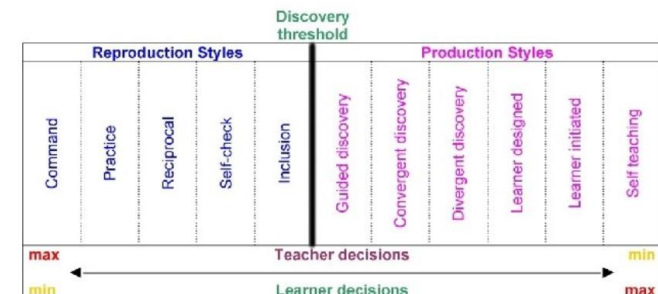


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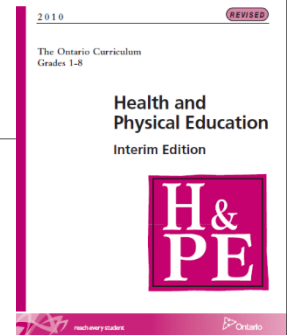
RESEARCH FEATURE

Implementating the Games Concept Approach in Singapore Schools: A Preliminary Report

Spectrum of Teaching Styles (Mosston, 2002)



Change of Curriculum Arrangement in Physical Education



1. Physical Education is adopted with official status in education

Curriculum Development Council (HK SAR) – Physical Education Key Learning Area Curriculum Guide (P.1 to S.3) (2002)

2. The Concept of Quality Physical Education is stated as policy curriculum planning

Michigan State Board of Education – Policy on Quality Physical Education (2003)

3. Adoption of new curriculum for physical education

Ministry of Education (Canada) – The Ontario Curriculum Guide (Grade 1 to 8) Health and Physical Education (2010)

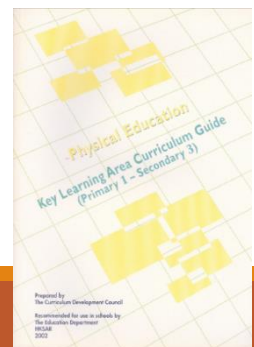
Attachment C

Michigan State Board of Education

Policy on Quality Physical Education

A child's intellectual growth cannot take place without having met his or her basic physical needs. The curriculum for every child's preschool through high school experience should include the opportunity to participate in quality physical education programs and other health-enhancing physical activity.

I. The State Board of Education recommends that all public schools offer physical education opportunities that include the components of a quality physical education program. Quality physical education programs positively impact students' physical, social, and mental health. It is the unique role of quality physical education programs to provide opportunities for children to understand the importance of physical activity and to acquire skills to combat a sedentary lifestyle.^{1,2}



The reality and barriers in having quality program for physical education

Although physical education is important, time allocation to the learning is different to countries

Allocation of Physical Education Curriculum Time in Regions (Mean Minutes per Week)

Latin America	Min per Week	Europe	Min per Week	Asia	Min per Week	Africa	Min per Week
Brazil	110	Luxembourg	142	China	105	Ethiopia	225
Chile	135	Andorra	165	Kazakhstan	115	South Africa	58
Colombia	120	Poland	156	Hong Kong	90	Gabon	150
Cuba	183	England	120	India	60	Guinea	100
Mexico	75	France	220	Japan	125	Lesotho	110
Venezuela	90	Germany	135	South Korea	120	Libya	125

Source: UNESCO-NWCPEA: World-wide Survey of School Physical Education (2013).

The difficulties in having a quality programs in physical education turns to be a world-wide phenomenon

- **In Singapore**, the desire to improve the quality development of physical education was limited in the identification of solutions to **staffing issues**, the inadequate duration for physical education lessons and class size (McNeill et al., 2010).
- **In China**, quality improving approaches in physical education became a dream when it was common to have 50 to 60 students in a single class, and 80 students was the norm (Wang & Yao, 2004). The **lack of adequate space** and **equipment** in physical education made quality improvements difficult (Yang, Liu & Ji, 2006).
- **In the Taiwan region**, the cultural bias, facilities, equipment and resources were challenges to the development of physical education (Holzweg et al., 2013).
- Sarwar (2010) discussed the physical education development **in the industrial city of Gujranwala in Pakistan**, and the major problems regarding physical education development comprised the **lack of funds, space, and facilities** and the **lack of interest** of staff, students and parents.

-
- De D'Amico, Ramos and Guerrero (2014) discussed the problem of physical education development **in Venezuela** as a result of the failure to establish long-term participation of physical activity and structured recreational activities (p. 547). This problem escalated in conditions in which there was a **lack of qualified physical education teachers** to work with children and youth in school (De D'Amico, Ramos & Guerrero, 2014).
 - A similar situation occurred **in Mexico** where “**many schools did not have a physical education teacher** in class” (Taylor, Ulloa & Villalobos, 2014, p. 315).
 - In some cases, it was a result of **principals who did not believe in the physical education** program or teachers who had negative perceptions regarding physical education and did not believe in contributing to it (Holzweg, et al. 2013).

The Reality in the Teaching of Physical Education

1. Sollerhed (1999) argued that “even with her strong historical traditions in physical education, **time was reduced** from three hours to one hour per week during the compulsory years of school” (p. 167) in Sweden.
2. The Speednet Survey (1999) in England recorded the loss of a half million hours of physical education in primary schools in the academic year 1998–1999 to **make way for literacy and numeracy work**. One-third of England’s primary schools experienced this reduction in time for physical education. The decreasing amount of curriculum time and the instructional methods and activities in physical education classes have raised concerns.

UNESCO-NWCPEA: world-wide survey of school physical education; final report (2013)

Table 4. PE Curriculum Time Allocation: Primary Schools (Minutes per Week)

Area	Mean	Range
Global	97	25-270
Africa	86	30-270
Asia	84	35-180
Europe	109	30-290
LatAm/Caribbean	90	30-225
Middle East	89	55-120
North America	107	30-200
Oceania	111	27-185

Table 5. PE Curriculum Time Allocation: Secondary Schools (Minutes per Week)

Area	Mean	Range
Global	99	25-240
Africa	96	25-180
Asia	85	25-180
Europe	105	30-240
LatAm/Caribbean	94	45-225
Middle East	66	40-160
North America	125	40-225
Oceania	100	60-150

Table 6. Global PE Curriculum Time Allocation: 2000-2013 (Minutes per Week)

School Stage	2000	2007	2013
Primary	116	100	97
		R = 30-250	R = 25-270
Secondary	143	102	99
		R = 30-250	R = 25-240

Call for the Action

Although the evidence is clear and the introduction of physical activities in students' lives is important,

**WHAT
TO DO?**

regarding the call to action,

it is vital to learn

**HOW
TO DO...**

‘**what to do**’ and ‘**how to organise**’ physical activities

for children, adolescents, and youths

to ensure the best results in terms of achieving a regular exercise habit.

This presentation

This presentation expects to go through the QPE data collected in Brazil in 2021. As these data are mainly coming from **Juiz de Fora**, it helps us to learn the perceptual understanding of the **physical education development** in your place.

I shall also go through some of the latest understanding in the development of students' habit in exercises and hope to address the issues of '**what to do**' and '**how to organise**' for students to achieve the optimal mode of active living.

