



Children's Playgrounds in Malaysia: Qualitative Observations Upon the Safety and Design Issues

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ABSTRACT

The study of public children's playgrounds in Malaysia, particularly their aspects of design and safety hasn't attracted many people. This 'ground' probably isn't important and just to give some 'play' for the children. Almost every housing area has its own playground. Some playgrounds are more than a common public facility because of their multi-shapes, huge size and colourful structures, but only after a few years, many of them have presented significant hazards due to their improper maintenance programmes. A purely qualitative approach is the strength of this paper. The authors have observed 75 public playgrounds all over Malaysia. Consequently, they have identified five issues related to playground design and safety. The section 4: Result of analysis will analyse these issues qualitatively and the discussions will wrap up with syntheses in the following section 5. The findings of this research show that most of the playgrounds need a better refurbishment and adequate maintenance programmes. With hope, this paper will help to the future betterment of the public children's playgrounds in Malaysia.

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1. Introduction

A public playground or an exterior playing facility is a common space made for the children. By request of every state's local authority, the housing developers have provided this facility in every housing area in this country. A small housing project of lesser than 30 units of houses should be provided with a mini playground in the size of forty square metres (MDKP, 2012). Even though the children's playground is probably regarded as a small subject in Malaysia, among ubiquitous playgrounds there are some super playgrounds of gigantic sizes, multi-shapes and

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colourful structures (Figure 5). Even though the children's playground is probably regarded as a small subject in Malaysia; a progressive country en routes towards a fully developed nation by the year of 2020. There are some amazing playgrounds of gigantic sizes, multiple shapes and colourful structures built on many public parks especially in the urban areas.

This work has conducted a series of observations and found many children's playgrounds were able to keep up their good conditions only in their early years. Aging playgrounds, poor maintenance programmes, inappropriate materials and vandalism have become the agents of deterioration. In time, the poor children's playgrounds succumb with many problems, mostly their play equipment. Children shouldn't be allowed to play on playgrounds with bad conditions because their safety is at risk and accidents are waiting to happen (Yeen, 2014, May1; NPPS, 2006; Blair, 2003). The local societies seemed to response passively owing to playground risks. If anything bad occurred on the playgrounds, people will start pointing fingers at one another. Some might say injuries on playgrounds can be prevented if we practice stricter safety standards. However, to rectifying everything by that time, it would be too late and unwise.

2. Playground Design in a Glimpse of Literature

The purpose of playground design is to create a safe space for children to play (McMasters, 1998). A well-designed playground will stimulate the children's imaginations and tempts them to explore new dimensions to play (Minuzzo, Rowan & Young, 2009). It also can support more physical activity, better health and greater social involvement for children, families and the community (Lopez, 2011). Besides a safely challenging space, the playground needs to be aesthetically pleasing, cost effective and innovative (Heap, 2012). The joy and fun on the playgrounds will give the children an unforgettable experience (Shackell et al., 2008). Still, there is no such thing as absolute safety (Deconinck, 2009). All inadmissible risks on the children's playground should be eliminated but children's excitement should be permitted to the fullest (Bachvarov et al., 2008; Moore et al., 2006).

3. Methodology

Equipped with basic tools such as pen, pencil, camera and a sketch book, the researchers have started to explore the public children's playgrounds in Malaysia. Passionately, they have drawn some sketches and jotted down some important findings while observing the playgrounds (Kawulich, 2005). This qualitatively emphasised study will discuss five critical issues owing to the design and safety of the playgrounds. The researchers will analyse them in the result of analyses section and will wrap up their qualitative strands with another five syntheses in the discussions

section. The five critical issues have emerged from their observations. Two types of observations used in this research, namely naturalistic and structured observations.

Naturalistic observation can be undertaken in a daily setting of the participant. However, according to Mukherji and Albon (2010); it is merely impossible to observe all participants under the same conditions. The researchers agreed with these scholars. This study after all didn't give any special attention towards the playground participants. The focus would be on the playgrounds 'safety and design. The researcher has acted as a 'secret outsider' (Gabr, 2010) and the participants might not even notice that they had been observed because the researcher hasn't interfere with their play activities (Angrosino & Rosenberg, 2011).

Structured observation is also known as the quantitative observation. This type of observation offers more reliable findings (Mukherji & Albon, 2010). It's more like a survey, but questions are not asked. Instead, particular types of things in the playgrounds are looked for and counted (Patrick, 2001). A common surveying technique of mixed methods research known as the observational checklist (Creswell, 2012), would be the base to set up the structured observation. This instrument has also adapted the General Maintenance Checklist; a well-known playground safety survey form that is retrievable via the Handbook for Public Playground Safety, published by the United States Consumer Product Safety Commission (CPSC, 2010).

Overall, the observations have clocked 75 public playgrounds in several cities in the west coast of Peninsular Malaysia. However, this paper doesn't intend to show a descriptive analysis upon all those playgrounds. The five integral issues will depict Malaysia's children's playgrounds. Moreover, the findings and qualitative strands of this paper will give some knowledge that could benefit everyone. The quantitative analysis of the 75 surveyed playgrounds will be studied under a different paper's title, which will be the sequel of this paper. For this one, the researchers aim to stress the advantage of qualitative observations as an important approach in exploratory based research. However, the discussion of the issues would have still connected with the surveyed playgrounds. Therefore, the following subchapter will give some explanation owing to the playground coding analysis. The coding or the *Survey ID* (survey identification) is an exemplary code to identify the particular playground and its general status during the time of the survey.

