

# CHAPTER I

## INTRODUCTION

### 1.1. Background of the study

Learning continues permanently from the start to the end of life. It occurs in specific situation when a problem needs to be solved (Nutkins, McDonald, & Stephen, 2013). Learning is the acquisition of knowledge or skill (Gray and Macblain, 2012). During this period, there are many factors that help learning. Considering the learning process in the childhood, play is the best communication and the most natural learning environment for children. Many studies have shown that play has important effects on child physical development and learning. Viewed from the environmental design perspective, play is a very useful activity for children and designing spaces which will be suitable for children, of good quality, preferred, used for a long time, sustainable, and which will contribute to children's development and learning is a very important issue.

Play is foundational to the development of children (Pellegrini & Smith, 1998). Furthermore, play recognizes and develops child's talents and creative potential; increases linguistic, mental, social, emotional, and motor skills; provides learning opportunities through trial knowledge and experience that will be required throughout their lifetime (Acar, 2014). Play promotes cognitive, physical, social, and emotional well-being, offering the necessary conditions for children to thrive and learn. Through play, the child can experiment, solve problems, think creatively, cooperate with others, etc., gaining a deeper knowledge about him/her and the world (Bento & Dias, 2017).

Critical thinking, communication, collaboration and creativity, commonly referred to as the Four C's, are the learning and innovative skills considered the most relevant and crucial to the twenty-first century K-12 learner (Pistorova & Slutsky, 2018). The four C's' enhanced learning and it becomes play based learning. At a very young age, children are seemingly in tune with new technological devices of the twenty-first century, adapting quickly and readily to these sometimes complex devices (Burke

& Marsh, 2013). Creativity which is part of play has improved too due to technology usage. Therefore, creativity forms a basis foundation whereby children are actively

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involved in problem solving and critical thinking through play and exploring their environment. In this way, learning can be realized permanently.

According to the Reviews of National Policies for Education in Indonesia (2015:84), Indonesia has done much to expand access to education for children at all stages of learning. The quality of learning children encounter during the early years of their development will affect their readiness to learn when they enter primary education. This in turn will help or hinder them in junior and senior secondary school. Primary care and education lays the foundations for greater success in learning along the education pipeline, greater equity of opportunities and outcomes, and greater efficiency in the use of education system resources.

Greater investment in Primary education would help underpin Indonesia's achievement of its social and economic development goals. The goal for education in Indonesia is to provide interventions which will help children grow and develop physically and mentally and to help them move on to the next level of education. Increasingly the period from birth to six years is being seen in a more holistic way, bringing together health, social care, childcare and education. This more integrated approach is being developed and promoted but is still quite limited in scope and reach.

In accordance with Indonesian national education goal, that is Government Regulation No.20 of 2003, which reads: "*Education is a conscious and deliberate effort to create an atmosphere of learning and the learning process so that learners are actively developing their potential to have the spiritual power of religion, self-control, personality, intelligence, character, and skills needed him, society, nation and country*". Based on Government Regulation it is mentioned that the learning objectives are not only limited to cognitive aspects, teachers must be able to instill religiosity, personality, and skills that students have a competitive edge for future lives.

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The development of a nation depends much on the young ones; therefore, the education of the children is of utmost importance. The school is often regarded as an institution created by the society to perform important cultural functions associated with the education of the young ones. In order for the school to achieve these goals, there should be a conducive child friendly environment where teaching and learning will take place. A child friendly school is a school where the staffs are friendly to children and the health and safety needs of the children are adequately met. The school is also community based, recognizes and promotes the rights of all children irrespective of gender, religious and ethnic differences, family status, physical and mental abilities disabilities (UNESCO 2001).

Child friendly learning environment is considered as a crucial aspect in educational settings for elementary education. The Primary Phase is arguably the most important school phase since it is at the foundation of all future learning. The policy and information guidelines, provided for all Junior Primary teachers, intended to help the school management and teachers to organize and sustain the teaching and learning on a high level within the school environment. Nevertheless, teachers should note that the classroom is not just the room in which they teach but a place where child friendly atmosphere is promoted or fostered for example; the classroom physical conditions such as temperature, desks, and seats; activities to consolidate learning; daily routines like routine chart; materials for instance teaching and learning materials, including wall displays, interest corners and reading corner (Ministry of Education, 2015).