My hope is that, after sharing this idea, it will be useful for you to consider different innovative ways in assisting students to get active when the day it comes to you as a professional in the field of sport and physical education.

The research in Quality Physical Education (QPE) and data from Juiz de Fora

What does Quality Physical Education refer to?

The development of a quality physical education program in schools involves the works of different perspectives ...

GOOD STAFF DEVELOPMENT PROGRAM

Policy to support adequate duration for physical education lessons

Introduction of adequate opportunities for learning

Good funding structure and facilities

interests in physical education

qualified physical education teachers

Quality Physical Education – What does it refer to?

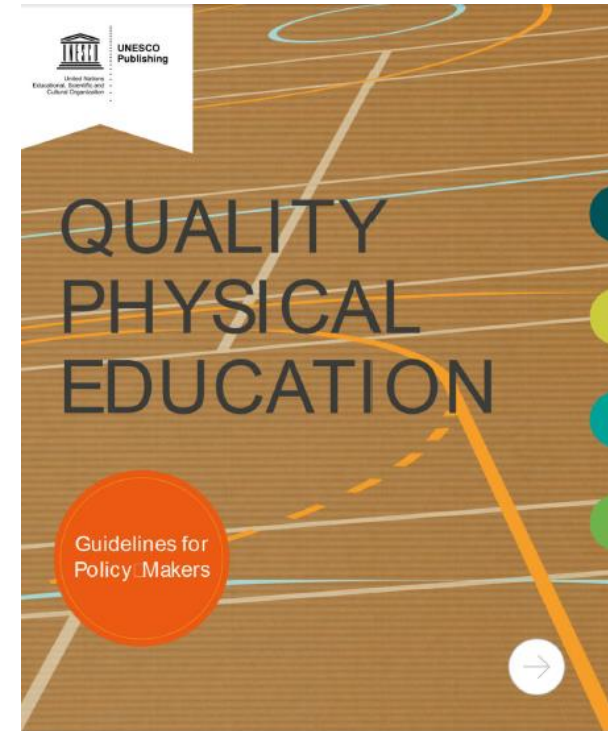
Quality Physical Education (QPE) - refers to the actions of careful decision in making use of every possible ways to

develop a well “planned, progressive, inclusive and supportive learning experience

that forms part of the curriculum in early years, primary and secondary education, and in this respect,

Sources:

Quality Physical Education Guidelines for Policy Makers, 2015, p.9).



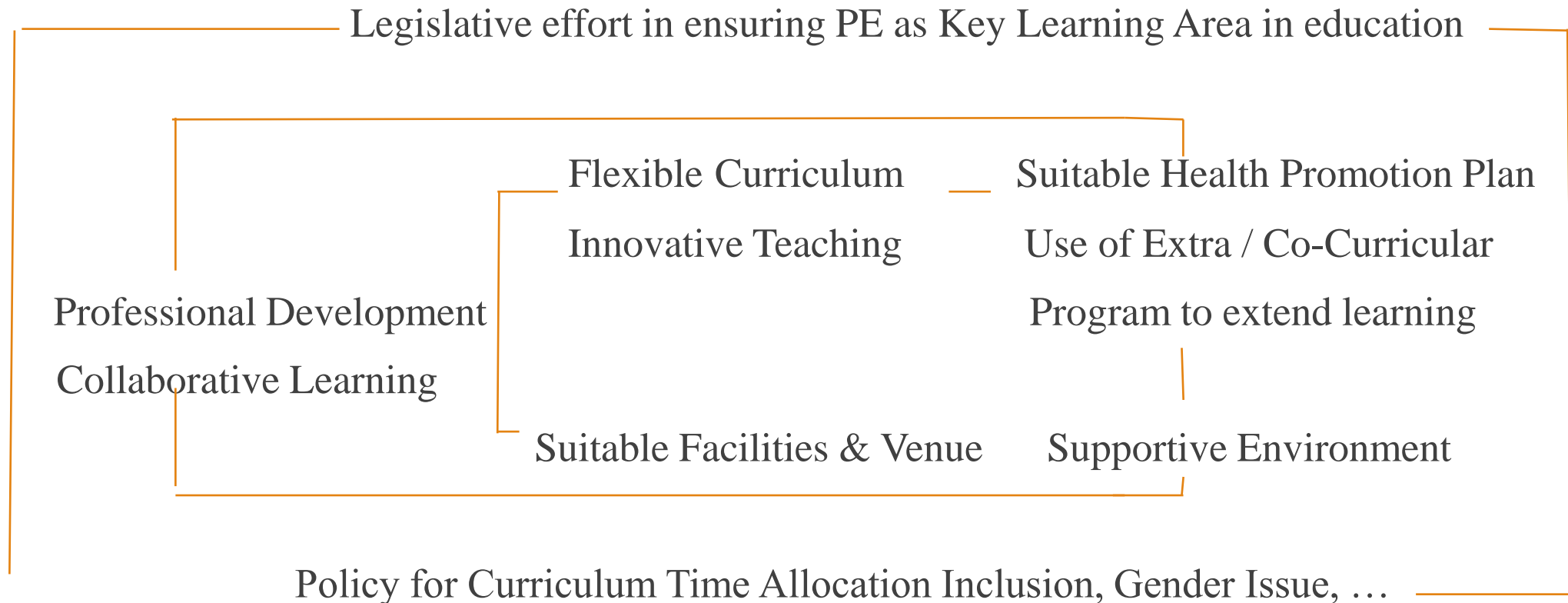
The part 3 of the QPE Policy Guideline ...

Part 3: QPE POLICY IN ACTION	30
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Part 4: PUTTING PRINCIPLES INTO PRACTICE	62

The research of Quality Physical Education does not refer to the study of a single dimension but expects to investigate the quality through a holistic concept.

Quality Physical Education contains the Components of ...

(Every parts are important in constituting the development of Quality Physical Education)



The holistic concept to understand QPE does not come in sudden. Such concept has already been considered as ways for improvement of physical education in school.

EUROPEAN PHYSICAL EDUCATION REVIEW [DOI: 10.1177/1356336X09345224]
Volume 15(2):201–223:345224

EPER

Moving towards quality physical education: Physical education provision in Singapore

- **Michael McNeill, Boon San Coral Lim, Chee Keng John Wang, Wee Keat Clara Tan** National Institute of Education, Singapore
and
- **Ann MacPhail** University of Limerick, Ireland

recommendations. From questionnaires distributed to every school on a voluntary basis, 164 Heads of Department (HODs) from 78 primary schools, 74 secondary schools and 12 junior colleges, and 474 teachers from 170 schools responded. The findings from these questionnaires focused on the impact of facilities, staffing, timetabling, curriculum time and status, on the provision of PE. In relation to the international context, Singapore faces similar constraints such as inadequate facilities and equipment, and insufficient allocation of time. The study makes a strong case for the improved status and function of PE in schools but three main issues require further

When these issues are addressed and their solutions translated into practice, Singapore can actualise the vision of making every student physically educated and achieve a world class standard.