3.1 Playground Coding Analysis

This coding shall be a classification system to classify the safety conditions of all 75 surveyed playgrounds. It can offer instant information or reference if the researchers need to relate their

qualitative discussions with any surveyed playground. Baper (2013) has developed a similar pictorial coding system for Kurdish houses architectural identity in Erbil, Iraq. That study has influenced the researchers to come out with this coding system. The 75 units of playgrounds have given them the ability to recognise the coding patterns. Fundamentally, this coding system will offer five grading scales. A playground that is in good condition and without deficiency shall be graded either as a ‘Good’ or ‘Very Good’. There are some ‘Average’ playgrounds and finally, the playgrounds that are showing bad or worse safety conditions shall be graded as ‘Bad’ or ‘Very Bad’ playgrounds. Baper and Hassan (2010) have used a similar five observational scales in their syntax analysis to decide the suitable architecture style. Another study by Hassan, Emalgafta and Ku Hassan (2010) was also applied the five scales in their survey of user’s satisfaction owing to the types of spaces in three different resorts in Langkawi island.

Table 1: The grading comparisons between the MPSQA and the NPPS scales.

MPSQA, 2014	Very Bad	Bad	Average	Good	Very Good
NPPS, 2006	F	D	C	B	A
	0-7	8-12	13-16	17-19	20-24

In the long-term, the researchers hope to develop a comprehensive grading system for Malaysia’s public playgrounds. This grading system will be named as the Malaysian Playground Safety and Quality Assessment (MPSQA) and it shall be developed in conformity with the United States National Program for Playground Safety (NPPS, 2006). In the meantime, the MPSQA stresses only on qualitative scales compare with the NPPS’s assessment, which has offered two types of scale (Table 1). A more comprehensive assessment scale should be prepared for future quantitative surveys. The playground coding analysis is a system where all the surveyed playgrounds are given with identifications and pictorially documented for further record and analysis. Even though, this coding system hasn’t fully developed and its quantitative scales haven’t ready. However, the information offered by the qualitative scales is useful enough to be analysed and elaborated in this qualitatively oriented paper.

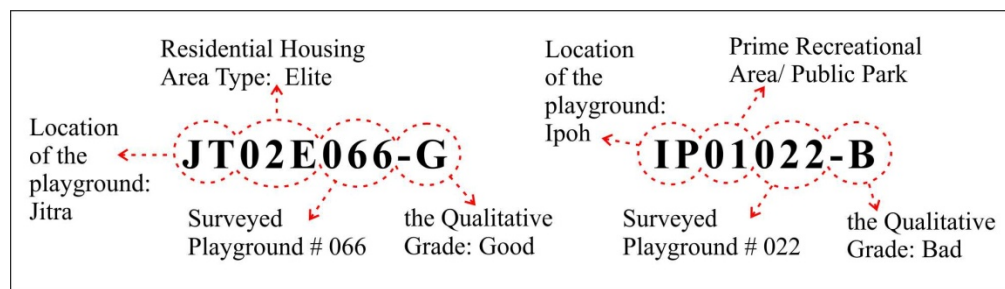


Figure 1: Interpreting the samples of playground codes.

Two coding examples for the surveyed playgrounds number 66 and 22 are shown in the Figure 1. The *Playground 66* was inspected in good condition compared with the *Playground 22*, which

its condition was bad and unplayable. The Playground Coding Analysis is a brief identification of the 75 playgrounds surveyed in this research. With this systematic record, a further analytical analysis could be conducted at any time. There was a time the researcher has failed to recognise the issue during a routine playground visit. With this coding aids and a collection of photographs of all playgrounds, a content analysis can be done to clarify the issue if any problem arises at a later time.

4. Result of Analyses

The research owing to this topic, especially by the local researchers is very rare. The children's playgrounds in Malaysia have been diagnosed with design problems, equipment faults and inadequate maintenance programmes. The following subsections are the chorus of this paper; the five qualitative analyses and their critical interpretations, which their problems probably might have been accepted as the non-important matters for the children and societies.

4.1 Analysis #1: The Signage with Negative Image

In Malaysia's built-environment, it is ubiquitous to see abbreviated signages indicate the ownership of a local authority or a municipal council for any public amenity provided by them. A common concrete bridge would have surprised nobody with a signage of JKR (the Public Works Department), which boldly engraved on its interlocking concrete wall blocks. Similar abbreviated signages could be spotted on street dustbins, pedestrian bollards, street-lamp posts, a bus stop or even an already abandoned telephone booth. Besides indicating the ownership of those things, these trends have somehow become a meaningless symbol in the language of urban design.

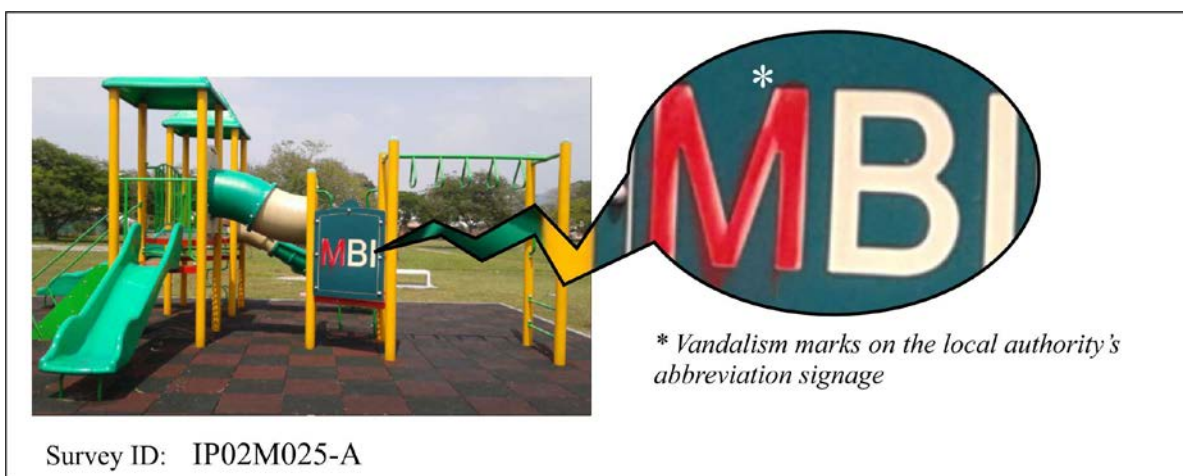


Figure 2: Graffiti stained on the playground at Rapat Setia, Ipoh.

