

## Development of Play Spaces to Enhance Wellbeing of Early Childhood and Primary Schoolchildren

### 1. Definition

**Play** *refers to* activity that brings pleasurable and happy feelings as well as learning and creative development. It also includes playing with parents from the time of infancy and with others, playing with toys, available devices, IT games, free invention of playthings and items, or doing any activity, e.g. gardening or sport, among other things.

**Play space** *refers to* an area that the child can get access to, an area that has been developed and organized as a place for pleasurable activity, learning creativity, and happy safe experience, all contributing to child wellbeing. A child play space can be anywhere where play activity is held, ranging from the parent's body or a room to areas in the household and in the community, including natural and safe environment, supported by community members concerned. In this regard, a playground is a type of space, usually situated in the open air.

**Amusement park** *refers to* a place that features various attractions and is more than a public park or general playground. It is created for pleasurable recreation, attracting fun-loving people, mostly for commercial purposes.

**Early childhood and primary schoolchildren**, in general, refer to pre-teen children.

**Early childhood** *refers to* children less than six years old or from birth to kindergarten.

**Primary schoolchildren** *refer to* children from six to twelve years old or those in primary schools.

**Wellbeing or health** *refers to* the state of human being which is perfect in physical, mental, spiritual, and social aspects, all of which are holistic in balance.

### 2. Background/significance of the issue

#### 2.1 Significance

Play is an essential part of a child's life. Children learn and develop through play. Medical researches confirm that play significantly contributes to brain development, as it stimulates an increase of nerve signals and better coordination between neurons and the body function.

Play of early childhood and primary schoolchildren is important and invaluable, because at this age the appropriate learning is "*through play and with happiness*". Play, when equipped with enabling factors, will help promote good physical, mental, intellectual, emotional, social and disciplined development, analytical thinking, creativity, adaption, and reduction of accidents, including prevention and problem-solving skills. Children will acquire various dimensions of development, such as emotional

1 development and interaction with others. All this will need good care providers, safety  
2 measures and other appropriate enabling factors.

3 Play differs according to age and context. Consideration, therefore, must be  
4 given to age differences. This is especially more so, when children are teenagers, i.e.  
5 13 years and above, the difference in the play process and provision of care will be  
6 more different from primary schoolchildren.

7 A number of existing agreements and legal provisions support and attach  
8 importance to the fact that children need appropriate and safe play spaces, leading to  
9 health enhancement and equality (see Annex 1). One must not forget homeless  
10 children, child orphans, and children in distress and with disabilities, while consideration  
11 must take into account the Child Protection Act B.E. 2546 (2003), Chapter 2 on  
12 Treatment of the Child

## 13 **2.2 Situation and issues for consideration**

### 14 1) Lack of awareness of the importance of play for health-enhancing purposes

15 The International Play Right Association (IPA) has announced the Declaration on  
16 the Importance of Play reaffirming the child's right to play and expressing concern about  
17 a menacing trend and negative effects on child development. Apparently, society shows  
18 indifference to the importance of play, while putting greater emphasis on theoretical and  
19 formal education, unhealthy competition and "winning regardless" mentality in child  
20 sports. The issue is more worrisome when play is vital to the child's physical and mental  
21 health; it is part of education to play a vital role in family and community life as well as  
22 in the interaction between the child and other people of all ages and genders. In  
23 addition, the Association has proposed recommendations to implement the child's right  
24 to play.

### 25 2. Shortage of play spaces able to promote development and safe learning

26 For Thailand, today, urban children experience a number of constraints,  
27 especially when it comes to safe play spaces. The urban environment is invariably  
28 characterized by buildings and housing units, not to mention traffic congestion and air  
29 pollution. Most children have to go to shopping malls, amusement parks, or pavements  
30 to play, while others play video games at home or in computer games shops. Rural  
31 children, on the other hand, may have an advantage of having a lot of spaces and  
32 natural surroundings. They, too, have to grapple with the safety issue and are often left  
33 to play on their own without attendants, while there is little creative play due to  
34 shortage of play equipment that enable child development.