The launch of the QPE study by the four international associations in 2010



International Society for Comparative PE and Sport (ISCPES)



Federation Internationale d'Education Physique (FIEP)



International Federation of Adapted Physical Activity (IFAPA)



International Association of Physical Education and Sport for Girls and Women (IAPESGW)

The purpose of the investigate of the Quality Physical Education is to answer ...

1. **What is Quality Physical Education?**

2. **What are the dimensions** involved in the study of Quality Physical Education?

If there are items and dimensions to be seen as relevant to the study,

3. **Can we** make use of the items and dimensions to **understand the strategies for success and barriers behind** in the development of Quality Physical Education?

The understanding may help to portrait a new perspective in the quality development of physical education, sports and physical activity in education.

QPE Research Tool Development (2010 to 2018)

2010 to 2012 – Collection of statements that are relevant in QPE study

2013 to 2014 – Scanning works; of the statements into items that are relevant to QPE study

2014 to 2015 - Development of a questionnaire survey with a title of ‘Professional Perceptions Toward Quality Physical Education (PPTQPE)’ to identified items with good fit loading for research in QPE

2016 to 2018 – Research Tool Development in QPE and analytical works

Identification of 48 items in 8 dimensions which are good fit to be adopted for QPE Research

The Global Index of QPE (GIQPE) Study (2019 to 2021)

2019 to 2021 – The 48 items in 8 dimensions serve as the materials to develop the questionnaire survey of ‘Global Index of QPE’ to investigate the strategies of success and barriers that limit its advocacy

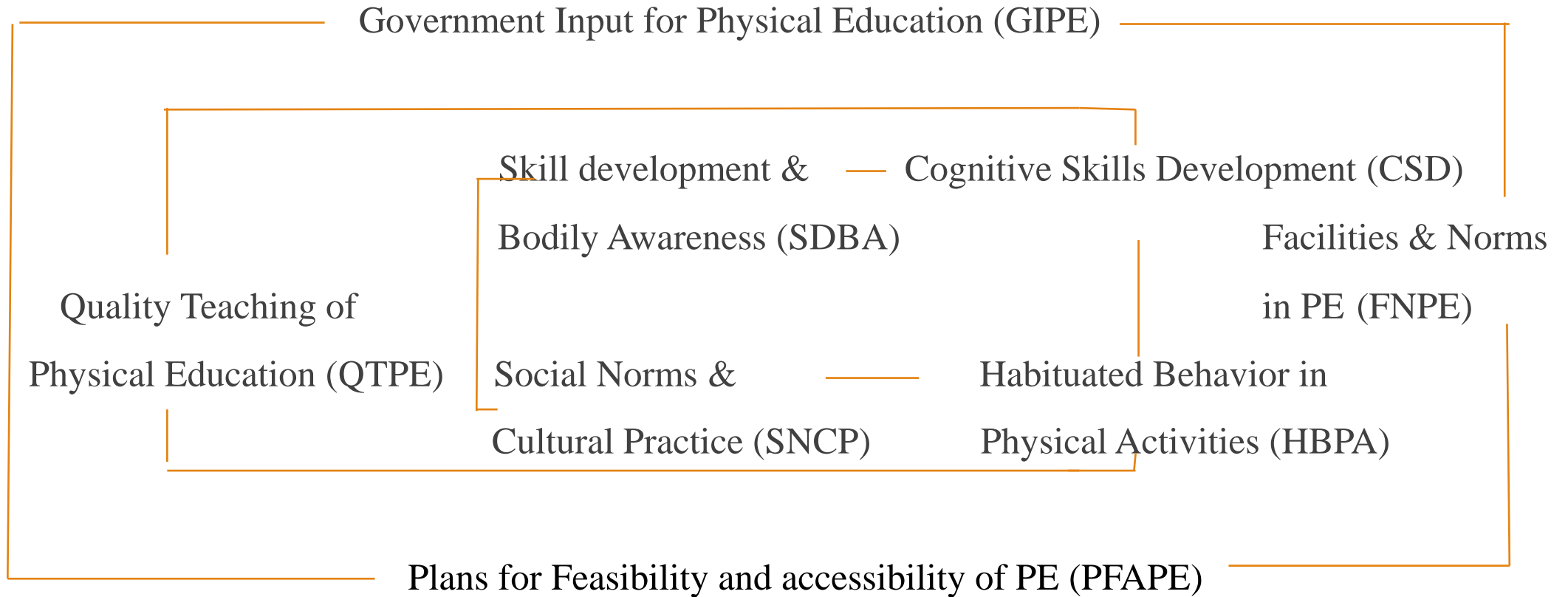


The 8 dimensions identified for QPE study

- *Skill development and bodily awareness (SDBA),*
- *Facilities and norms in PE (FNPE),*
- *Quality teaching of PE (QTPE),*
- *Plans for feasibility and accessibility of PE (PFAPE),*
- *Social norms and cultural practice (SNCP),*
- *Governmental input for PE (GIPE),*
- *Cognitive skills development (CSD), and*
- *Habituated behaviour in physical activities (HBPA).*

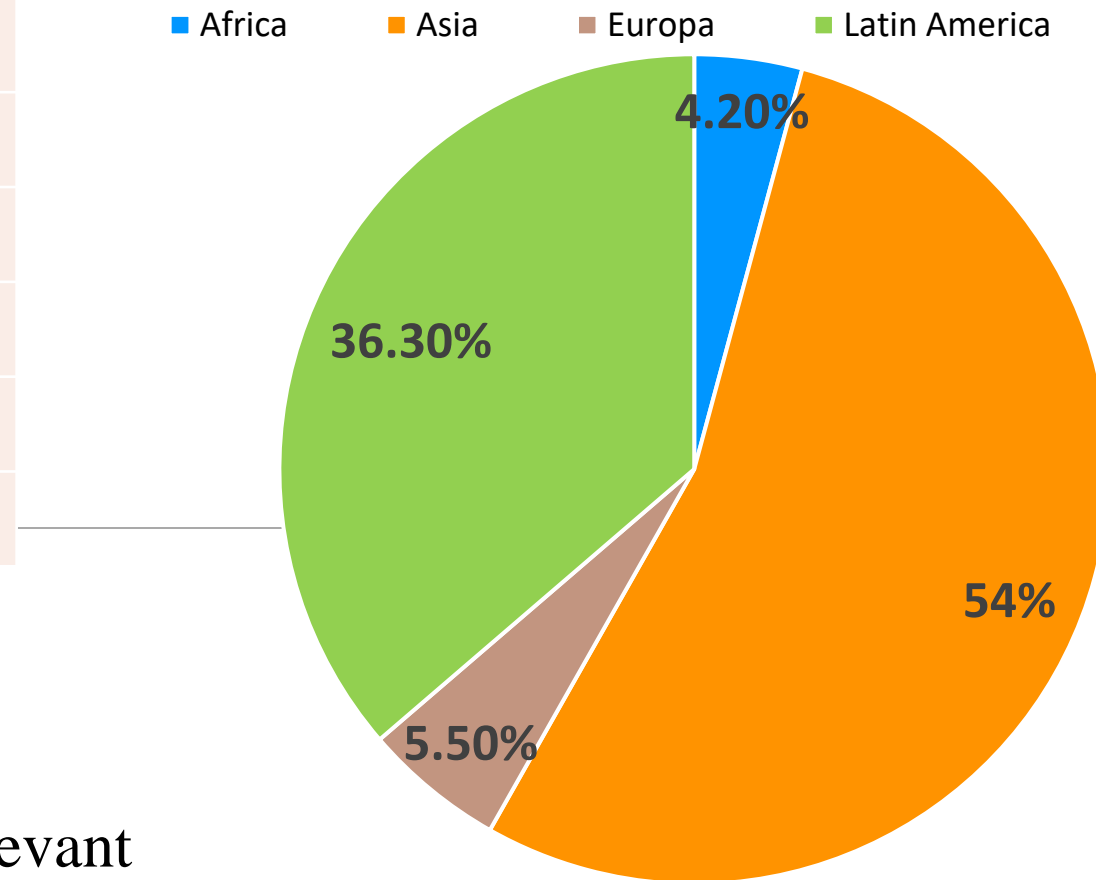
Quality Physical Education contains the Components of ...

