

**A COMPARATIVE STUDY OF STUDENTS' PERCEPTIONS  
TOWARD PHYSICAL EDUCATION COURSE AND THEIR  
ACTUAL BEHAVIORS TOWARD PHYSICAL ACTIVITIES IN  
GRADES 10 AND 11 IN A PUBLIC HIGH SCHOOL AT PHNOM  
PENH, CAMBODIA**

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**Abstract:** The purpose of this study was to determine students' perceptions and their actual behaviors toward physical education course and to investigate if there is a significant difference in students' perceptions and their actual behaviors in Grades 10 and 11 at a public high school in Phnom Penh, Cambodia. Quantitative method and questionnaire was used to collect the quantitative data from 317 students (Grade 10 = 160 and Grade 11 = 157) from the public high school. The questionnaire was adopted from Chi-Kwong (1999) and Alselaimi (2010). Questionnaire was divided into three parts: demographic information, students' perceptions toward physical education course (personal factor, behavior, environment, and perceived evaluation of curriculum) and students' actual behaviors toward physical activities. The data was analyzed by using means, standard of deviation, and independent samples *t*-test for quantitative data related to students' perceptions and their actual behaviors toward physical activities. The study discovered that both Grades 10 and 11 students had positive perception toward physical education course in that public high school. The results also conveyed that there is no significant difference among the Grades 10 and 11 students in regards their perception toward a physical education course and their actual behaviors toward physical activities.

**Keyword:** Students' Perceptions and Behaviors, Physical Education, Physical Activities.

### **Introduction**

Physical education plays a very important role in promoting student healthy lifestyle and academic achievement. Physical activities provide great benefits to the students particularly on their physical health. Ravi (2017) explained that students who regularly participated in physical activities could reduce the risk of several chronic diseases and improve their health conditions. A number of

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research proved healthy life in which those who had regular physical activities could get away from diabetes, blood pressure, bone issues, and obesity (Bailey & Martin, 1994; Barbeau, Gutin, & Yin, 2004; Bouchard, Malina, 1991; Gao, 2012) and improve academic performance (Barcelona et al., 2015).

Aside, physical education provides a list of benefits for students. According to Bailey (2006) physical education can help students respect their own body and others. Moreover, it helps develop not only the body but also the mind. The same literature supports that through physical education, students' self-confidence, self-esteem, social and cognitive development and academic achievement will be enhanced. Moreover, it is the opportunities for students to meet and communicate with one another, taking various social roles, learning social skills together including tolerance and respect for one another and experiencing different kinds of emotions that can be occurred in lives. Due to these benefits, physical education has been integrated into the school curriculum. In many countries, physical education has been used to refer the curriculum which concerns on developing the physical competence and confidence of the students as well as their abilities employ different kind of physical activities (Department for Education and Empowerment, 2000).

Cambodia is one of the countries involved in the process of reviewing its education system to develop students in order that they can have knowledge and skills necessary to improve and maintain their physical and mental health (Retka, 2015; Sport for Tomorrow, 2017; UNESCO, 2011). Physical education courses have been integrated into the formal curriculum. Based on the strategic plan by the MoEYS (2014) physical education plays an important role in improving students' health and academic performance. This is conformed to what Barcelona et al., (2015) mentioned that physical education course help students' achieve better in their academics. Retka (2015) concluded that physical education brings such planned benefits for Cambodian students, not only in academic performance but also their physical and mental health. Thus, it would be great that students favorably had positive perception toward physical education course which was expected to increase their physical activities not only health but also promote academic achievement as well their socialization (Sport for Tomorrow, 2017). Therefore, this paper aims to seeking the perceptions of public high school students in Cambodia in the hope to recommend the education officers, administrators, and instructors to promote physical education course in school. This would bring benefits to students as well as to society as a whole.