35 Many may feel that Thailand enjoys a lot of spaces that can be made into  
36 playgrounds installed with playthings. In reality, there is still an acute shortage in, for  
37 instance, play spaces, management, and knowledge about play processes able to  
38 enhance development and safe learning. For example, the Ministry of Education, by  
39 way of the Office of Basic Education Commission (OBEC) has already embarked on the  
40 Brain-based Learning Playground Project – or "play in the royal footstep" – together  
41 with the Office of Knowledge Management and Development (OKMD) but, during 2016-  
42 2017, was able to put in place only 370 playgrounds from among 27,145 schools under  
43 its jurisdiction. The Wisdom Playground Foundation has lent its support by participating  
44 in the project together with ten other schools and hospitals. Model playgrounds have

1 been created under the Thai Health Promotion Foundation (ThaiHealth). The models are  
2 still few in number and need to be further replicated.

3 Such shortage, including children's inability to get access to play spaces, evidently  
4 deprives children of opportunity to develop physical skills, fundamental to growth, and  
5 process skills, such as problem-solving, decision-making, and reasoning skills, including  
6 moral development and other learning and living attributes. It leads to slow  
7 development in children, lack of learning motivation, lack of skills necessary to work  
8 with others, and lack of responsibility for self and others.

9 Equally important is the fact that most playgrounds are not properly managed as  
10 far as safety is concerned and, therefore, are not truly beneficial to wellbeing of children  
11 in terms of child development and creativity.

### 12 3) Play spaces and safety

13 Most children in Thailand play or learn about things around themselves in rather  
14 unsafe environments, at home and outside in the community. Young children are left  
15 unattended, while school-age children are not sufficiently taught survival skills, thus  
16 making accidents the top leading cause of death for children aged one year and above.

#### 17 3.1) Causes of child injury and death on the playgrounds

18 A study by the Child Safety Promotion and Prevention Research Center, Faculty of  
19 Medicine, Ramathibodi Hospital, Mahidol University, reveals that most playgrounds in  
20 the community and schools were inappropriately designed, installed and maintained,  
21 leading to frequent child injury. A survey shows 34,075 child injuries per year, with the  
22 highest number found in the age group of 5-12 years.

23 *Playground equipment* that cause injuries the most are slide (44%) and swing  
24 (33%), followed by climber, merry-go-round and others. The sites where injury occurs  
25 include school, village or community residential area, and public park.

26 Safety problems on playgrounds, causing child death, are: the ground surface is  
27 hard and does not absorb the force of the fall; equipment are shaky as they are not  
28 properly secured at the base, and can fall easily; some equipment with a tall structure  
29 are not equipped with fall protection; and paint on equipment contains high lead  
30 concentrations.

31 In other countries, data are collected to explain the causes of injury and death  
32 from play, which eventually leads to safety development. There are now safety  
33 standards for play equipment and playgrounds, covering equipment and their inspection  
34 by agencies concerned. In Thailand, it is the duty of the Industrial Standard Institute  
35 (ISI) to control manufacturing plants, but the standard is confined only to equipment,  
36 while the playground safety standard is far from clear. There is no agency with clear  
37 responsibility in this area. There are needs to review environmental/play risks and care  
38 during play on the basis of which safety can be developed.

39 Playground equipment that are beneficial and valuable to children must be  
40 appropriate to the child's age and development, taking into consideration all the aspects  
41 including ground surface, equipment, instructions, and particulars of playground  
42 supervisors or attendants when children come to play, and safety about the  
43 surrounding, e.g. if the playground is close to water places or roads, fencing must be  
44 provided.