(Every parts are important in constituting the development of Quality Physical Education)



The launch of the Global Index of QPE (GIQPE) study from 2019 to 2021

	City	Male	Female	Total
Africa	3	135	114	250
Asia	43	1679	1476	3196
Europe	11	180	147	327
Latin America	31	1256	700	2146
Total	88	3250	2437	5919



Juiz de Fora

108 professionals in the field of PE returned the questionnaire for analysis (41 returns contained relevant demographical information).

Suggested means score in interpreting the works of QPE in different dimensions

- 7.5 and above – satisfaction to full satisfaction
- 5 to 7.5 – at the edge of success
- 4 to 5 – below average and needed works are required to improve the situation
- 0 to 3 – substantiable are strongly requested

	Mean±SD	N	Minimum	Maximum	Median	95%CI (Lower) □	95%CI (Upper) □	IQR □	Kurtosis	Skewness	Cronbach Alpha
FACTOR 1 SDBA	5.933±2.081	108	1	10	5.875	5.541	6.326	2.625	-0.422	-0.142	0.936
FACTOR 2. FNPE	6.048±1.707	108	1.143	9.643	6.036	5.726	6.369	2.196	-0.201	0.195	0.918
FACTOR 3. QTPE	5.892±2.073	108	1	9.833	6	5.502	6.283	2.667	-0.459	-0.26	0.922
FACTOR 4. PFAPE	4.065±2.645	108	0	10	3.5	3.566	4.564	4	-0.577	0.64	0.802
FACTOR 5. SNCP	4.985±2.345	108	1	10	5	4.542	5.427	3.667	-0.772	0.084	0.861
FACTOR 6. GIPE	4.643±2.172	108	1	10	4.4	4.233	5.052	2.95	-0.535	0.37	0.853
FACTOR 7. CSD	5.896±2.333	108	1	10	5.8	5.456	6.336	3.55	-0.69	-0.016	0.961
FACTOR 8. HBPA	5.398±2.133	108	1	10	5.25	4.996	5.801	2.958	-0.57	0.122	0.942
GIQPE	5.357±1.994	108	1.096	9.794	5.167	4.981	5.733	2.632	-0.346	0.125	0.969

No.	Items description	M	SD
FACTOR 2: Facilities and Norms in Physical Education (FNPE)		6.067	1.689
Item 31	Physical education is a compulsory subject for all high school students in our city.	8.722	2.456
Item 45	Physical education is a compulsory subject for all primary school students in our city.	8.43	2.438
Item 50	The teaching and learning of physical education in our schools are fun and enjoyable.	7.33	2.258
Item 44	All physical education teachers in our city are qualified to teach physical education.	7.142	2.609
Item 42	Our city's physical education programme is the most effective means of equipping children with the skills, attitudes, values, knowledge and understanding for lifelong participation in physical activity and sport.	6.439	2.727
Item 18	Different types of physical activities and associated knowledge are the content of physical education learning in our city.	6.255	2.511
Item 34	The students in our city are given suitable opportunities for active learning in physical education lessons.	6.231	2.585
Item 6	Positive sport-related attitudes and values are the focus of learning in physical education in our city.	6.157	2.226
Item 21	Health knowledge is regarded as one of the major areas of learning in physical education in our city	4.897	2.529
Item 10	Our city has a suitable policy to reinforce the accessibility of the teaching of physical education to all children, regardless of their ability/disability, sex, age, culture, race/ethnicity, religion, and social or economic background.	4.88	2.654
Item 5	The schools in our city have a safe and suitable environment for teaching and learning physical education.	4.806	2.044
Item 13	Our city has a suitable policy extending the opportunities for learning in physical activities through the support of sport-related, after-school or extra-curricular / co-curricular activity programmes in schools.	4.722	2.498
Item 3	The schools have safe and suitable facilities for teaching and learning physical education.	4.639	2.228
Item 26	The schools have safe and suitable equipment for teaching and learning physical education.	4.148	2.315

No.	Items description	M	SD
FACTOR 1: Skill Development and Bodily Awareness (SDBA)		5.958	2.075
Item 2	Our city's physical education programme encourages students to learn and interact with classmates.	7.204	2.668
Item 47	Students' physical skills development is being effectively enhanced through our school's physical education programme.	6.374	2.575
Item 32	Knowledge of sport and physical activities are being learned well through the school physical education programme.	6.213	3.396
Item 36	The knowledge of growth and its relationship to activities are well taught through the school physical education programme.	5.889	2.584
Item 17	Sport and physical activity habits are well developed through the school physical education programme.	5.833	2.374
Item 23	Our city's physical education programme provides students with opportunities to take part in different physical activities.	5.639	2.631
Item 27	The knowledge of how our bodies work and its relationship to activities are being well taught through the school physical education programme.	5.556	2.435
Item 19	The city's educational authority has plans to encourage every student to participate in sport and physical activities after the normal school programme and to use their spare time wisely in sport and physical activities.	4.787	2.431

No.	Items description	M	SD
FACTOR 3: Quality Teaching of Physical Education (QTPE)		5.923	2.079
Item 7	Our city's physical education programme contains teaching elements that help to develop students' basic understanding of the importance of physical activities and health.	6.454	2.297
Item 41	Our city's physical education programme contains teaching elements that help to assist students to develop their basic motor skills within the context of appropriate physical activities.	6.271	2.436
Item 4	Our city's physical education programme contains teaching elements that help to develop students' basic skills for different physical and sport activities.	6.231	2.286
Item 49	Our city's physical education programme contains teaching elements that help to assist students to develop their basic skills in decision making and communication.	5.925	2.661
Item 25	Our city's physical education programme contains teaching elements that help to assist students to how to communicate their ideas and feelings effectively with others.	5.407	2.521
Item 11	Our city's physical education programme contains teaching elements that help to develop students' appropriate health and fitness understanding, including setting and achieving personal goals for healthy living.	5.12	2.448