A playground should play good roles in fulfilling children learning. Play grounds should become a conducive place for children to develop their competence, interest, talent, and creativity through their active participation in several plays or games. To achieve this, the support from teachers, NGOs, and appropriate school environment as well as a conducive playground setting are needed. Conceptually, the playful learning environment (PLE) refers to an indoor-outdoor technology enriched play and learning environment that

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has been developed for pre-primary and primary education (Kangas, 2010). The multiple levels of school playground safety influence on students' participation in physical activity requires further exploration and replication within the educational context (Hyndman, Telford, & Telford, 2015). Research is beginning to recognize that school playground safety can influence students' physical activity (Willenberg, et al., 2009).

Playgrounds offer an important opportunity for child development by promoting physical activity and healthy behaviors, as well as improving psychosocial skills, academic performance, and self-esteem. Even play value and safety are compatible goals for playgrounds, however, with the availability of playgrounds and in fact that, playground equipment has become a cornerstone of elementary schools, daycare centers, public parks, apartment building play areas, and the backyards of many homes, unfortunately, they also pose a significant risk of injury (Mack et al., 2000; Norton et al., 2004).

Outdoor spaces are the best play environments for children. Outdoor learning is defined as purposeful and planned learning experiences in the outdoors (Romar, Enqvist, Kulmala, Kallio, & Tammelin, 2018). These areas offer opportunities that are not found in indoor spaces and physical environment contributes to children's learning with owned affordances. Thus, outdoor spaces designed for children are very important. These outdoor spaces will be more meaningful and useful when they contribute to children's learning (Acar, 2014). It offers unique stimulus that capture children's attention and interest. Sticks, rocks, flowers, soil and water are explored with curiosity and drive to learn, as they offer countless possibilities for play (Bento & Dias, 2017). Climbing, sliding, going fast, fun and excitement are important activities and experiences that the children involved (March, 2014).

Adelson, Chounthirath, Hodges, Collins, & Smith, (2018) found out that the most common type of injury associated with climbing equipment, swings, and slides was an upper extremity fracture (40.6%, 26.2%, and 23.4%, respectively). Among swing-related

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injuries, the proportion of injuries to the head and neck (42.4%) and upper extremities (39.9%) were similar. Overall, 5.6% of climbing equipment-related injuries, 3.6% of swing-related injuries, and 3.7% of slide-related injuries resulted in hospitalization. The most common mechanism of injury for all types of playground equipment was a fall. The proportion of injuries related to falls ranged from 58.7% of seesaw-related injuries to 90.1% of climbing equipment-related injuries. While Jennissen, Koos, & Denning (2018) conducted a study on playground slide related injuries and found out that almost 60% of injuries occurred in parks or other public areas. Besides that, Tuckel, Milczarski, & Silverman (2018) he discussed that over the past few decades in USA, a number of initiatives have been undertaken to increase playground safety. These initiatives include the following: (1) encouraging adults to supervise playground activities, (2) designing playgrounds that are age appropriate, (3) implementing environmental modifications such as proper protective surfacing under and around playground equipment, and (4) ensuring maintenance of playground equipment. Both governmental and nongovernmental agencies have played active roles in promoting these initiatives.

Similarly, the Indonesian government has a “*Permendkinas No 24, Tahun 2007*” document for elementary and high school highlights the standard guidelines or measures that should be met or followed in schools when it comes to establishment of playground in schools and they are stated as follows: a) an open area with spaces minimum 3m<sup>2</sup> for playing; wide minimum playground area of 500m<sup>2</sup>; planted green tree on the play area; play ground or area placed far not to disturb learning process in classes; play area should not be used for parking; the playground or space should have flat surface, good drainage, no waterways and other objects that to interfere with sports activities. In addition to that the place to play or exercise in Indonesian schools shall be equipped with some play facilities.