### **Objectives**

There were four research objectives:

1. To identify the Grades 10 and 11 students' perceptions toward physical education course in a public high school at Phnom Penh, Cambodia.
  - 1.1 To identify the Grades 10 and 11 students' perceptions toward physical education course based on personal factor in a public high school at Phnom Penh, Cambodia.
  - 1.2 To identify the Grades 10 and 11 students' perceptions toward physical education course based on behavior factor in a public high school at Phnom Penh, Cambodia.
  - 1.3 To identify the Grades 10 and 11 students' perceptions toward physical education course based on environment factor in a public high school at Phnom Penh, Cambodia.
  - 1.4 To identify the Grades 10 and 11 students' perceptions toward physical education course based on perceive evaluation of curriculum in a public high school at Phnom Penh, Cambodia.
2. To identify the Grades 10 and 11 students' actual behaviors in physical activities in a public high school at Phnom Penh, Cambodia.
3. To determine if there is a significant difference between Grades 10 and 11 students' perceptions toward physical education course in a public high school at Phnom Penh, Cambodia.
4. To determine if there is a significant difference between Grades 10 and 11 students' actual behaviors toward physical activities in a public high school at Phnom Penh, Cambodia.

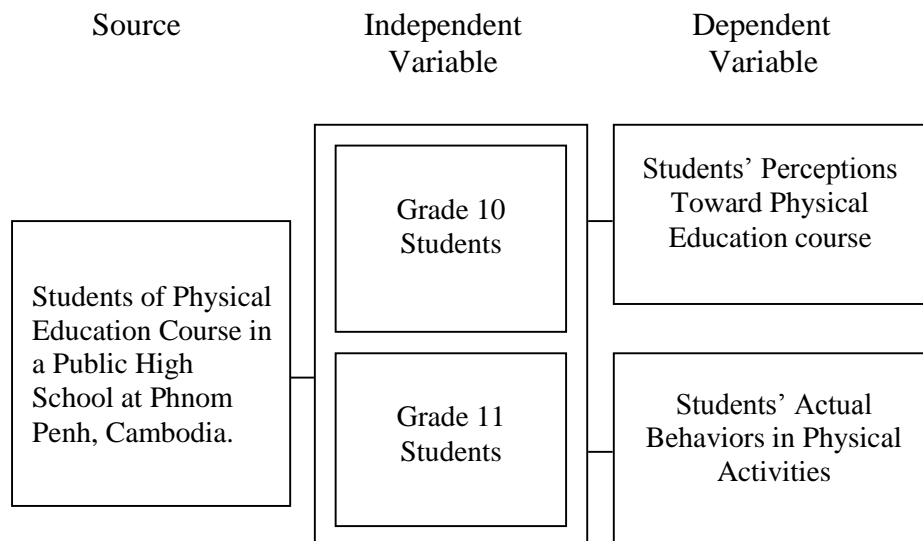
### **Hypotheses**

There were two research hypotheses developed for this study.

1. There is a significant difference between Grades 10 and 11 students' perceptions toward physical education course in a public high school at Phnom Penh, Cambodia.
2. There is a significant difference between Grades 10 and 11 students' actual behaviors toward physical education course in a public high school at Phnom Penh, Cambodia.

### **Conceptual Framework**

The researcher determined the students' perceptions toward physical education course. The expected elements of the perceptions would be including the positive and negative ideas of physical education. The researcher also determined the actual behaviors toward physical activities. Students' perceptions would determine whether they actively or passively engaged in physical activities. Based on these results of objective one and two, the researcher determined a significant difference between student perceptions among their grades and a significant difference between students' behaviors toward physical activities according to their grades.



**Figure 1.** *Conceptual framework of this study*

### Literature Review

#### *Students' perceptions toward physical education.*

The perceptions of physical education course is the understanding of the information derived from the past experience students who met during the course. The perception should be more specifically on the curriculum, the activities, the teaching and learning. This is conformed to what, Li, Lindner, and Speak (1994); Cheng and Yu (1993) mentioned that when student believed that physical education was useful for them, their attitudes and behaviors toward it was also favorable. However, if students had negative ideas toward physical education, they would be more passive which was contradictory to the objectives of the course (Karp & Morey, 1998).