#### 45 3.2) Danger from natural play spaces

1 A natural environment with trees and water is, perhaps, one of the best play  
2 spaces for children. However, it is also a dangerous place if they are negligent or not  
3 careful. The top leading cause of death of children between one and 17 years old is  
4 accident, while drowning is a leading cause of death in those aged between one and 12  
5 years. Drowning for young children of 1-4 years old often occurs in the household.  
6 Primary schoolchildren are drowned in water somewhere away from home; still, it  
7 occurs in the residing community or on the way between home and school. This is a  
8 place that parents do not keep a watchful eye on, for at this age children like to play  
9 with their peers outside. Care providers often think that at this age children should  
10 know enough about the risks and can steer clear of danger by themselves. In order to  
11 prevent very young children from fatal accidents caused by play in the natural space, it  
12 is necessary to give information and create awareness for them and attendants,  
13 especially when they come from poor family.

14 3.3) As of now, there are a number of laws and safety practices in place though  
15 they are still fragmented. Some of these laws are 1) Bill on Promotion of Safety in  
16 Sports and Recreation for Children and Youth B.E... proposed by the Ministry of Social  
17 Development and Human Security, 2) Sports Authority of Thailand Act B.E. 2558 (2015),  
18 3) Requirements on Safety of Playgrounds and Play Equipment, Installation,  
19 Maintenance and Play Attendants issued by the Child Safety Promotion and Prevention  
20 Research Center in coordination with 10 other agencies concerned under the support of  
21 Health Research Network, National Health Foundation and Thai Health Promotion  
22 Foundation (2002), 4) Ministerial Regulation on Control of Play Equipment (2015), and  
23 5) Safety Standards for Play Equipment in Amusement Parks, MoYoPho 9902-59, issued  
24 by Department of Public Works and Town Planning, Ministry of Interior (2016). All  
25 these legal provisions should be integrated into common guideline and practice.

26 4) Play space design and management to accommodate appropriate activities and  
27 wellbeing enhancement in play spaces

28 Besides the issue of having insufficient safe play spaces, most playgrounds today  
29 have an old-fashioned look, something unappealing and unexciting to children. They  
30 are also not in line with the existing safety requirements, thus exposing young  
31 schoolchildren to danger and other life risks.

32 Not only does a design of child play spaces need to take into account the safety  
33 requirements, but it should also respond to children's needs and behaviors to ensure  
34 effective use. Studies show that the frequency of children's use of play spaces is based  
35 on the following factors: 1) play equipment can be adjusted for various uses according  
36 to their imagination, 2) play spaces are interesting to them, 3) there is enough shade  
37 from trees or buildings, and 4) there are peers to play with. Therefore, play space  
38 design should pay attention to these points, making it possible for children to exercise  
39 their imagination, originality or creativity by themselves, with safety in mind.

40 Preparing play spaces is not confined only to playgrounds and equipment.  
41 Parents can arrange household areas or adjust some community space for play  
42 purposes. It is essential to pay attention to differences in age, sex, personal traits,  
43 physical strength, and other special needs. Thus, each area will be arranged  
44 accordingly.

45 The following is an example of how play spaces are organized according to the  
46 natural environment and to what the children want. In Endrup, Denmark, a playground

1 has been in existence for over 50 years where children can build houses or campfires,  
2 do simple cooking, make animal shelters, keep pets, or grow plants, using left-over  
3 materials given by community members. The playground has now become a children's  
4 town where they can think up what they want to play and do with the materials at  
5 hand, while the play workers called "play leaders" see to their safety and facilitate.  
6 Children learn to make friends with others of different age and sex. They learn how to  
7 live together and share things. In some cases, they will learn how to deal with  
8 aggressive behaviors. All this is no different from what they will experience in real life  
9 when they grow up. This kind of playground concept has spread to several other  
10 countries in Europe and Asia, e.g. Hong Kong, India, and Japan. A playground is seen  
11 as part of the park of the city even though it is located in a small community area.  
12 Community members will provide material and budgetary support and hire play leaders  
13 or attendants/wardens.