Public playgrounds provision, safety and maintenance are mainly the responsibility of the local government councils (Mott et al., 1997). The symbol of MBI (in the Figure 2) stands for the

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Ipoh City Council. That abbreviated signage proudly moulded onto the playground's wall panel to indicate the ownership of the playground and the generosity of the council in providing such facilities for the children. However, putting the anonymous signage on the playground neither evoke any sense public belonging nor ever increase a responsibility mindset among the community to better care of their surrounding public amenities. The community folks will simply mind no business if anything goes wrong at the faulty playground. Irresponsibly, they will just sit back yet point their fingers at the MBI claiming that the ownership and everything pertaining to the playground is at the responsibility of the local authority.

The abbreviated signage of MBI is explicitly inappropriate, because playgrounds must be designed for the people whom will be using them (Frank Cram, 2001). Instead of engraving that capital letters, it is better to design an information board attached to the playground structures showing some graphical playground's guidelines or portraying good-community messages to educate the children.

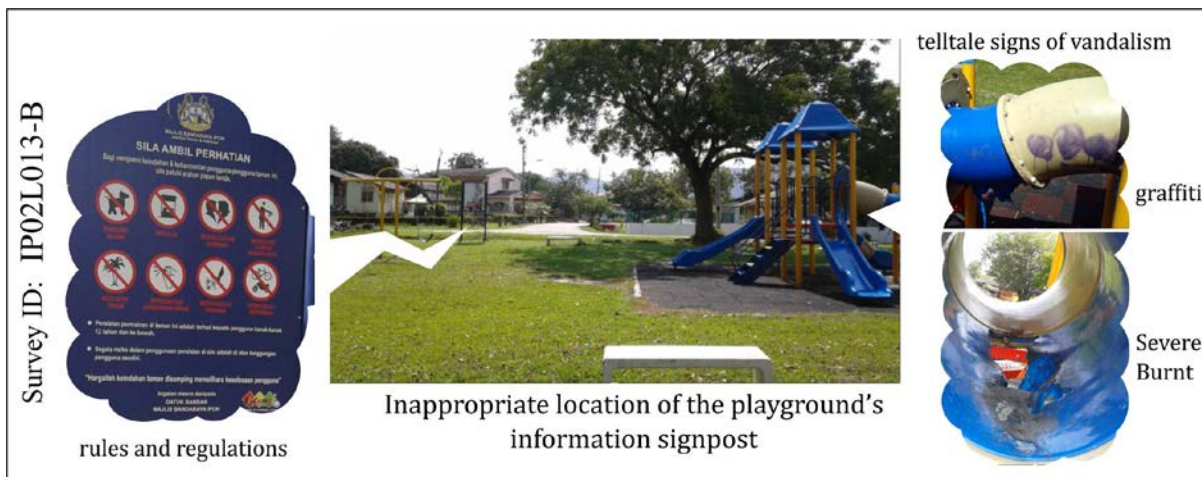


Figure 3: Ineffective information signpost for *Playground 013* and its tunnel tube was found in a bad condition caused by arsonist's vandalism

The *Playground 013* is located in the middle of a rectangular green space, making it accessible from 360° angles (Figure 3). According to Weperan and Rogmans (1991), effective signage and appropriate attentions given to the playgrounds will increase their life expectancy. However, recent incidents of arson and vandalism have spoilt that cheerful playground. With severe burnt and graffiti stained, the playground for children fell into a shameful condition. One can study many factors of vandalism, but, from the design's point of view, the information signpost of the *Playground 013* that faced to the backside of the playground area has proven ineffective to deter any wrongdoing towards the playground equipment.



Figure 4: Multifaceted issues on the signposts

Local authorities as the respective owners for most of the public playgrounds in Malaysia are weighted with burdensome responsibilities to maintain the upkeep of their children's playgrounds. The children's safety responsibility shouldn't be translated into such of lengthy wordings and mundane playgrounds' signposts (*Figure 4*). In today's world, accurate information and public education messages need to be conveyed in the most creative manners. Stressing on detrimental messages alone is not the way to prohibit behavioural abnormalities such as vandalism and misuse of the public facilities. A playground signage appears to have a major impact on the facility's safety and helps the local authority to defend them in court if someone got injured on their playground (Seidler, 2006). However, the typical signage isn't supposed to deliver only common messages. The aspect of safety will be taken for granted if the notice is everywhere the same. The public easily presumed to understand about the notification before they've even read the entire notice.

The playground signages must adapt to some changes for the betterment. A creative signage could be effective as a message conveyor and able to uplift a new image for the playground. The owner could've provided an illustrative notice and given the playground with a beautiful name. The platform's wall panel (in the *Figure 2*) could be replaced with a new notice board displaying some creative safety messages to the public. This method will dismiss the conventional isolated freestanding signposts, which will in time deteriorate on their own (*Figure 4*). Like the community's surau or mussolla, where a name is proposed to dignify the religious building or to bring sentimental meanings to the local folks. A playground for 25 children's capacity for example, shall not be remained anonymous. Given with a special name, the children's playground will stand up differently and hopefully, the local community will pay more attention to the playground as their special sharing property.