Self-efficiency, which is refers to perception of personal competence, plays a critical role in learning motivation and behavior. Self-efficiency comprises judgments of self-confidence and self-beliefs of being able to complete learning tasks and to reach learning goals (Bandura, 1993). Learner perception of self-efficiency to be successful were influenced by their past experience (Pintrich & Schunk, 1996). What their environment reflects back to learner about their personal competence, inspires their self-beliefs, goal setting and determination. Their perception of their abilities were influenced by both personal factors and environmental factors (Pintrich & Schunk, 1996). The students' self-belief affects the identifying of the self-efficiency of their achievement which impacts their goal setting (Bandura, Martinez-Pons, & Zimmerman, 1992). Perceived self-efficiency regulates learner's mindsets

toward learning. Students are very likely to participate in the activities that are valuable to them and expect the benefits of completion of the tasks. They see the benefits of physical education which provide physical fitness, having fun and sense of achievement. It is the expectancy of successful component during physical courses. This can be related to students perceived sports competence and the experience when students get self-confidence to participate in sport. When students feel that they acquire the skills to play, they would perform the task eagerly.

#### *Students' behaviors toward physical activities.*

Through the process of learning, students' behaviors can be affected by perceptions and attitudes. Students' behaviors would be changed as their perception and attitude change. According to Bandura (1977), student's behavior was learned from environment around them through the process of observational learning. Only specific attitude can affect behaviors. Attitudes can affect behaviors with those who are strong and consistent, person's direct experiences and related to specific behaviors (Atkinson et al., 1983) Ajzen (1985) showed that an individual's perceived ability as another factor in the theory of planned behaviors, to be considered together with the intention to predict actual behavior. This idea echoed in the theory of self-efficacy proposed by Bandura (1977) in motivation for exercises. Students gain self-confidence as they have more successful and pleasurable experiences in sports activities. When students have higher perceived athletic competence, they might have higher intention to do more exercises. These theories highlight the links between attitudes, subjective norms or values of exercises, perceived behavioral control, intentions and actual behaviors.

#### *Perception Theory*

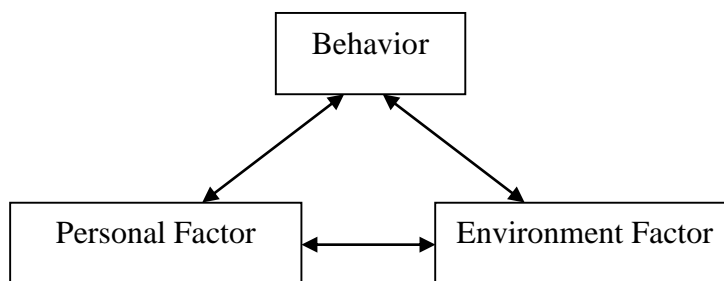
The leading theory on perception of cognitive learning developed by James J. Gibson (1966). Perception is very important for learning as it allows them to adapt to their environments and learn to detect information to specific subjects, even activities that can be used for their daily activities.

#### *Behavioral Theory*

The behaviorist for the social learning theory developed by Albert Bandura (1986). Student's behaviors are learned from their environment around them through the process of observational learning.

Moreover, reciprocal determinism by Bandura (1986) stated that a person's personality is shaped by three factors: the personal, behavior, and environmental. This is conformed what Schunk (2007) mentioned that students improved their emotional states and correct wrong self-beliefs and

habits of thinking (personal factors), improved academic skills and self-regulator practices (behavioral factors), and changed structure of learning to gain success (environmental factors). Thus, it can be that a physical education course could help change the perceptions of students including self-beliefs, habits and behaviors toward the course. This is line with what Bandura (1986) noted that environment and behavior reciprocally interact.



**Figure 2. Reciprocal determinism (Pajares, 2002)**

## **Methodology/Procedure**

### *Research Instrument*

Questionnaire was used to collect data for this quantitative and comparative study. The questionnaire was adopted from Chi-Kwong (1999) this consists of three sections: student demographic data, student perception of physical education and the students' perceived athletic ability. Only part of the students' perceptions course was used in this study. And from Alselaimi (2010) on students' actual behaviors toward physical activities. The questionnaire comprised of three parts. Part one entails 2 items (gender and grade) which was used to identify the students' demographic information. Part two composed of 16 items that used to measure students' perceptions toward a physical education course and part three composed of 2 items that used to investigate students' actual behaviors toward physical activities.