14 Play spaces for children after school/class are also important. According to a  
15 study on the lives of children and young people in Loei province, 20% do not live with  
16 their parents. Usually, after school, they will meet at a friend's house or dormitory and  
17 may engage in risky activities or behaviors. Some who go home to an empty house are  
18 likely to engage in riskier behaviors. To reduce the risks, a "house afterschool" program  
19 is created to provide a creative space for them after class.

## 20 5) Management and sustainability problems

21 Thai society at every level is aware of the significance of child play and has tried  
22 to come up with good examples for learning and replication purposes. However, it is no  
23 plain sailing, as many do not understand the concept, while there is lack of clarity with  
24 regard to available mechanisms for systematic cooperation.

25 In addition, some issues, such as support for and management of child play  
26 spaces, maintenance, safety inspection, and sustainability of the program, will depend  
27 on the play attendants and executives of the sites concerned, e.g. school directors,  
28 hospital directors, abbots or local administrators. All this gives rise to a sense of  
29 uncertainty and unsustainability. If there is some sort of tangible policy in place at  
30 national or local level, together with cooperation from all sectors concerned, the  
31 problem may be alleviated.

## 32 **3. Objectives/targets**

33 Early childhood and primary schoolchildren in Thailand are able to get access to  
34 safe and wellbeing-enhancing play spaces in a comprehensive and sustainable manner,  
35 leading to their happiness and good development – physical, mental, intellectual,  
36 emotional, social, and discipline-forming – including ability to think analytically and  
37 creatively, ability to adjust oneself, and reduction of accidents.

## 38 **4. Existing capital or achievements**

39  
40 4.1 Over the last ten years, a "model" has been developed for a wellbeing-  
41 enhancing play space for early childhood and primary schoolchildren. It is based on the  
42 principle that play is close to nature, with freedom, support, and safety. It has an  
43 impact on child wellbeing development, uses materials that are easy to find, is self-  
44 managed, and has support groups of various types in schools, hospitals, and  
45 community. The following are some examples:  
46

1            -“The Brain-based Learning Playground Project: Play in the Royal Footstep” was  
2 started in 2007 by the Wisdom Playground Foundation, with a focus on free and creative  
3 play, in an environment using easy-to-find natural materials. The project began by  
4 collecting information and preparing a book called “*Play in the Royal Footstep*”, with  
5 support from the Office of Knowledge Management and Development. Volunteer  
6 architects, specializing in learning design and management, who have had opportunity  
7 to study and follow the movement of playgrounds all over the world for some time,  
8 designed the project and acted as advisors. The project, allowing the children to create  
9 their own play, was implemented through the model school and has expanded into a  
10 network of schools under primary education service area offices in several provinces and  
11 Bangkok, hospitals, religious places, and so on. It has generated knowledge on play  
12 space design and constructed low-cost play equipment close to nature and easy to  
13 maintain, as well as other innovations through mutual consultation on a regular basis.

14            -“The Brain-based Learning Playground Project (BBL): Play in the Royal Footstep”  
15 is a project of cooperation between the Office of Basic Education Commission (OBEC),  
16 Office of Knowledge Management and Development (OKMD), and Nakhon Sawan  
17 Primary Education Service Area Office 1. With its own budget, the project provides  
18 opportunity for an exchange of learning, training of personnel, development of activities  
19 and knowledge, organization of systematic learning, supervision, monitoring and follow-  
20 up. All this is geared toward play space development and the learning design process  
21 along the line of the brain-based development concept. In 2017 an attempt was made  
22 to document lessons learned from playgrounds in 189 schools and a plan is made for  
23 2018 to have another 183 model schools with brain-based learning playgrounds, raising  
24 the number to 372 schools. The project sees a collection of knowledge and experience  
25 derived from practice and development. Contacts are made, exchanging practical and  
26 problem-solving experiences on a regular basis, by way of the Internet, joint meetings  
27 and field visits. In addition, there is a project “Development of Knowledge on Play to  
28 Promote Brain Development for Parents”.