No.	Items description	M	SD
FACTOR 7: Cognitive Skill Development (CSD)		5.920	2.331
Item 39	The physical education programme in the schools in our city helps students to develop socially acceptable moral thinking and conduct.	6.299	2.439
Item 33	The physical education programme in the schools in our city enhances students' development of their problem-solving ability.	6.25	2.392
Item 38	The physical education programme in the schools in our city raise students' innovative thinking skills.	5.738	2.636
Item 30	The physical education programme in the schools in our city raise students' independent thinking ability.	5.731	2.564
Item 12	The physical education programme in the schools in our city assists students with the development of their critical thinking skills.	5.509	2.500

No.	Items description	M	SD
FACTOR 8: Habituated Behavior in Physical Activities (HBPA)		5.410	2.140
Item37	Our city's physical education programme helps students to develop the necessary participation skills for the in and out-of-school programmes available within the community that have the potential for life-long involvement and participation.	5.701	2.435
Item 24	Our city's physical education programme assists students to understand the relationship between physical and sport activities and personal and social development.	5.611	2.490
Item 22	Our city's physical education programme assists students to develop advanced proficiency in different physical and sport activities.	5.537	2.559
Item 14	Our city's physical education program contains opportunities for suitable actions to assist students to maintain active and healthy lifestyles.	5.463	2.443
Item 16	Our city's physical education programme helps students to develop regular exercise habits.	5.259	2.409
Item 9	Our city's physical education programme encourages students take up suitable responsibilities to serve sports clubs or other related activities in school or the community.	4.833	2.194

No.	Items description	M	SD
FACTOR 5: Social Norms and Cultural Practice (SNCP)		4.994	2.354
Item 35	The city's educational authority has a clear policy to achieve the development of equal opportunities for both genders to learn in the school's physical education programme.	5.685	2.941
Item 8	Religious culture is an issue in contributing the development of unequal learning opportunity in our country	5.139	2.362
	The city's educational authority has a clear policy to encourage the development of equal learning opportunities in the school's physical education programme.		
Item 43	The city's educational authority has a clear policy to solve the economic issues in the development of equal learning opportunities in the school's physical education programme.	4.131	2.639

No.	Items description	M	SD
FACTOR 6: Governmental Input for Quality Physical Education (GIPE)		4.645	2.190
Item 46	Our city's educational authority has implemented policies for physical education as a human right's issue for all children.	5.514	3.042
Item 15	Our city's educational authority has clear recognition of the distinctive role of physical education as part of a balanced education system for the realization of human potential, health and the well-being of all citizens.	5.093	2.405
Item 28	Our city's educational authority recognizes that good quality physical education depends on well-qualified educators, and thus, priority is provided for the training of qualified personnel, even when other resources are in short of supply.	4.565	2.816
Item 20	Our city's educational authority has a clear policy to support research to improve the effectiveness and delivery quality of the physical education programme in schools.	4.148	2.531
Item 1	Our city's educational authority has a clear relationship with international financial institutions to ensure physical education is included as part of their aid programmes in education.	3.897	2.881

No.	Items description	M	SD
FACTOR 4: Plans for Feasibility and Accessibility of Physical Education (PFAPE)		4.103	2.628
Item 48	Our city's educational authority encourages frequent inter-city collaborative plans between institutes in preparing for the quality development of physical education in schools.	4.701	2.879
Item 40	Our city's educational authority encourages frequent international collaborative plans between institutes in preparing for the quality development of physical education in schools.	3.505	2.873

QPE development in Juiz de Fora – the suggested remarks

- **Strong legislative effort** in protecting the compulsory learning of physical education in schools and authorities seem to implement necessary measures to ensure the effort.
- Substantial works are done to ensure the **teaching with quality** on the development of sport skills, health and habit in exercises. The **quality of learning** in physical education is largely attained at the margin of success. Necessary procedures to advance its development seem to be the next step.
- **Investment in facilities, equipment and venue** for sport learning and physical activities seems to be something that request special attention.
- There is the strong development of pre-service training in college but **weak in in-service training** when professionals are teachers in schools.
- ***There is the lack of suitable policy in **extending the opportunities** for learning in physical activities through the support of sport-related, after-school or extra-curricular / co-curricular activity programmes in schools.
- *****Life-wide learning concept** seems not to be a prevailed method in learning and thus students are not having effective ways to learn and serve with responsibilities in sports clubs or other related activities in school or the community.

Pedagogical Understanding in Physical Activities

Self-efficacy and physical activity in children

Self-efficacy and the development of exercise behaviour

Regular exercise behaviour is one of the key factors in assisting the healthy growth of children, adolescents, and youths.

- *Nike's (2012) report called for a closer look at the benefits of physical activity, as 'physically active children will be significantly healthier and wealthier' (p.14).*
- *The WHO (2006; 2018) has also urged people to be physically active and encouraged countries to develop suitable policies to promote healthy lifestyle development.*

These initiatives will not work unless individuals have a desire to exercise.

Many theories have been applied to understand the cognitive issue in the learning of physical activities, the most frequently used is **Self-efficacy Theory**.

Self Efficacy – The Concept

Those who have

- **high self-efficacy** will tend to **invest more effort** into implementing the activities despite the obstacles and constraints from time, health, and environment (Bandura, 1997).

Those with

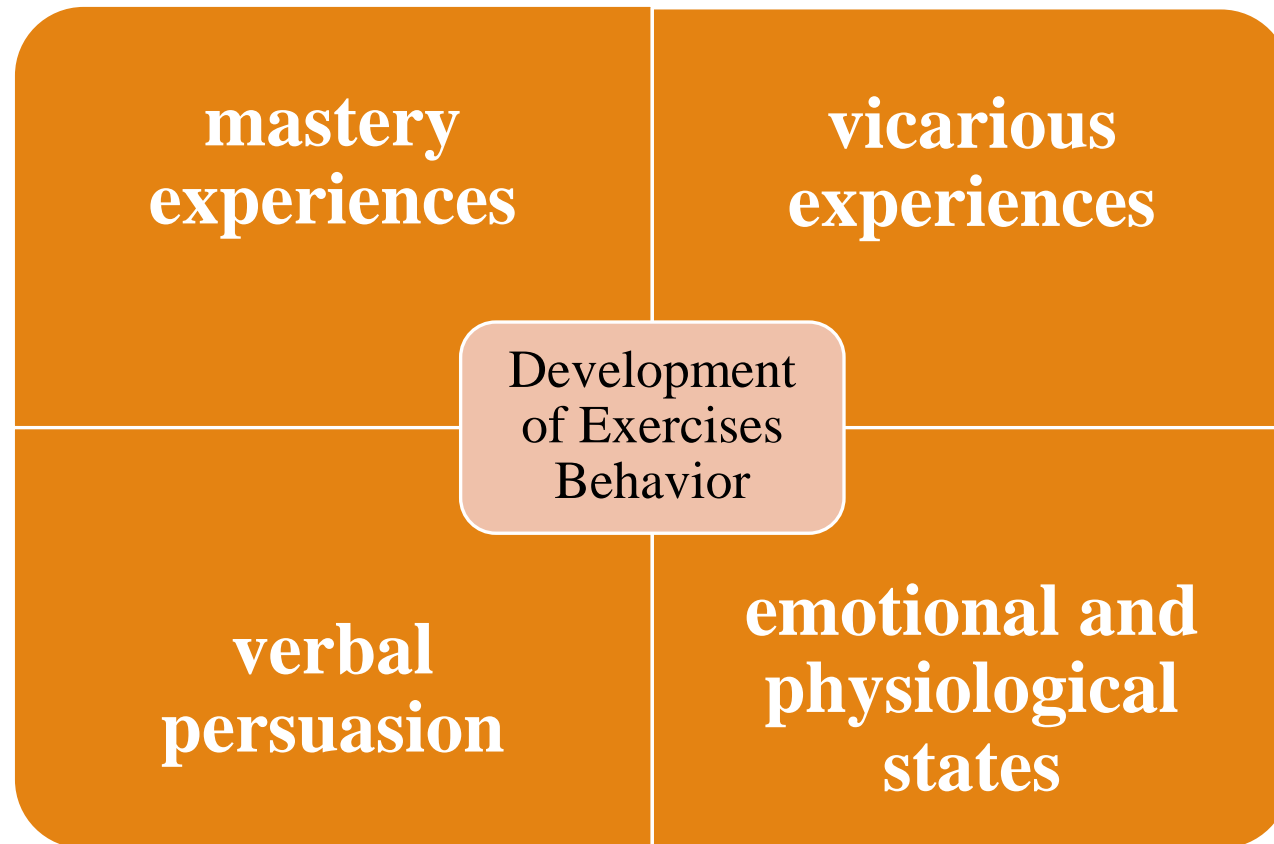
- **lower self-efficacy** may **invest less effort** in terms of task completion and have a greater tendency to abandon the task (Bandura & Cervone, 1983).