### *Population and Sample*

The population of this survey was the students from Grades 10 and 11 at a public high school in Phnom Penh, Cambodia in the academic year 2018-2019. Participants in this study were 317 students (male = 136, female = 181).

### *Validity and Reliability*

The questionnaire Part II was adopted from Chi-Kwong (1999) was broadly used to investigate students' perceptions toward a physical education course. Questionnaire Part III was adopted from Alselaimi (2010) for the student actual behaviors toward physical activities. The questionnaire was translated

in Khmer by the researcher. It was then back-translated into English by three experts independently. The researcher sent it to three experts in Cambodia who were educational professionals qualified in both Khmer and English languages. The validation was to ensure the items measure the study variables and if the English and Khmer translation were consistent.

The validity of the revised survey was pilot-tested with 30 high school students in a public high school at Phnom Penh, Cambodia. The researcher used Cronbach's alpha to analyze the reliability of the questionnaires. The overall result of this pilot test was a good rating with an alpha coefficient of .673. This overall result was close to .70 which was the acceptable range (George & Mallery, 2003). The range of Cronbach's Alpha according to George and Mallery (2003) was defined as follows: above .90 (excellent), above .80 (good), above .70 (acceptable), above .60 (questionable), above .50 (poor), and below .50 (unacceptable).

## **Findings**

The findings of this study based on four primary objectives.

### *Research Objective One: Students' Perceptions toward a Physical Education Course*

Table 1 presented the overall results of students' perceptions (Grades 10 and 11) toward physical education. The results presented their perceptions for all the four factors toward physical education course. Their perceptions of all the four factors conveyed that students had neutral feelings and emotions toward the course. They were not very positive or very negative toward it. They stayed in between the two scales which meant that in somehow they might enjoy the course and they liked playing with their classmates. They may feel relaxed as the course could reduce their boredom. They moderately valued the course since students could promote their learning achievement and could work well with other friends. Moreover, they thought that the course was useful for them and this curriculum should be a compulsory subject in high schools.

Their perception toward curriculum conveyed negative results. This was that students did not want to have physical education cut from the curriculum if there was a curriculum reform. Students still supported to keep this course even though it was an elective course. The results demonstrated very high (very positive) on Item 21 "Physical education needs to be a compulsory subject in high schools": (Grade 10,  $M=3.73$  and Grade 11,  $M=4.01$ ).

In summary of this objective, students of both grades neutral feeling and emotion toward physical education course. They were rather interested in the

curriculum and felt relaxed when taking it. As they had such perceptions toward it, they tended to moderately participate in it. They found that the course created an environment where they could learn to work together and saw that their health and their friends were improved including their intellectual ability. Though they were not strongly positive in the course, they still supported that physical education course was important. They conveyed that the course should not be cut even though there was a curriculum reform in schools.

Table 1. *Summary of the Findings on Students' Perceptions toward a Physical Education Course among their Grades*

Factors	Grades	<i>M</i>	Interpretation
Personal Factor	10	3.33	Neutral
	11	3.32	Neutral
Behavior Factor	10	3.46	Neutral
	11	3.50	Neutral
Environment Factor	10	3.42	Neutral
	11	3.37	Neutral
Perceived Evaluation of Curriculum	10	2.86	Neutral
	11	2.95	Neutral

Overall mean score for Grade 10 was 3.26 and it interpreted a neutral outcome  
Overall mean score for Grade 11 was 3.28 and it interpreted a neutral outcome

*Research Objective Two: Students' Actual Behaviors toward Physical Activities*

As shown in Table 2 students of both grades did not demonstrate active participation in physical activities per week. They participated around 3 times per week. They did not have sufficient exercise over the week since the result demonstrated in a lower moderate one. All in all, students showed passive behaviors toward physical activities though the overall means were almost neutral.