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4.2 Analysis #2: The Fortress of the Darkness

Playground 001 was built in Padang Polo, one of the prime recreational areas of Ipoh of Perak. The researcher has spent about an hour at the playground and passively observed its surroundings with his observational checklist and a sketchbook. The huge-scale playground is segregated into several play spaces. As usual the main focal point is the composite play structure (CPS) (Figure 5), where its elephantine size's could have easily accommodated between 50-80 playing children at a time (Md Saaid & Hassan, 2014).

According to Jansson (2008), children's playgrounds are places for children, but not necessarily children's places. From observations, the sense of the attractiveness of the playground has managed to attract not just children, but youths and adults might have used the equipment when the children were absent. The arrow in the Figure 5 points to the CPS's tower-playhouse and for safety reasons the tower's platforms have been wall-upped, however, that application, unintentionally created negatively enclosed spaces or unwanted secluded areas (as shown in the sectional sketch A; Figure 6).



Figure 5: An elephantine composite play structure at Padang Polo, Ipoh.

Any secluded area is unwelcomed in playground design as parents might not have clear sights while supervising their children. When a security or patrol officers were given with tasks to police the playground from a nearby road, their observations would be screened and obscured by the structures (White, 2012). Social plays in playgrounds are the kind of activities to boost the physical and emotional aspects of the children. Hence, some creative spaces may be required for that reason. However, secluded spaces are merely inviting negative dramas in the form of vandalism or immoral activities.

Let's imagine, at night, somebody could have been hiding in the tower-playhouse and occupied

the playground as his ‘fortress of the darkness’ (*Figure 5*). The unintentional purpose of those spaces is negligent in playground design. During the investigation survey, vandalism burnt marks were spotted on the high-impact plastic wall panel (the zooming picture in the *Figure 5*); the evidence indicates that such immoral activities couldn’t occur in broad daylight where the place has been operated as a normal children’s playground.

One lovely morning while investigating the *Playground 067* in Jitra, the investigator had caught a homeless man sleeping inside the cosy straight-tunnel slide (sectional sketch-B in the *Figure 6*). The researchers believed these kinds of problems might happen in playgrounds if they were located away from the noisiness or within a ‘deaf neighbourhood’; a community that practice of minding their own individual business. Mostly, residential playgrounds were rarely used by local children during the morning and night times. If these situations persist of catching the public ignorance, bad things for children are waiting to happen.

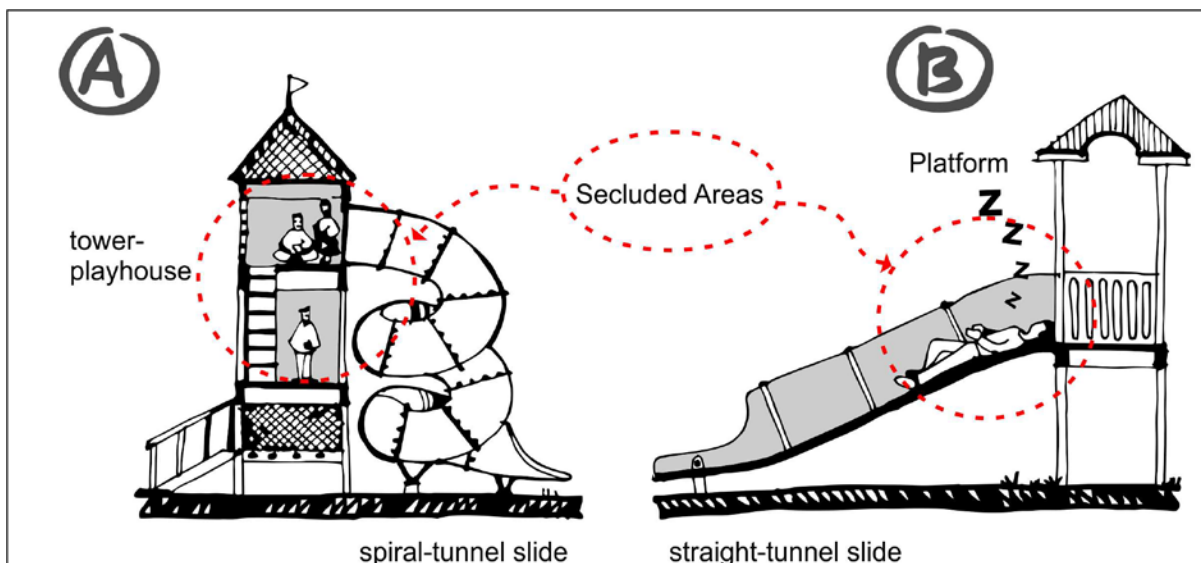


Figure 6: Sectional sketches of a platform (common slide) and a tower-playhouse

4.3 Analysis #3: No Award but Tripping Hazards

A playground is an architectural landmark for children under 12-year old. Even a small child emotionally could get his sight glued to the colourful shapes of tunnel slides, climbing frames, swings, seesaws and the playhouses. One late afternoon, a car with a family of parents and their kids had slowly driven passed an overwhelming playground area. The caring parents have another plan for that time and with no intention of bringing their kids to play, but, there was as if the ‘spirit of the playground’ had asked the children to plead for permission from their parents to grant them a very precious playing time at the playground. The minutes of obstreperous tensions inside the car were the proof of how important a playground is for the children.