When people with high self-efficacy

- *choose to perform more challenging tasks, set higher goals, and adhere to them;*
- *invests more effort and persists longer than those with low self-efficacy;*
- *recover quickly and maintain the commitment to their goals when setback occurs;*
- *maintain a greater sense of energy during exercise;*
- *perceive less effort being expended during exercise;*
- *report a more positive affect; and*
- *feel more revitalized during and after exercise.*

Sources: Lee et al., 2008, p.1693

How self-efficacy develops



Bandura (1997)

Some important Research Results

Trost et al. (2001) - increase obese children's self-efficacy development, intervention physical activity programmes should consider the following:

1. Provide *enjoyable activities* that enable overweight children to experience success (i.e. emphasise moderate intensity activities such as walking);
2. Create *opportunities* for obese youth *to observe influential others* (e.g. parents and peers) perform physical activity;
3. *Verbally encourage* children to participate in physical activity (i.e. you can do it); and
4. *Reduce any anxiety* associated with participation in physical activity by significantly reducing or eliminating competition or grading from planned activities (p.827).

Projects to enhance the learning opportunities for students in sports and physical activities

- Trim and Fit (Singapore Ministry of Education)
- Fitness Award Scheme (Hong Kong SAR)
- UGOTCHI (Austria)
- Active Healthy Kids (Australia) ...

HOW THESE PROJECTS HELP to DEVELOP our SELF-EFFICACY in SPORT???



Pedagogical Learning in Physical Activities

10,000 Steps per day – Walk to Shanghai inter-class competition



Curriculum Model and Pedagogical Context for learning of Physical Activities – The Five Learning Dimensions

End results – Self-efficacy Building

Preparation of next level Competition

1. Intervention Physical
Activity

- * Rules in participation;
- * Criteria for award
- * Close / Open skills;
- * Compulsory / Optional in participation;
- * Individual / Group;
- * Inter-class / Cross different level;
- * Moderate / Vigorous Intensity;
- * Time and duration; ...

2. Games Perception

- * Activities up to the level of students;
- * Rules are easy to understand;
- * Levels of complexity;
- * Easy to learn;
- * With chances to prepare before the competition;
- * Peer support;
- * Fair scoring; ...

Decision Making
&
3. Thinking Process

1. Tactics in Games / Activities

- * How tactics to be used;
- * Ways and means to overcome barriers;
- * Environment and play areas;
- * Games plan development; ...

2. What to do?

- * Situation assessment and cues recognition;
- * Predict possible outcome;
- * Risk management;
- * Decision of participation; ...

3. How to do?

- * Games plan and selection;
- * Available of preparation time;
- * Group / individual effort;
- * Alternation / Plan B in competition; ...

4. Performing

- * Actual performances in games;
- * Games plan and result;
- * Group effort;
- * Social learning;
- * Goal attainment;
- * Cognitive understanding; ...

5. Result

- * Positive / Negative Impact
- * Positive / negative reinforcement
- * Award and Achievement
- * Efficiency in performance

-
- 1. Intervention Physical Activities** - The first dimension focuses on presentation of intervention physical activities and relates to their organisation, delivery and presentation to students.
 - 2. Games Perception** - The second dimension relates to students' perception of the physical activities.
 - 3. Decision Making and Thinking Process** - The third comprises students' thinking process, whereby the student must decide which tactics to use, 'what to do' and 'how to do' it.
 - 4. Performing** - The fourth dimension comprises participation in the activity and
 - 5. Results** - The fifth and final dimension is the result.

Suggested guidelines for school-based activities and self-efficacy development in physical activities

1. *Create a supportive environment;*
2. *Conduct activities in recess, after school, before class, or during lunch break;*
3. *Select easy / popular activity themes (e.g. rope jumping, hoop, stairs walking);*
4. *Implement fun learning in physical activities with suitable challenge;*
5. *Implement moderate intensity activities;*
6. *Encourage cognitive development through the activities;*
7. *Use cycles, rotation, and / or activities conducted in phases;*
8. *Ensure fair games and reward every students' work effort;*
9. *Allow students to decide their tactics, game strategy, and amount of input and effort in the activities.*

The extended concept for opportunities development in sport learning

The Formal, Informal and Non-formal Concept in School Education

The Sport Education Model (SEM) from Daryl Siedentop (1998)

1. **Seasons (Lessons in PE)** - Seasons typically last a minimum of 12 lessons. This promotes more in-depth understanding of the material (more depth, less breadth).
2. **Affiliation** - Students quickly become **members of teams**, the rosters for which are constant throughout a season.
3. **Formal Competition** - Sports seasons include formal schedules. Typically, competitions are interspersed with practices.
4. **Culminating Event** - A competitive event highlights the season and provides goals for players to work towards.
5. **Keeping Records** - Records are publicized that provide feedback, define standards, and establish goals for players and teams.
6. **Festivity** - The festive atmosphere of sport enhances its meaning and adds an important social element for participants.