Table 2. *Summary of the Findings on Students' Actual Behaviors toward Physical Activities among their Grades*

Categories	<i>M</i>		Interpretation	
	Grade 10	Grade 11	Grade 10	Grade 11
Students' Actual Behaviors toward Physical Activities	3.38	3.24	Passive	Passive



*Research Objective Three: Comparison Students' Perceptions of Grades 10 and 11*

When comparing between Grades 10 and 11 students in regards their perceptions toward physical education, the results indicated that there was no significant difference since the significant values were bigger than .05 level of significance. Among the four factors, the significant levels showed greater than .05 level. Thus, it was concluded that there was no significant difference between their perceptions toward the course.

Table 3. *Summary of the Finding of This Study Regarding to Inferential Statistic Used for Data Analysis on Students' Perceptions Toward Physical Education Course among their Grades*

Factors	Grades	M	Sig.	Interpretation
Personal Factor	10	3.33	.97	There was no significant difference
	11	3.32		
Behavior Factor	10	3.46	.70	There was no significant difference
	11	3.50		
Environment Factor	10	3.42	.93	There was no significant difference
	11	3.37		
Perceived Evaluation of Curriculum	10	2.86	.90	There was no significant difference
	11	2.95		

Sig. < .05

*Research Objective Four: Comparison of Students' Actual Behaviors of Grades 10 and 11*

Table 4 presented the findings derived from the comparison of students' actual behaviors toward physical activities. The results indicated that there was no significant difference among Grades 10 and 11 students.

Table 4. *Summary of the Findings on Students' Actual Behaviors toward Physical Activities among their Grades*

Grades	M	Sig.	Interpretation
Grade 10	3.38	.77	There was no significant difference.
Grade 11	3.24		

Sig. < .05

## Discussion

The findings revealed that both Grades 10 and 11 students' perceptions toward a physical education course were positive. They seemed to enjoy participating in the course as they could feel relaxed and they found that the course helped them learn to control their emotions and to have better self-confidence. This is conformed to the findings of a study conducted by Chen (1998). Chen found

that the students enjoyed participating in physical education course as they appreciated the meaningfulness of the course. Students were interested in the course. The results of another study by Chew, Harris, and Quarterman (1996) also provided that physical self-efficiency was the significant factors contributing to positive perceptions of the students toward physical education programs. However, Fitzelarence and Tinning (1992) conducted a study on the perceptions of secondary school students and the findings were contradictory to these research findings. Fitzelarence and Tinning found that most adolescents liked to do activities outside school campuses but they rejected physical education course as they were bored with it and thought that the course was irrelevant. The author found that physical education was not a compulsory subject in school and it was not either integrated in health and safety education. That is why students had their own choice if they want it to participating in the course or not.

The results presents that these two groups of students (Grades10 and 11) had similar habits of doing exercises. They had 3-4 times per week for their physical activities. They had exercised vigorously around 3 days per week. The results expressed in fairly good category. That means students had fairly good habits of doing physical activities. The physical education course may encourage them to do such physical activities, though not as much as every day. As shown in the research objective one, it seemed that students enjoyed participating in the physical education course which means that they have a good feeling about it. As what Chen (1998) mentioned that they actively participated in the course because they could see the benefits from it. Chew, Harris, and Quarterman (1996) also found that the course promoted students' physical self-efficiency. This is conformed to what Bandura (1986) provided that is what people think, believe, and feel affect how they behave. Social determinants may contribute to the promotion of physical activities. Alselaimi (2010) found that social interactions influence young people intention and behaviors toward physical activities. According to social cognitive theory, people are the agents actively engaging in their developmental process and through their action, they could make things happen. People tended to work together to achieved share beliefs. The social system and environment affect human behaviors through self-efficacy (Bandura, 1986). Moreover, Arbabisarjou, Bongjar, and Sourki (2016) provided that students' behaviors could be changed because of the physical education course and the personality of teachers. These two were influencing factors promoting the physical activities of the students.

Based on the findings, through some evidence showing that there might be other possible factors including environment (social factors), it could be

concluded that physical education course made students feel good and could gain benefits from it. Such positive thought toward physical education course promoted physical activities though, some authors agreed that the physical education course may not affect much to the preferences of the students to have physical activities outside the classroom. Just like Fitzelarence and Tinning (1992) found that most adolescents liked to do activities outside school campuses but they rejected physical education course. They thought that the course was boring and was irrelevant.