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Being regular and familiarised with many playground areas is like a bonus and the children with this experience may be able to choose their most favourite playgrounds. Amazing playgrounds should be conferred with recognitions or awards, at least in the eyes' of the children. However, when any child or group of children were seen to storm freely into the playground area, only few will realise about the tripping hazards (Figure 7 and Figure 8). Any fall, cuts or mishaps sustained by active children while playing on the playgrounds will be perceived as common childhood injuries, although in reality, they could have made a difference, if better safety conscience has been implemented in Malaysia's children's playgrounds.

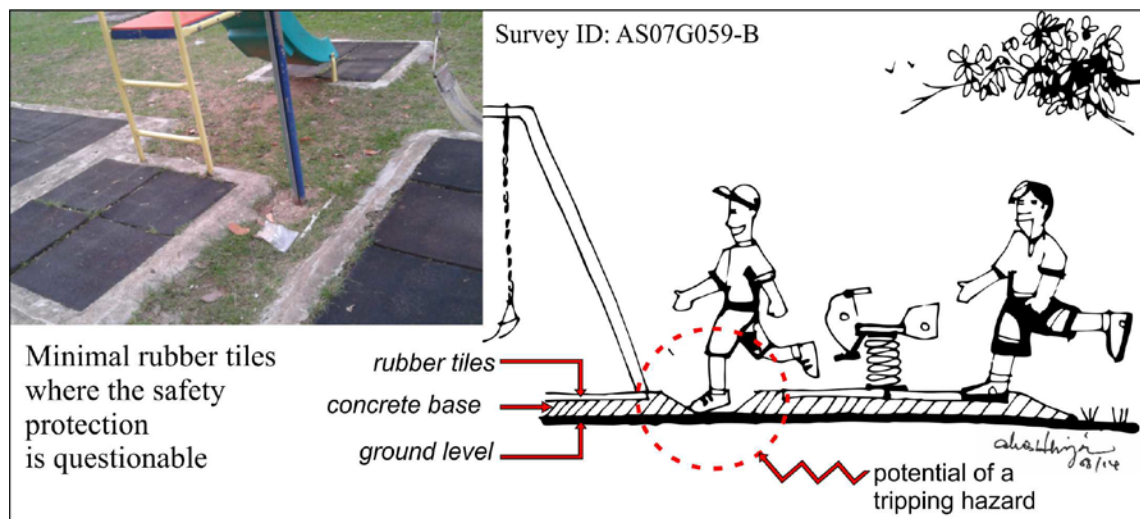


Figure 7: A photograph and an observational sketch of the *Playground 059*

Actually, there are a lot of playgrounds in which their conditions were similar to the surveyed *Playground 059* (Figure 7). Meagre rubber tiles in size of 500 x 500 mm were installed only at the ingress and egress parts of the play equipment where their applications were sometimes a bit senseless; small gaps between two portions of rubber tiles for instance. Instead of cutting the tiles to fit into these gaps, the playground's contractor had laid them with concrete cement. Such practices on any playground surfaces are totally incorrect. Any exposed of concrete material is inadmissible for children's playground (CPSC, 2010). There was an immense weakness in the design of *Playground 059*, probably because they were looking for cost saving, but simply did not aware about the children's psychological effects at the time of play. Vigorous children will run free in the playground milieu and switching their play activities without having to think twice about their own safety (Figure 7).

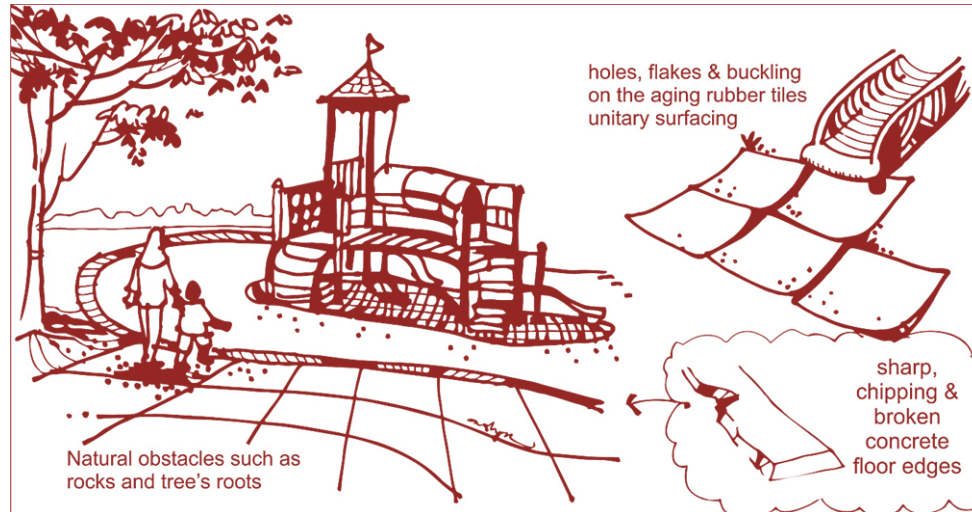


Figure 8: Playground deficiencies cum as the agents of tripping hazards

Falls and mishaps might have regarded as a part of childhood. But, for architects or playground designers, any negative situation such as tripping hazards should have been anticipated. Needless to mention about the shameful condition, situations pictured in the Figure 7 and Figure 8 are everywhere in Malaysia’s playgrounds. Whether they were the subjects of economical values or any other purposes, such practices should be avoided. The playground providers must install larger safety surfaces or at least meet the minimum standards for playground surfacing.