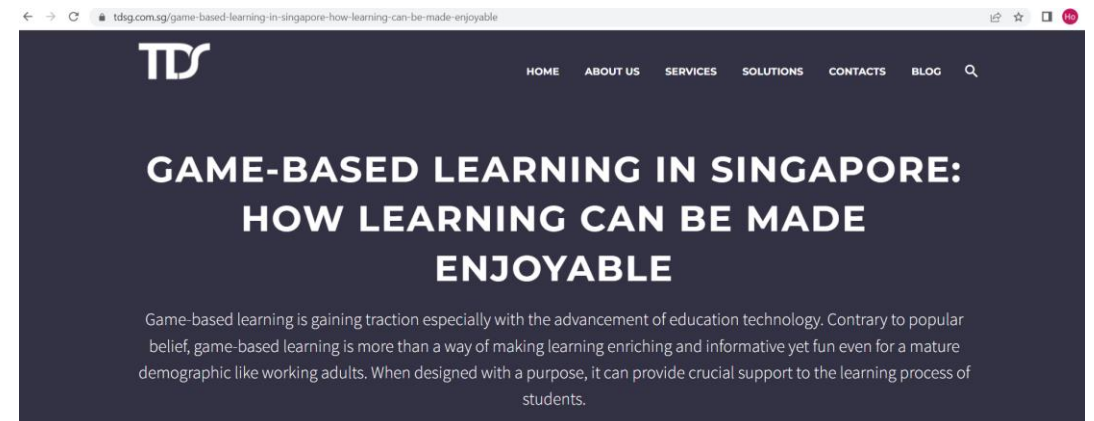
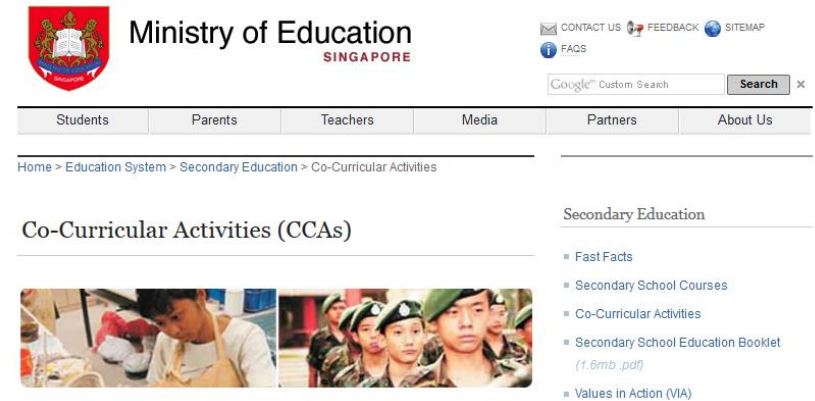


Extension of Learning Opportunities in Physical Education, Sports & Physical Activities

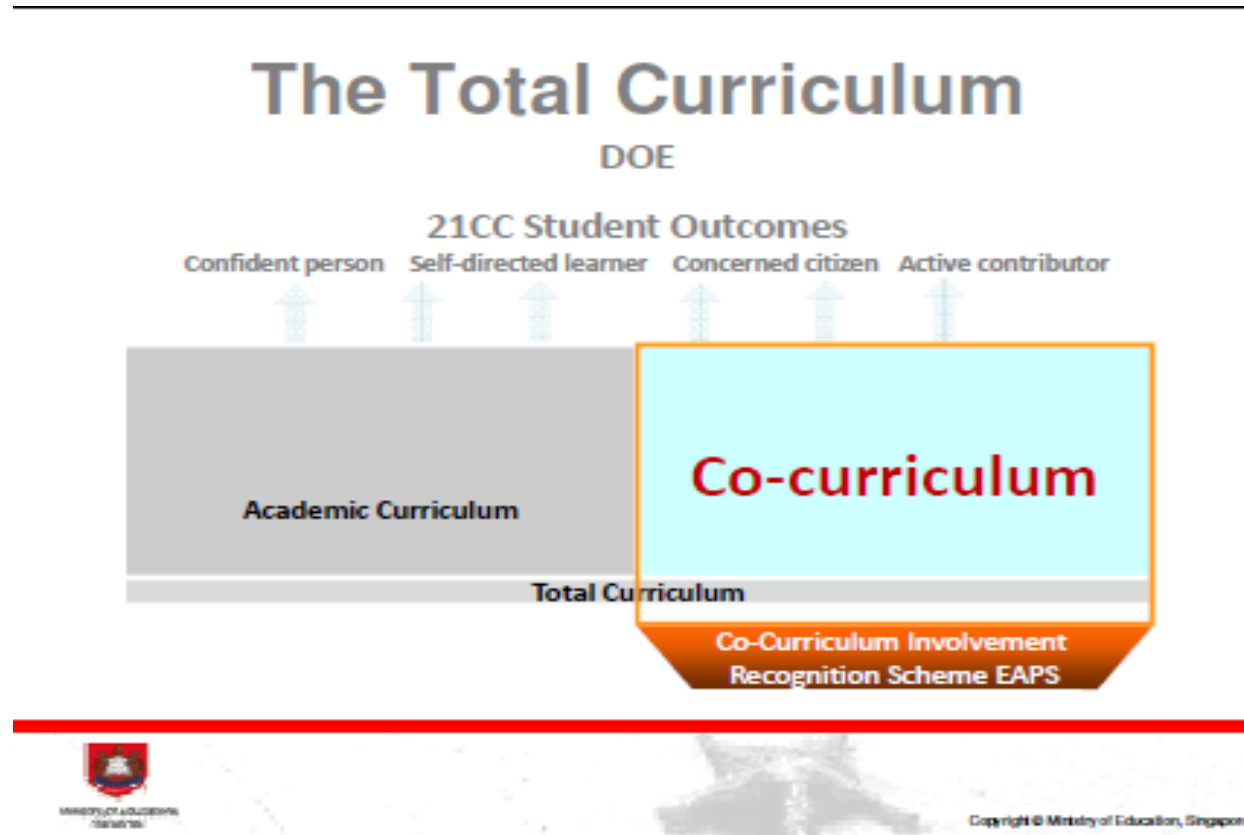
Extension of Learning Opportunities by

1. Co-Curricular Activities Program,
2. School Leisure Activities,
3. Extra-Curricular Activities,
4. After School Sport Program,
5. Weekend Sport, ...

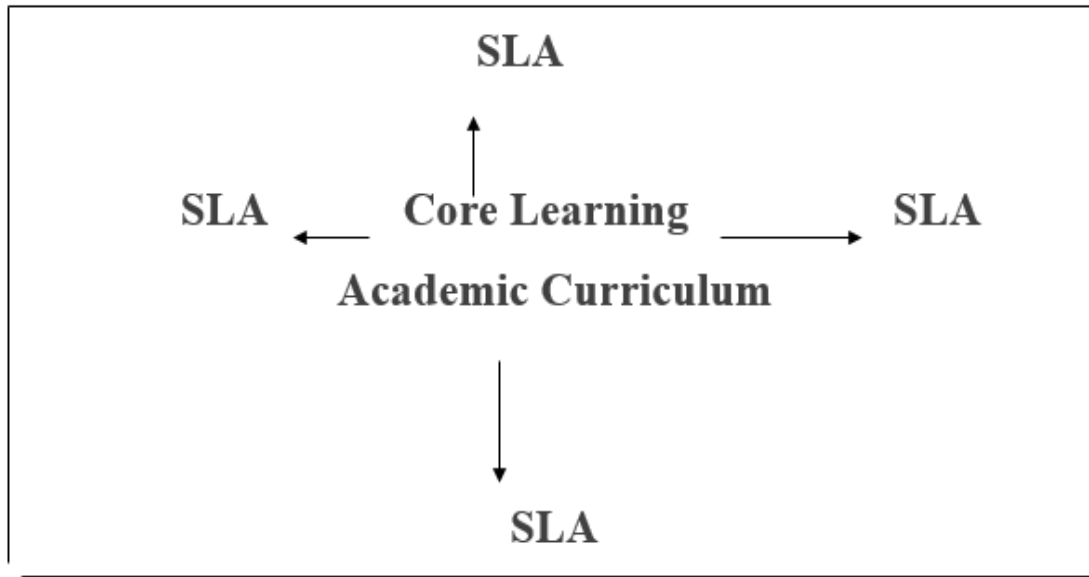
Schools make the change.