The findings present the evidence that there is no difference in perceptions toward physical education course among the two groups of students (Grades 10 and 11 students). They enjoyed the course and felt relaxed when participating in it. Their behaviors toward the course was also good and they thought that the course helped them have better self-confidence and self-control. In terms of evaluating the curriculum, they provided that physical education course was as important as other subjects. It should not be cut if there is a curriculum reform in schools. Moreover, this course should be compulsory in high schools.

Positive feelings and behaviors would have emerged from the experiences or awareness of benefits of physical education course. According to Gorgut and Tutkun (2018), physical education course is important as students could be psychologically, physically, and physiologically active. Students' concepts as well as the character improves. They tended to decrease their roughness and started to have more cooperation when working in team, self-discipline, leadership and socialization. Similarly, Aras (2013), Güner (2015), and Keskin (2014) found some benefits from physical education course. One of the benefits was that their learning achievement was better. Heper (2012) and Mullan and Stratton (2005) also found that physical education helped students maintain a physical coherence. The course is very important to help improve students' health. Moreover, the course helped reduce the aggressiveness of students (Bayansalduz et al., 2015 & Vardar, 2015).

The results convey that there is no difference in students' actual behaviors toward physical activities among the two groups of students. They participated in physical activities at least 3 times per weeks and did vigorously 3 days per weeks. The results were not bad. At least students had some physical activities during the week. The findings revealed that as students had positive attitudes toward physical education course, they tended to be active in physical activities. These findings conform to what was found by Chi-Kwong (1999) that when students felt good about the physical education course, they were more active in physical activities. This is may be that students found benefits

in physical activities. According to Burt et al. (2014), whenever young people engaged more actively in the physical activities, their weight would be decreased. This is very similar to what was found by Gao (2012) that physical activities prevented students from obesity, diabetes. Moreover, Oak (2012) mentioned that physical activities promoted students' physical and mental well-being as well as improve their personalities.

Students may find other benefits derived from physical activities. If they participated regularly in physical activities, they tended to do better in their academics and socialization (Gao, 2012). This is similar to what was found by Barcelona et al., (2015). These researchers found that students could do better in both immediate and long-term academic performance. They mentioned that physical activities could have effects on students' brain and fitness which were conducive to students' better concentration on their learning. Most students liked to be fit and this would bring positive impact on their academic performance too.

All in all, students' positive feelings toward physical education course would promote their physical activities outside the school campus. The reasons they tended to get more engagement in physical activities may derived from the facts of the benefits as mentioned in the above which supported by a number of researchers.

### **Recommendations**

Based on the finding of this study, the researcher made recommendations for high school physical education teachers, school administrators, and the students of the public high school as follows.

For teachers. The high school physical education teachers can use this study as a guide for them in teaching. Moreover, the results would satisfy the students' needs. This would raise their awareness of the importance of the physical education and increase their exercising practices. Students would be also aware the benefits of both health (physical and mental) and their academic performance. Teachers and program developers know the possibility of updating physical education, of it needs to be changed. Teacher should develop teaching material and encourage students to be high achievers.

For administrators. The school administrators can know and understand the extent of the efficiency of physical education in high schools in Phnom Penh, Cambodia. In addition, students will add an important element to the slowly growing body of research on teaching in physical education. By expanding the research through exploring the perceptions of high school students who

participate in a general physical education program, teachers may be better able to identify teaching behaviors that provide a positive influence on students' physical education experiences.

For students. The finding should add an important element to the slowly growing body of research in teaching in physical education. By expanding the research through exploring the perceptions of high school students who participate in a general physical education program would contribute to helping students to positively consider the course beneficial to both academically and physically. As students could find benefits from it, they would raise their enjoyment in physical activities.