4.4 Analysis #4: Money doesn’t guarantee durability

An interview with the MBI’s Landscape Department officer has managed to get a better insight pertaining to the playgrounds under their governance. During the 2010-2011 terms, the city council allocated a sum of two million (*Ringgit Malaysia*) to assemble forty units in brand-new Malaysian’s made playground equipment. Each playground set costs RM 50,000, which seemed a bit excessive for such a facility. The composite play structure (CPS) or the integrated play structure is the most significant part of today’s playgrounds (Wheway, 2011; CPSC, 2010; Yilmaz & Bulut, 2006; Metin, 2003; Bhattacharya et al., 2003). A children’s playground without this colourful structure is nothing but a playing field.

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Figure 9: The one-off playgrounds project within residential areas of Ipoh.

After three years in the service; while surveying most of the city's playgrounds, the investigator was able to check the condition of that project's playgrounds. Several playgrounds of that project could be referred from the Figure 9 and Figure 2 (the *Playground 025*). To his astonishment, some of the formerly beautiful playgrounds were no more in their excellent conditions. Due to many factors, the state of beauty was found only a momentary. Only *Playground 007* was able to maintain its very good shape. Both *Playgrounds 010* and *013* were irresponsibly vandalised. There was a burnt hole, in a size of 50 mm Ø inside the slide tube of the *Playground 010* while the slide tube of the *Playground 013* was severely burnt and cannot be played at all.

The *Playground 008* has a bizarre story. The whole structure was poorly repositioned from its previous site to give way for the construction of a multipurpose hall for the neighbourhood community. There was plenty of missing piecemeal on the reassembled CPS and the contractor who took the job was even incompetent in handling the delicate playground equipment. The playground remained incomplete and the surface is poorly inappropriate. Nevertheless children do play there every morning and afternoon, and unaware of deadly risks if one of them falls on his head. Those playgrounds of that age are considerably new. But, the problems have begun when the newly built playgrounds had been left exposed as though as they were provided with a tag of maintenance-free. If the impaired conditions persisted on those playgrounds, children at play may expose themselves to greater potential hazards.

The main problem is due to the nonexistence of gradually maintenance. Without proper maintenance plans, patchy minor defects will be exaggerated until there are getting too late, hence, they will be too costly to ameliorate. Forewarned is forearmed. Naturally exposed playgrounds and excessive signs of wear have made us impossible to have deficiency free equipment. They may sometimes be broken, but we could avoid the worsening of the broken conditions. Gradual inspections and adequate maintenance are crucial to eliminate any potential hazards that may cause accidents and injuries among the innocent children.



Figure 10: Some roughness activities involving children and playground equipment.

Active activities on the playgrounds may be exceeding beyond the designed limits of the play components. Sometimes, the group-play will get rough and tumble, especially when children invented games of their own (Figure 10). But, the blame couldn't rest on them. Even small children could easily get bored with a simple and unadventurous playground. In order to enhance the play value, children's playgrounds should be emphasized in the design and use only high-quality materials abide by the international playground safety standards. The playground designers shall oblige with these safety tasks and they also responsible to ensure a good durability, so that the equipment could withstand the roughness activities and not easily broken.

4.5 Analysis #5: Some Shade will be great

Malaysia is a beautiful country with the weather here is oppressively hot and humid all year. However, most of the local children's playgrounds are placed in the open-area, unsheltered and exposing their structures to become the monuments of the built environment. This factor indirectly contributes to shortening the life expectancy and durability of the playground equipment. Other environmental factors such as heavy rains and poor drainage management were studied by Md Saaid and Hassan (2014) through several case studies. Aiding by that literature, the playground shade should be considered as an important element in playground design. The effective range of time to play or the playgrounds' utilisation and viability could become the potential issues for future research. However, the validity of this issue or the needs for some shade; the analysis will be done in this section using the surveyed *Playground 073* as the qualitative example.

Survey ID: SA03073-G

Issue: Fair playground facilities, but scorching surfaces under the hot sun.
Methods: Observations, interviews, photographs & sketches.



Figure 11: Naturalistic observations at the *Playground 073*

The researcher has spent an afternoon observing a playground at the southbound R&R (rest and relaxation) of Ilmina, Guthrie's Highway (Figure 11). Not many people were seen at the scene because it was a weekday. There was a children's playground situated on a space approximately 120 m², enclosed between buildings of the food court, restrooms and mussola. The conditions of the playground facilities were seemingly satisfactory.

Even so, the small CPS looked a bit unadventurous thus appeared to fit only the small children. Furthermore, there wasn't any signage to explain about the rules and the age-appropriateness of the play equipment (Figure 11B). The poured-in-place rubber (PIP) unitary surfacing looked brightly blue and adorned with some vehicular children motif. Generally, the safety of the surface was fairly acceptable; however, there were some potential hazards and safety negligence in which the playground's owner had failed to identify. Within the soft surface area, where the children were allowed to play freely, there were several concrete benches implicating tree trunks. These benches were common for hardscape decorations (Figure 11A). Imagine, what will happen if a child falls or hit his head first onto that kind of surface?

Sharp points and hazardous edges aren't the main points in this observation. Although, the equipment told us that this playground prioritises the small children, the main problem occurred when the playground design doesn't really friendly for them. Supposedly, the design of this playground has to serve for the optimum utilisations, dissimilar to residential playgrounds which are normally packed during the late afternoon.

It was two o'clock past the midday, the whole playground area; especially the rubberised floor was oppressively baked by the sultry tropical sun. Several preschoolers were playing in the playground area while their parents monitored them from a nearby food court area. At one corner, a little boy probably around two and half years old released his hands from his grandpa grasps. On his barefoot, he suddenly rushed into the playground area. Unfortunately, he couldn't get far because the playground surface was intensely hot and unplayable. Seeing the poor child on his

tiptoe, the grandfather immediately pulled him back to safety, which was on the outside of the playing area.