29            -“Model health-enhancing playground” project, supported by Thai Health  
30 Promotion Foundation (ThaiHealth), consists of a number of elements, including the  
31 following: (1) creative media in more than 500 child development centers across the  
32 country, (2) capacity building of teachers as organizers of the process of playing and  
33 learning through media and creative space, (3) development of media kits and sets of  
34 knowledge, e.g. development of learning activities through creative play media for 365  
35 days, development of knowledge (Active Play), development of the website  
36 [www.kidactiveplay.com](http://www.kidactiveplay.com) explaining and collecting methods and formats of many creative  
37 plays.

38            - Hospitals with model playgrounds, together with university professors of  
39 pediatrics, generate knowledge and activities on development and give health  
40 knowledge to children and their family, using playgrounds as props, e.g. Ban Bueng  
41 Hospital, Chao Phraya Abhaibhubate Hospital.

42            - Foundation for Child Development undertakes the following work: (1)  
43 generating knowledge and model of “Play for Child Life”, comprising the concept and  
44 organization of play spaces (environmental development for child development), (2)  
45 training of play facilitators (play attendants/wardens) and organization of play spaces  
46 with community participation, and (3) organization of play spaces for vulnerable children  
47 in need of help. The work of the foundation is based on research findings.

1 - Bureau of Health Promotion, Department of Health, Ministry of Public Health,  
2 has developed a manual of general and national standards for child development  
3 centers (for children aged 2-5 years), specifying requirements on the management of  
4 the environment outside the building and on the management of playgrounds and  
5 equipment.

6 4.2 On the creation of "playground attendants/wardens" several sectors - e.g.  
7 curriculum development group, Bureau of Academic Affairs and Educational Standards,  
8 Office of Basic Education Commission (OBEC), Faculty of Education, Chulalongkorn  
9 University, Lampang Rajabhat University, and teachers from schools with model  
10 playgrounds - are in the process of managing knowledge and developing attendants.

11 4.3 Child and Youth Media Institute has a set of knowledge on play, play  
12 manuals, studies on the child's right to play, and lessons learned from the creative  
13 media. It promotes creative spaces and turns child development centers in community  
14 schools into urban models with three good characteristics, namely good media, good  
15 space, and good wisdom, with a development of play networks in the country and  
16 abroad.

17 4.4 The Ministry of Public Health, together with Thai Health Promotion  
18 Foundation (ThaiHealth), has come up with a strategy of physical activity. The  
19 Department of Health has a Green & Clean Hospital project with early childhood  
20 development and environmental health as indicators.

21 4.5 The Child Safety Promotion and Prevention Research Center, Faculty of  
22 Medicine, Ramathibodi Hospital, studies and supports the implementation of the  
23 requirements on playground safety and building of water safety skills for children.

24 4.6 New innovations are created to secure quality and effective play spaces, to  
25 ensure better management, and to reduce costs, with participation from playground  
26 networks, academics, playground architects, engineers, and educators.

27 4.7 The Industrial Standard Institute (ISI), Ministry of Industry, has prepared a  
28 draft standard for field equipment to promote safety. ISI has also set a standard for  
29 products for the toy industry ISI.685-2540. In this way, child toys have become control  
30 products, whether manufactured or imported, that must meet the required standard.

31 4.8 Several private organizations have already expressed their wish to support  
32 the management of play spaces for children. What is needed now is a concrete effort  
33 for coordination.

34 All the efforts and willingness to support, manage and disseminate the knowledge  
35 and experience are already there, albeit scattered around. They need to be collected,  
36 synthesized, and analyzed by the parties concerned before they are put to use.