### REFERENCES

- Ajzen, I (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl and J. Beckmann (Eds.), *Action control: From cognition to behavior*. New York: Springer Verlag
- Alselaïmi, A. (2010). Using the theory of planned behavior to investigate the antecedents of physical activity participation among Saudi adolescents. *Dissertation, Doctor of Philosophy in sports and health sciences, the University of Exeter*.
- Aras, O. (2013). Examining the attitudes and views of the secondary school students and their physical education teachers toward physical education lesson (example of Kars). *Unpublished Master's Thesis. Gazi University, Ankara*.
- Arbabisarjou, A., Bonjar, H. S., and Sourki, S.M. (2016). Students' individual and social behaviors with physical education teachers' personality. *International Education Studies, Vol. 9, No.1*.
- Atkinson, R.C., Atkinson, R.L., & Hilgard, E.R. (1983). Introduction to psychology. Retrieved from:  
[http://au.summon.serialssolutions.com/#!/search?bookMark=ePnHCXMw42JgAfZbU5khZ9uAaitjM3NzA04GKU\\_Q0usUyJmoCiX5CgWwHA5sDUm7uYY4e-gmlsZDRyIAk6IW8aCjTYzwywIAxecfug](http://au.summon.serialssolutions.com/#!/search?bookMark=ePnHCXMw42JgAfZbU5khZ9uAaitjM3NzA04GKU_Q0usUyJmoCiX5CgWwHA5sDUm7uYY4e-gmlsZDRyIAk6IW8aCjTYzwywIAxecfug)
- Bailey, D., and Martin, A. (1994). Physical activity and skeletal health in adolescents. *Pediatr Exerc Sci. 6:348-360*.
- Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of school health, Vol. 76, No. 8, pp.397-401*.
- Bandura, A. (1977). *Social learning theory* (3rd Ed.). Englewood cliffs, NJ: Prentice hall regents.
- Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory* (1st Ed.). Englewood cliffs: Prentice-Hall.

- Bandura, A. (1993). Perceived Self-Efficacy in Cognitive Development and functioning. Retrieved from:  
<https://www.uky.edu/~eushe2/Bandura/Bandura1993EP.pdf>
- Bandura, A., Martinez-Pons, M., and Zimmerman, B.J. (1992). Self-Motivation for Academic Attainment: The Role of Self-Efficacy Beliefs and Personal Goal Setting. Retrieved from:  
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.840.9215&rep=rep1&type=pdf>
- Barbeau, P., Gutin, B., & Yin, Z. (2004). Exercise Interventions for prevention of obesity and related disorders in youth. *Quest*, 56:120-141.
- Barcelona, M.J., Calvert, G.H., Castelli, M.D., Centeio, E.E., Glowacki, M.E., Hwang, J., and Nicksic, M.H. (2015). The history of physical activity and academic performance research: Informing the future. Monographs of the society for research in child development. *The University of Texas at Austin, 2100 San Jacinto Dr., mail code D3700, Austin, TX 78712.*
- Bayansalduz, M., Eraslan, M., Goktepe, M., Koc, I. I., Ozmaden, M. (2015). Investigation as some variables of assertiveness levels at deaf athletes. *Journal of international multidisciplinary academic researches*, 2(2), 50-57.
- Bouchard, C., & Malina, R. (1991). Growth, maturation and physical activity. *Champaign, Ill: Human Kinetics.*
- Burt, L.V., Fakhouri, H.I., Fulton, E.J., Hughes, P.J., Ogden, L.C., and Song, R.N. (2014). Physical activity in U.S youth aged 12-15 Years. *NCHS data brief, No. 141.*
- Chen, A. (1998). Meaningfulness in physical education: a description of high school students' conceptions. *Journal of Teaching in Physical Education, Vol.17, pp.285-306.*
- Cheng, C.K., and Yu, C.K. (1993). A comparison of attitudes toward physical education between Hong Kong secondary 5 students enrolled in regular and enhanced classes. *Synopsis of local researched in sports science (1990-1992,)*, 3, 69-78.
- Chew, R.M., Harris, G., and Quarterman, J. (1996). African American students' perceptions of the values of basic physical education activity programs at historically black colleges and universities. *Journal of teaching the physical education*, 15, 158-204
- Chi-Kwong, H. (1999). Secondary students' perception of physical education lessons and its relationship with their participation behavior in sport activities. *Thesis, Master of education, University of Hong Kong.*