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However, the above- mentioned initiatives did not yield a decline on the injuries that are recorded caused by playground equipment. In the study conducted result showed that falls from monkey bars result in the greatest number of injuries (52%). Schools/day care centers and recreation areas each account for approximately 40% of injuries. Fracture of the upper limb is the type of injury most often associated with a fall from playground equipment (43%). In relation to that earlier last year another incident was reported by The Namibian Newspaper (2018), of playground injury whereby an elementary grade learner fell from a school swing and the learner right liver lobe was torn. The incident had infuriated parents and left the Namibian schools and the whole education sector shocked.

According to the above-provided information on injury cases at playground, many countries including Indonesia have established standard measures and initiatives on playground usage. Despite those efforts by their government, there has been low involvement in play among children because with those current playground safety standards and guidelines, a large number of injuries continue to occur on playgrounds each year. In addition, scholars have provided information on injury causes on playground; however, the previous study lacks information on safety of physical playground. It underscores the need for increased observation efforts that address modifiable risk factors associated with playgrounds such as features of safe playground in elementary schools, so that children can continue to benefit from their value with decreased risk of serious injury.

Specifically, on the basis, of the preliminary study conducted based on limited observation at SD Lab School UPI Cibiru, the play equipment's were not on a fenced nor a protected area and learners are likely to use the play equipment anytime on their own and this risk them to falling and get injured on schools play grounds.

Similarly, another preliminary study was conducted in Namibia on the same note and the study has found out that the urban and rural schools that are having school playground or learners' spaces are quite small. The playground was too rocky and there are

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a lot of holes that hinders learning through play. However, the available play grounds in those schools do not have enough facilities/equipment for kids to play with nor to enjoy playing. The playground is not accessible to learners especially to those with disability because it's located between a numbers of buildings as it is illustrated in figure 1 below.



**Figure1: Play ground located between buildings and poor equipped**

In addition, the play grounds observed were not characterized like in the way that learners from early childhood class are at their own area instead of being on the same area with junior primary learners. The finding also showed that the climbing ladder and swings were surrounded by pothole with water plus hard rock on the surfaces whereby the playground itself is not fenced this is supported by figure 2. This is a clear indication that safety is not really considered on a high level because learners can fall from the neither swings nor ladder and get injured by the hard rock on the surface or step in stagnant water that may cause infections.

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**Figure 2: Swings and ladders surrounded by pothole with stagnant water and hard rock**

Therefore, the researcher “Analyzed the physical playground (and play activities) safety at Primary School: A Case Study at Yahya Christian Primary School in Bandung”. On the same note the pilot study was carried at the above mentioned school and found out that there was a case of an elementary grade learner who got knee injury on a slippery (surface) playground area where he was playing soccer, this is supported by figure 3 below.



**Figure 3: Slippery playground surface**

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The above playground surface poses a hazardous condition to learner's safety whenever they are to use a playground because they can slide and fall anytime during play which may leads to severe injuries or physical body harm, therefore further analysis were carried out on physical safety at several playgrounds in Yahya Christian Primary School.

In addition the school is chosen since information can be gathered in relation to the study title. Beside that participants will help the researcher to gain in depth information during interview since they can communicate in English instead of Bahasa Indonesia to avoid language barrier. The topic was chosen because there are so many injuries occurring on playgrounds during play in many countries therefore it was worth to conduct the study in Indonesia in order to find out about playground safety on physical playground activities, to avoid the increasing numbers of injuries as it's highlighted by other scholars. However, this study is limited to a single case which is a case study design to be employed at one school, therefore the researcher suggest or recommend that playground safety can be further assessed by employing a study with multiple schools and using other research methods that include other designs like quasi- experimental; descriptive just to mention a few.

## **1.2. Problem statement**

Existing studies revealed that some playground are maintained and equipped with necessary play facilities. However, in some primary school's little attention is given to the safeness of the area occupied by play equipment such as swings, ladders, tree houses, slides etc. These equipment are indispensable for outdoor learning and children's physical development at elementary schools. The current spaces occupied by the above play equipment are usually hard, have pothole, some with stagnant water and therefore tend to exposes children to chances of injuries. It is invaluable to analyze the safeness of playground surfaces occupied by the physical play equipment at primary school level.