## 37 **5. Structure of national committees concerned**

38 There are three important committees for this matter (chaired by the Prime  
39 Minister or deputy prime minister/minister entrusted by the Prime Minister, while other  
40 committee members are executives of ministries concerned and qualified persons):

41 5.1 National Early Childhood Development Committee, created by virtue of the  
42 regulation of the Prime Minister's Office B.E. 2551 (2008), is chaired by Deputy Prime  
43 Minister, with the Office of the Education Council, Ministry of Education, serving as  
44 secretariat.

45 5.2 National Commission on the Promotion of Child and Youth Development,  
46 created by virtue of the National Promotion of Child and Youth Development Act B.E.  
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1 2550 (2007) and its amendment (No. 2) B.E. 2560 (2017), is chaired by Deputy Prime  
2 Minister, with the Department of Children and Youth, Ministry of Social Development  
3 and Human Security, serving as secretariat.

4 5.3 National Child Protection Committee, created by virtue of the Child Protection  
5 Act B.E. 2546 (2003), is chaired by the Minister of Social Development and Human  
6 Security, with the Department of Children and Youth, Ministry of Social Development  
7 and Human Security, serving as secretariat.

## 8 9 **6. Constraints, problems and obstacles**

### 10 6.1 Areas to be made into play spaces

11 One must start with finding a suitable place. It is necessary to coordinate  
12 cooperation from the rightful owner of the space concerned and other people concerned  
13 with its management in order to reach the objective in a sustainable manner. Such a  
14 place must be situated in an appropriate area based on the knowledge of town planning  
15 and child safety, while the size is appropriate to the number of children entering the  
16 area. At present, there is no such management in any serious way.

### 17 6.2 Format of the play space

18 There are problems due to lack of information and understanding on how to  
19 design the play space appropriate to the age, needs and local context. Evidently, each  
20 appropriate play space will differ from terrain to terrain, e.g. on the hills, near the sea,  
21 or in areas with rainfalls throughout the year.

22 There are also problems about the safety standard and regulation of play  
23 equipment, play process and play space. Most playgrounds do not segregate between  
24 young and older children, thus easily leading to potential risks of injuries and accidents,  
25 as they have different levels of physical strength and fitness, as well as different levels  
26 of learning.

27 In addition, it is necessary for a play space to meet the needs of children with  
28 physical impairments as well as those of the disadvantaged.

### 29 6.3 Workers who attend to child play, activities and other events using the space

30 Play attendants or facilitators ensure that children can play with happiness and  
31 fun in a development-enhancing and safe environment. The attendant can be a child,  
32 youth, parent, teacher, nurse, community member, or anyone concerned with child  
33 development. A play attendant should understand the nature of child play, its use,  
34 value, and significance, as well as the application of local resources to child  
35 development. He/she should also encourage elderly people to act as volunteers and  
36 play a role of attendant or design play activities.

37 Appropriate activities should be designed to suit children of different age and  
38 context. Attendants will help design play activities and use the play space to promote  
39 various developmental aspects. At present, there is a considerable shortage of this type  
40 of workers, and little effort is made to promote the understanding of such a role.

### 41 6.4 Support, mechanisms, and cooperation

42 Management and preparation: Although it is of primary importance to ensure  
43 enough play space for every child to get access to, as it is their right to do so. Yet,  
44 equally important is how to manage and prepare play spaces in a sustainable manner.  
45 For this to happen, there need to be policies, enabling factors, and participation of all



1 sectors concerned to ensure that the maintenance and safety inspection systems of the  
2 play space function as they should.

3 Understanding of teachers and parents: What has happened to some  
4 playgrounds is that children are not allowed or encouraged to play. Their teachers and  
5 parents jump to a mistaken conclusion when they see children climb over a structure,  
6 swing around precariously, step in the mud, wade in water, and play with sand. The  
7 teachers and parents see children in these activities as getting hurt or dirtied. It is,  
8 therefore, important to have in place safety management, make it understood to the  
9 public, and encourage their participation.

10 Monitoring system: Some play spaces can be risky. Accidents can occur from  
11 play. One needs to monitor any violation of the rights of the vulnerable. Some may  
12 need help. It is imperative to have agencies monitoring and looking into the matter.