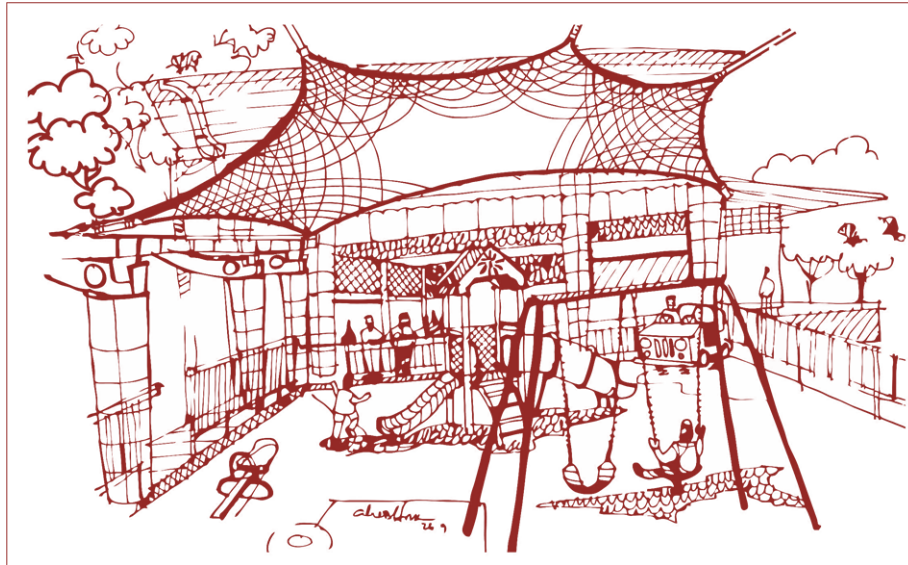


Figure 12: A proposed of a tensile playground shade at the *Playground 073*.

The researcher then took his chances to interview the boy's grandfather (Figure 11C). It was a loose interview and unstructured to get a better insight about the existing playground. While laughing about his grandson tiptoeing responses, he lamented the playground's owner pertaining to the lack of awareness. The playground equipment and its environment looked aesthetically pleasing, but not really friendly for the children. Why the management doesn't afford to provide basic amenities such as a playground shade? Why do they think this element is unimportant in Malaysia's context?

Apart from obscuring the playground from the direct sunlight, the playground shade will provide comfort and will extend life expectancy of the playground equipment (Figure 12). The researcher was very impressed with the boy's grandfather, even though he was a layman, his comments were sensible enough to help him making a proposal to reform the existing children's playgrounds in Malaysia.

5. Discussions

In this qualitative research, many problems of their safety and design have affected the playgrounds. Those playgrounds found to be neither perfect in design nor in their current conditions. All playgrounds must improve at some points. Therefore, the research findings of this study shall be derived from the significant points that will be presented in the following synthesis

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sections. New ideas offered by the following syntheses would become the valuable inputs for the future development of children's playgrounds in Malaysia.

5.1 Synthesis # 1: Playground Signage

It is actually a difficult task to find out why does playground equipment breaks? With a thorough supervision and orderly neighbourhood awareness, the factors of playground deficiencies such as vandalism, broken and misuse equipment will probably decrease. Nevertheless, the public will hamper by tiresome problems when the community's playground breaks. Soon, the poor children's playground would become an abandoned place. The awaited rectification works will take times or may delay for many months or years. Because they have no choice, some poor children could have still used the dangerous playground. If they get any injury or small mishap, such cases are tolerable because in our culture minor injuries and childhood are always associated with each other. Only severe injuries will fear the most!

Even though, some signages looked seemingly useless, but they were deemed compulsory by the local authorities. These rightful owners would comfortably off their hands because the rules and ethicality of play are written on the signage boards and they shouldn't be responsible if any accidents occurred on their playgrounds. From the design perspective, a signage could be a symbol of introduction for the playground. Thus, inventing a new thing or an innovative signage such as a proposed of naming the playground will also become a good effort to promote a more appreciative playground.

5.2 Synthesis # 2: Playground with Playworkers

There are a lot of special designed children's playgrounds in prime recreational areas in Malaysia. As usual, the playgrounds of this type are unsupervised and could be accessed freely by everyone. These playground structures are normally huge, colourful and costly. This study also found that the playground outstanding designs have attracted not only the children, but also some youth groups and several homeless adults had probably misused these facilities for such immoral and wrongly activities. The openness characteristics have made the children's playgrounds able to promote the normal play activities during the normal, pleasant days, neither at night nor in the sun and not in the rain. But, when they're not in used, they could be misused! If anything bad happened to any child, who's to blame?

Probably, this is the time for Malaysia to start practicing guarded playgrounds. The playground owners can employ full-time and well-trained playworkers. Besides being their representative to advise on safety and proper play; they will look after the gradual maintenance

needs and securing the playgrounds from any threat of vandalism and misuse that could jeopardise the playground equipment. Adequate playground's maintenance requires more funds and so do the playworkers' new employments. However, this measure will redeem the government what we could call a great success, in the long run. The conditions of our public playgrounds will only be rated as 'excellent' if a playground safety researcher or a playworker who is authorised to conduct a safety inspection, couldn't find any deficiency on the playground. This result will prove that the surveyed playground is now operated in its best quality.