- Department for Education and Empowerment (2000). Physical education. *The national curriculum for England and Wales, London, UK.*
- Fitzelarence, L., and Tinning, R. (1992). Postmodern youth culture and the crisis in Australian secondary school physical education. *Quest, 44*, 287-303.
- Gao (2012). School-based physical education and sports programs. *Highlights of Gao- 12-350.*
- George, D., and Marllery, P. (2003). *SPSS for windows step by step: A simple guide and reference*. 11.0 update (4<sup>th</sup> ed.) Boston: Allyn & Bacon
- Gibson, J.J. (1966). The senses considered as perceptual systems. Retrieved from:  
*file:///C:/Users/computer/Desktop/Gibson\_ATheoryOfDirectPerception.pdf*
- Gorgut, I. & Tutkun, E. (2018). Views of physical education teachers on values education. *Universal journal of educational research, 6 (2)*, 317-332.
- Güner, B. (2015). The evaluation of the problems related to the women not being able to participate in recreation activities. *Journal of international sport sciences, 1(1)*, 22-29.
- Heper, E. (2012). Concepts related to sports science and historical development of sports. (Editor: Hayri Ertan). *First Edition. Eskisehir: Open Education Faculty Publishing.*
- Karp, G.G., and Morey, R.S. (1998). Why do some students who are good at physical education dislike it so much? *Physical Educator, 55(2)*, 89 - 101.
- Keskin, O. (2014). Effects of physical education and participation in sports on social development in children. *Journal of international multidisciplinary academic researches, 1(1)*, 1-6.
- Li, D., Lindner, K.J., and Speak, M.A. (1994). Participation in sport by students entering the University of Hong Kong: Results of a survey undertaken in September, 1993. In K.J. Lindner and M.A. Speak (Eds). *Sport and exercise participation: Motivation and barriers*, (pp. 3-17). Hong Kong: University of Hong Kong center for physical and sport.
- MoEYS. (2014). *EDUCATION STRATEGIC PLAN 2014-2018*. Phnom Penh: MoEYS.
- Oak, M. (2012). Benefits of playing sports. Retrieved from *http://www.buzzle.com/articles/benefits-of-playing-sports.html*
- Mullan, E., and Stratton, G. (2005). The effect of multicolor playground markings on children's physical activity level during recess. *Preventive Medicine, 41*, 828-833.
- Pintrich, P. & Schunk, D. (1996). The Role of Expectancy and Self-Efficacy Beliefs. Retrieved from: *https://www.uky.edu/~eushe2/Pajares/PS.html*

- Ravi K (2017). The Benefits of Physical Activity and Exercise for Health. Retrieved from:  
[https://www.researchgate.net/publication/322444720\\_The\\_Benefits\\_of\\_Physical\\_Education\\_and\\_Exercise\\_For\\_Health](https://www.researchgate.net/publication/322444720_The_Benefits_of_Physical_Education_and_Exercise_For_Health)
- Retka, J. (2015). Sports, Fitness Curriculum Planned for Junior High. Retrieved from: <https://www.cambodiadaily.com/news/sports-fitness-curriculum-planned-for-junior-high-98923/>
- Sport for Tomorrow (2017). Cambodia Establishes Middle-School PE Curriculum. Retrieved from:  
[http://www.sport4tomorrow.jp/news\\_en/cambodia-establishes-middle-school-pe-curriculum-thanks-to-hearts-of-gold-initiative-through-sport-for-tomorrow-programme/](http://www.sport4tomorrow.jp/news_en/cambodia-establishes-middle-school-pe-curriculum-thanks-to-hearts-of-gold-initiative-through-sport-for-tomorrow-programme/)
- UNESCO (2011). Education and fragility in Cambodia. International institute for educational Planning. Retrieved from:  
<http://unesdoc.unesco.org/images/0021/002110/211049e.pdf>
- Vardar, T. (2015). Importance of sports in preventing aggressive behavior among young people. *Journal of International Multidisciplinary Academic Researches*, 2(2), 41-49.