13 6.5 Lack of structure at local and national levels with regard to information  
14 follow-up and development of play spaces, including the occurrence of accidents in the  
15 play spaces. Such information will lead to possible solutions and prevention. Actually,  
16 there are a number of agencies responsible for the management of play spaces.  
17 Unfortunately, there is no one center that can act as a clearing house in which overall  
18 information can be used to develop and redress the situation.

## 19 20 **7. Policy issues for management and problem solving**

21 7.1 Taking action to bring about public policies through participation of every  
22 sector concerned to allocate safe and accessible play spaces and learning spaces able to  
23 promote wellbeing for every child.

24 7.2 Coordinating the cooperation from all parties concerned to bring about play  
25 spaces in safe areas and places with an appropriate format. These play spaces can be  
26 self-maintained and sustainably managed. For instance, they are regularly maintained.  
27 In the long run, there is constant improvement and development with participation from  
28 the sectors concerned with their management.

29 7.3 Coordinating with the parties concerned and people in society involving their  
30 participation at every step, ranging from maintenance and management of the play  
31 spaces on a regular basis to strengthening the capacity of play facilitators and child care  
32 measures to ensure play safety and enhance health, wisdom and mental development,  
33 e.g. parents, administrators, community member, the elderly, teachers, and students.

34 7.4 Providing resource supports for action to construct and maintain play and  
35 learning spaces, including financial support, knowledge, and materials, to responsible  
36 agencies and people in the society.

37 7.5 Monitoring and educating early childhood care providers, including creating  
38 safety awareness and enhancing life skills for survival for primary schoolchildren,  
39 especially on water safety, paying special attention to children from poor family.

## 40 **8. Issue for consideration of the National Health Assembly**

41 Requesting the National Health Assembly to consider Document HA10/draft  
42 Resolution 3 on Development of Play Spaces to Enhance Wellbeing of Early Childhood  
43 and Primary Schoolchildren.