5.3 Synthesis # 3: Playground Surfaces

Most of the safety surfaces from the surveyed playgrounds were found inadequate and not achieved the proper standards of playground surfacing materials. Minimal rubber unitary tiles are common for Malaysia's playgrounds, but the problem with these tiles is due to their design application (Figure 7). The rubber base area is provided only as per minimum requirement as if the children have the same rationality like the adults. If in any case they were about to fall, they shall fall onto the small rubberised area. A practice like this or as it's been shown by the common design, is clearly senseless and illegally inappropriate.

Most of the public playgrounds in Malaysia use synthetic surfaces. This type of surface will not last forever. Overtime, the chemicals used in the bonding of shredded rubberised surface become rigid and the surface no longer meets the standard (Huber, 2010). More than 90% of the surveyed playgrounds identified with surfacing problems. Even though such playgrounds in their early days were installed with good unitary surfaces, in time, due to heavy use and being badly maintained, the decadence of these poor playgrounds is inevitable. Although the potential hazards become obvious, these playgrounds continue to operate as normal. Sooner or later few children may be struck by playground accidents because of the negligence caused by the authorised people. Remember, 75 % of injuries on children's playgrounds occurred because of playground falls (Morrongiello & Matheis, 2007 & Phelan et al., 2001).

The local authorities have to be sensitive and proactive in dealing with the bare impairment of the playgrounds. The impact absorbing surface is an important element of playground safety. Hence, improving the current practices is compulsory, even though it will cause a lot of money. Imagine the process of building construction, for example; probably a quarter of the total project amounts will be allocated for the building's foundation and substructures to ensure the stability and the safety of the building. The same thing applies to the children's playgrounds; not about their colours and aesthetical values, but the safety of the surface matters the most.

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5.4 Synthesis # 4: Playground Impermanent

The researchers found few public children's playgrounds were built with excessive budgets. Even though, such exorbitant playgrounds can impress the children with their colourful structures, but they may look effectively awesome only in their beginning years. A survey towards a group of locally designed and three years old public playgrounds in Ipoh revealed that most of the city's playgrounds face a serious maintenance problem. The government one-off project went from the sublime to the ridiculous because most of the playgrounds have been badly maintained.

The interview with the city council officer only managed to get an unconvincing answer; if there was major broken playground equipment reported to them, they would have submitted an insurance claim to rectify the problem. The real problem is this process usually takes a very long time. There were too many broken and impaired equipment detected in the city's playgrounds that they couldn't be sure how long will it takes for each playground to get repaired and even if the playground has been repaired the process and the result were actually not up to the supposedly required standards in playground safety practices.

The worsening of several impaired playgrounds probably due to rough and tumble related activities, a group of children seemed not satisfied with their existing playgrounds and they need more challenging equipment (Figure 10). No matter how perfect the design of the playgrounds is, no one could hold on without being maintained (White, 2012). Whether there are common, gradual or preventive modes, the maintenance is important and must be carefully planned to prevent playground accidents and to avoid major deficiencies, which in the end the needs for rectification works become highly expensive. Decisively, the major weakness of poor playground maintenance must be fully resolved in order to ensure a good future and sustainable children's playgrounds in Malaysia.

5.5 Synthesis # 5: Playground Shade

The roofless and exposed children's playgrounds were typically found in open spaces, particularly in the public recreational areas. Most of the public playgrounds in Malaysia built in public parks or in residential housing areas. Normally, these playgrounds stood as the neighbourhoods' focal points and packed with the local children and their parents after office hours (around 5 to 7 pm). For playgrounds in special communal spaces such as hospitals, terminals or the R&R (highway transits), different folks flock around these places day and night. Hence, there would be a strong inclination for some children to play at any indefinite moment. Every child has his right to play even for only a short transitional period. For example, a little boy and his father

enjoy their minutes at the highway's playground while waiting for his mother going the toilet or the musolla.

Usually, architects were the lead consultants for conventional building projects. They were given a huge responsibility to manage the design of the whole buildings. Unfortunately, they often misjudged the basic needs of the little children on an enclosed playground, which was proudly equipped with expensive playground equipment and colourful rubberised surface. How are they going to play safely? If the playground surface is too hot because the sun is right above their heads in Malaysia's equatorial tropics (Figure 11) or if after a heavy rainfall and later the surface has several puddles of still water (Md Saaid & Hassan, 2014).

The rationale in this matter is easy, but the design needs more funds. The playground owners shouldn't have to question about the budgetary constraint if they really want to offer something satisfying and pleasurable in the scope of architecture. The installation of a playground shade will allow the children to play freely and comfortably (Figure 12). Apart from enhancing the ambience, the shading roof can protect the play equipment hence extend its life expectancy.

6. Conclusion

The children's playgrounds are ubiquitously available in almost everywhere, some of them are huge, super playgrounds and surely expensive. The research findings have produced several rational explanations and suggestions in consequence of the five analytical issues. If the governmental authorities react positively towards the ideas and suggestions laid up in this discourse, the changes made, will transform our common playgrounds into a better model. Upon the success, the country will stand up on the par with other developed countries that established a strong culture in playground's research. Adversely, this achievement looks impracticable for the near future because this country still unperceived the children's playground as a big issue that worthy of attention.

Even though, both professionals and academicians in the developed world commit very well in the issue of playground safety. Malaysia on the other hand stills lack in playground regulations; the signage, enforcement and maintenance programmes are both ineffective. Besides the rational thinking and public experience, people didn't know much about the children's playground, especially in the aspect safety and design. The only guideline available is the obsolete MS 966: Playground Equipment (2001). With hope, this research could be one of the catalysts to transform

the design and improve the safety features of Malaysia's children's playgrounds.

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