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### **1.3. Research questions**

Based on the problem statement above, the following research questions were formulated.

1. How learners react intrapersonally (individually) on the playground when they are given an opportunity to play?
2. How do learners interpersonally (socially) interact with each other's when they are on the playground?
3. What are the physical safety features of the playground?
4. How is the policy and organization of a physical playground for primary school in Indonesia? This question is further specified into the following questions:
  - (a) What are the physical activities that support learning? Are they accompanied by rules and regulations?
  - (b) What are the equipment available for learners to use when playing?

### **1.4. Purpose of the study**

Based on the questions above this study sought to:

1. Describe and analyze how learners react intrapersonally when they are exposed to play.
2. Describe and analyze how learners interpersonally interact with each other during play session on the playground.
3. To identify the physical safety features of a playground.
4. (a) To identify the physical play activities that support learning and playground rules or regulations.
  - (b) To identify play equipment those are available or used by learners when playing.

### **1.5. Significant of the study**

1.5.1. The theoretical benefits of the study are:

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- a) The research will add literature to the issue of safety of learners during play.
- b) The study put forward some informed inferences and suggestions on the safety of a playground to improve the quality of physical playground in primary school education.

1.5.2. The practical benefits of the study are:

- a) Teachers will be aware of the importance of having safe playground with play equipment and so that they give learners opportunity to play as part of their physical development.
- b) The research will benefit children if the teachers/educators are aware of the importance of playground safety. This will lead to increased supervision and ensure safe and healthy plays that will contribute to learners' growth.
- c) Schools will evaluate their physical playground safety on play equipment and help to ensure a conducive learning playground environment for primary grade learners.
- d) The study will inform readers and parents to provide necessity supports when it comes to playground equipment to ensure maximum safety.

## **1. 6.Operational definition**

Based on the research topic, there are several terms that need to be defined so that there is no confusion or difference in perception between the researchers and the readers.

1. Play is an act of movement or actions that involves body parts.
2. Physical play ground /outdoor play is an area that is equipped with play equipment's, furnished, maintained, colorful facilities, with big space to accommodate free play, not slippery, available sitting benches for resting, accessible changing rooms, available clean water to drink, free from litters, fenced swimming pools and protected from busy roads, free from harmful objects, and

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other dangerous items. The playground can also be a reserved area in a school environment with appropriate children playing facilities which are of their age level.

3. Safe playground is an outdoor space that has bigger playground space; proper surfacing; weather protection; safe structures; protective equipment's; hydration; designated play areas; maintenance and it have features to provide a state or condition of being protected from injury, danger or risk that is likely to cause harm to children's' well-being during play.
4. Play equipment's are play facilities or learning tools that are available for children during play activities and they are aimed to develop learners physically.
5. Play activities are games or activities done for recreational, pleasure and enjoyment that promotes learning and involves physical body movements.
6. Intrapersonal this is an individual level of influence on students' playground attitude; perception and characteristics.
7. Interpersonal is the social playground environment which includes factors such as relationships, culture and societal influences in which a student interacts with. The social environment is a major influence on students' playground activities as many students prefer having someone to be active with (fellow learners and learner to teacher social interaction).
8. Physical level influence creates an awareness of the importance of physical environmental characteristics is vital prior to rolling out any school playground initiatives.
9. Policy level influences on school students' physical activity participation has revealed that safety rules, access to equipment, access to playground areas and the level of supervision within school playgrounds are key factors.

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## **1.7. Organizational Structure**

The organizational structure for this research thesis consists of chapter 1 that carries introduction section with the following components: background of the study; problem statement; research questions; purpose of the study, benefit of the study operational definition.

Chapter 2 contains literature reviews which support the study; it includes the description, the role and the benefits of play in child development. Outdoor playground, play safety are also included since they form a backbone of play. Learning theory and relevant studies that are conducted about play are also discussed in this chapter.

Chapter 3 focuses on research method which carries the study design, place and time, research subjects, data sources, data validity, data analysis research procedure and research ethics.

Chapter 4 consists of the analysis of research findings, discussion of the research findings and limitation of the study.

Chapter 5 focuses on the conclusions of the study, implications of the research findings and recommendations.