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## 1 **References**

- 2 1. Prasoet bunkoet and working group of the book "Play in the Royal Footstep". Play in  
3 the Royal Footstep, Office of Knowledge Management and Development. 2008
- 4 2. Talk outside the box with education architects.  
5 <http://www.komchadluek.net/news/lifestyle/200072>.
- 6 3. Brain-Based Learning (BBL) Playgrounds; Learning Resources for Play in the Royal  
7 Footstep. <http://www.okmd.or.th/bbl/documents/281/bbl-playground>
- 8 4. Bureau of Recreation, Department of Physical Education, Ministry of Tourism ad  
9 Sports. Recreational activities for early childhood development. 2014.  
10 [\](http://www.dpe.go.th/content/file/article/1212151449893343.pdf)
- 11 5. Tai Wisdom Association. Play for Learning.  
12 <http://www.taiwisdom.org/artclnchdev/lfskll>
- 13 6. Document for Workshop on Developing School Networks based on Model Brain-  
14 Based Learning (BBL) Playgrounds "Play in the Royal Footstep". 13-15 June 2017, at  
15 Ban Suan Resort Hotel, Nakhon Sawan province, by Office of the Basic Education  
16 Commission. Office of Knowledge Management and Development (Public  
17 Organization). Nakhon Sawan Primary Education Service Area Office
- 18 7. Document for Workshop for Further Academic Development for Schools with Model  
19 Brain-Based Learning (BBL) Playgrounds "Play in the Royal Footstep". 31 August-2  
20 September 2017, at Royal Benja Hotel, Bangkok, by Bureau of Academic Affairs and  
21 Educational Standards, Office of the Basic Education Commission and Office of  
22 Knowledge Management and Development (Public Organization).
- 23 8. Child Safety Promotion and Prevention Research Center, Faculty of Medicine,  
24 Ramathibodi Hospital, Mahidol University. Causes of Injury and Death of Children on  
25 Playgrounds...B.E....
- 26 9. Wutthipong Saenbudda. Application of Playgrounds of Creative Brain-based Learning  
27 Model to Rural Primary Schools. Presented to 3<sup>rd</sup> National Seminar on Home  
28 Wisdom: "Wisdom to the Future:" Faculty of Architecture, Khon Kaen University, 15-  
29 16 June 20017. ([https://architservice.kku.ac.th/wp-content/uploads/2017/06/023 -](https://architservice.kku.ac.th/wp-content/uploads/2017/06/023-Wutthipong-Saenbudda.pdf)  
30 [Wutthipong Saenbudda.pdf](https://architservice.kku.ac.th/wp-content/uploads/2017/06/023-Wutthipong-Saenbudda.pdf))
- 31 10. Opening Up Learning Opportunity for Children through Creative Spaces, by Prawpan  
32 Suriwong. 8 January 2016. [www.thaihealth.or.th/Content/30417-opening up](http://www.thaihealth.or.th/Content/30417-opening-up-learning-opportunity-for-children-through-creative-spaces.html)  
33 [learning opportunity for children through creative spaces.html](http://www.thaihealth.or.th/Content/30417-opening-up-learning-opportunity-for-children-through-creative-spaces.html)
- 34 11. Preparing Open-air Playgrounds for Early Childhood. Author: Punnapath  
35 Chansawang, reviewed by Associate Professor Dr. Pittayaporn Manajuti. Level:  
36 kindergarten, Section: on kindergarten ([http://taamkru.com/th/preparing](http://taamkru.com/th/preparing-open-air-playgrounds-for-early-childhood/) open-air  
37 [playgrounds for early childhood/](http://taamkru.com/th/preparing-open-air-playgrounds-for-early-childhood/))
- 38 12. U.S. Consumer Product Safety Commission. Public Playground Safety Handbook. Dec  
39 29,2015
- 40 13. UNICEF, 2009. A Practical Guide for Developing Child Friendly Spaces.
- 41 14. "House After Class", a entertaining place for life beyond the textbook. Disseminated  
42 2 January 2010. <https://mgronline.com/QOL/detail/9520000159993>.
- 43 15. Opening up Learning Opportunity for Children through Creative Spaces. Written by  
44 Child and Youth Media Institute. 11 January 2016.  
45 [http://www.childmedia.net/content\\_for\\_child/ 554-opening up learning opportunity](http://www.childmedia.net/content_for_child/554-opening-up-learning-opportunity-for-children-through-creative-spaces.html)  
46 [for children-through creative spaces.html](http://www.childmedia.net/content_for_child/554-opening-up-learning-opportunity-for-children-through-creative-spaces.html)

- 1 16. Spaces for Children. A paper by Thirawong Thanitweth, Secretary-General, Tai  
2 Wisdom Association. Adopted from Dek Tai Newsletter.  
3 <http://www.taiwisdom.org/artclnchdev/lfskll/chldrsng13>
- 4 17. Adisak Palitpolkanpim, Thammanoon Hengsadeeikul, Chadaporn Suksiriwan, et al.  
5 (2002). Requirements on Playground Safety: Equipment, Installation, Maintenance,  
6 Play Attendants. Final report. Thailand Research Fund.
- 7 18. National Promotion of Child and Youth Development Act B.E. 2550 (2007) and its  
8 amendment (No. 2) B.E. 2560 (2017), Government Gazette Vol. 134/Section 63 Kor.  
9 13 June 2017.
- 10 19. Draft National Child and Youth Development Plan, 2017-2021.  
11 [http://dcy.go.th/webnew/main/news\\_view.php?id=1492&type=12](http://dcy.go.th/webnew/main/news_view.php?id=1492&type=12).
- 12 20. Regulation of the Prime Minister's Office on Early Childhood Development B.E. 2551  
13 (2008). <http://www.lertchaimaster.com/doc/patomwai-2551.pdf>
- 14  
15