The Total Education Concept in Singapore



The Total Education Concept for CCA program in Hong Kong SAR



Total Learning

全方位學習的課程架構



Life-wide Learning Experience : *Enriching, Extending & Enabling*

全方位學習經驗：擴闊、延伸、促進 課室學習

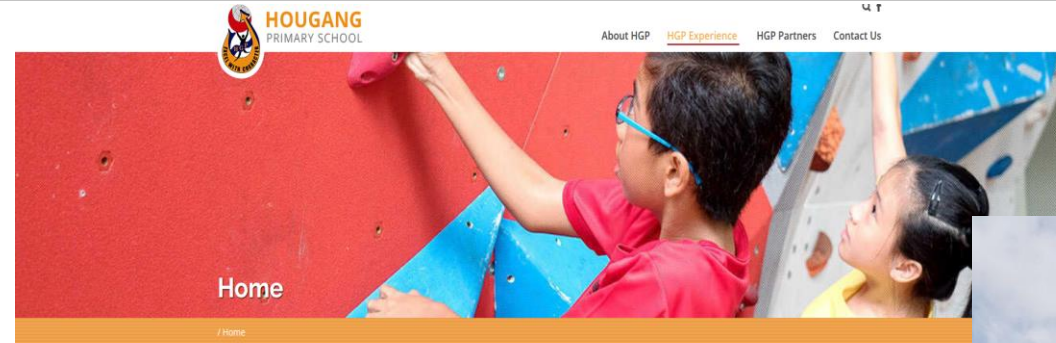
Hougang Primary School, Singapore (<https://hougangpri.moe.edu.sg/>)

The informal setting gives birth to the adoption of a ‘non-curricular approach’ as a strategy to improve and enhance students’ opportunities for exercise.

Pardo et al., 2013

3. Signature OAE Programme for Every Level

Level-wide programmes are planned for mass participation so that every student, from P1 to P6, is given the opportunity for exposure and to ignite their interest. The P4 to P6 OAE Enrichment Programme, P4 Artificial Caving Activity, P5 Outdoor Adventure Camp and P6 Kayaking Expedition are some of the examples that provides students with the skills, motivation and encouragement towards life-long participation in such healthy activities.



LLP (Learning for Life Programme)

Character Development through Outdoor Adventure Education (OAE)

1. Purpose of the programme

- i. To provide deliberate and purposeful opportunities for students to develop their character and Responsibility
- ii. To equip students with outdoor skills, knowledge and experience
- iii. To develop 21st Century Competencies in students

2. Quality OAE in PE Curriculum

Hougang Primary School (HGP) has a comprehensive and structured programme to provide every HGPian with a multi-disciplinary and varied experience of Outdoor Adventure Education (OAE) that suits the ability of each child. Over the six years of education in HGP, students spend an average of about 20 hours per year on OAE experiences. The OAE in PE curriculum and P1-P2 PAL OAE provides the foundation for every HGPian from P1 to P6. Students develop appropriate outdoor skills through physical activities while cultivating an attitude of care and appreciation for the environment, and thoughtful consideration of the risks and safety of self and others. The OAE in PE curriculum is supplemented by the OAE curriculum that the school has crafted from P3 to P6 to enhance the learning experience. Besides equipping the students with outdoor skills, knowledge and experience, the main focus of OAE is to imbue in every child good character values that will serve them well for the future and helps them make the right decisions.



The Future Development of Intervention Physical Activities in School

Recess and After School Time –

Non-curricular approach to extend opportunities for exercise in schools

The arrangement of physical activities in schools is common educational practice for students in their physical education (P.E.) lessons.

However, apart from the opportunities to engage in physical activities during P.E. lessons, do students have other opportunities for exercise?

The opportunity to engage in physical activities is sometimes inadequate, particularly in places where two P.E. lessons per week comprise the maximum opportunities for exercise (Ho, 2009; Holzweg et al. 2013). In fact, in Asia and many other places, two P.E. lessons per week is common practice.

Activities during recess and after school

opportunities exist beyond the school day for increasing physical activities in youth. Sports and active after-school programs have the potential to make a significant impact on daily physical activity levels (Kohl III & Cook, 2013, p.335).

After-school programmes or activities in recess - another way to increase the opportunities for student activity and have a number of advantages. It encourages the development

‘informal’ setting or characterised by an ‘unstructured’ format.

not curriculum bound activities,

activities developed in a relaxing manner.

The screenshot shows the CDC Healthy Schools website. At the top, the CDC logo and name are circled in red. Below the navigation bar, the breadcrumb trail reads: CDC > CDC Healthy Schools > Promoting Healthy Behaviors > Physical Education and Physical Activity. A search bar is visible in the top right. The main content area features a sidebar with expandable menu items: CDC Healthy Schools, About CDC Healthy Schools, Health and Academics, Improving School Health, Assessing School Health, Managing Health Conditions, Promoting Healthy Behaviors, and Physical Education and Physical Activity. The 'Physical Activity Before and After School' article title is circled in red. The article text includes: 'Physical activity before and after school includes walking or biking to and from school programs, physical activity clubs, intramural programs (sports organized by the school or community in which any child can participate), interscholastic sports (competitive sports between schools), and physical activity in before-school and after-school extended day programs.¹⁻²' and 'Encouraging students to be physically active before and after school helps them identify activities they enjoy and might engage in long term.¹⁻³' It also lists benefits: 'Physical activity before and after school can benefit students by: • Increasing their overall physical activity. • Improving their grades and test scores.'

Conclusive remarks

Let's Re-think of **What to do** and **How to Organize** in educating our next generation with active life-style for sports and exercises

Suggested guidelines for school-based development

1. Create a *supportive curriculum for sports to be in place in the school life*;
2. Make use of the *activity times in recess, after school, before class, or during lunch break*;
3. Select *easy / popular activity* themes (e.g. rope jumping, hoop, stairs walking);
4. Implement *fun learning* in physical activities with suitable challenge;
5. Implement *moderate intensity* activities;
6. Encourage *cognitive development* through the activities;
7. Use cycles, rotation, and / or *activities conducted in phases*;
8. Ensure *fair games and reward* every students' work effort;
9. Allow *students to think and decide* their tactics, game strategy, and amount of input and effort in the activities.

Conclusive remarks

Life habit development in sport is different to the learning in physical education lessons.

Apart from the physical education curriculum, professionals are needed to have the adoption of an innovative curriculum to include physical education, health and leisure education together in forming a new perspective for school education.

Will that also spark off the interest of yours in the research and developmental works of physical activities in school?

