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CONTEXTUAL APPROPRIATENESS: REFLECTIONS ON LEARNING CULTURE, POLICY AND PHYSICAL ENVIRONMENT OF PRESCHOOLS IN MALAYSIA

Pearly Lim Pei Li [a*], and Azizi BAHAUDDIN [a]

[a] *School of Housing, Building and Planning, Universiti Sains Malaysia, MALAYSIA.*

ARTICLEINFO	ABSTRACT
	With a physical environment capable of inhibiting or enhancing participation in learning, one way to improve preschool quality is through its physical environment. However, as a universal standard may lead to ill-informed policy decision and allocation of funds (UNESCO,2006), to ensure physical environment recommendations are contextually appropriate, understanding the influences of pedagogy in the National Preschool Curriculum Standard (NPCS), requirements for the preschool establishment and existing learning culture are imperative. This paper investigates contextual appropriateness of preschools in Malaysia reflecting on learning culture, relevant policies and physical environment. The case study approach using qualitative analysis was employed to uncover learning cultures of four for-profit preschools. Insights on pedagogy and guidelines for establishing preschools were obtained through secondary data analysis. Findings indicated that learning culture in preschools differed from child-centred approaches espoused in NPCS while preschool establishment guidelines do not provide adequate strategies for developing physical environment reflective of pedagogies advocated in NPCS. **Disciplinary**: Multidisciplinary (Architectural Sciences, Education Sciences).

1. INTRODUCTION

The rapid expansion of preschool education in Malaysia has been observed (MOE, 2013). However, in the for-profit sector, increment in the number of programmes may not be reflected in quality (UNESCO, 2010). With physical environment capable of inhibiting or enhancing participation in learning, one way to improve preschool quality is through its physical environment. Besides, Rook et al. (2015) argue that design of learning spaces has an effect on the learning process making it crucial to design learning spaces with the learning process in mind. Nevertheless, a universal standard may lead to ill-informed policy decisions and the allocation of funds (UNESCO,

2006). Thus, despite global recognition that child-centred learning with an emphasis on play is invaluable, to ensure recommendations of physical environment are contextually appropriate in Malaysia, understanding the influences of pedagogy in the National Preschool Curriculum Standard (NPCS), preschool establishment and existing learning culture are imperative.

2. PROBLEM STATEMENT

According to Li (2005), cultural value systems influence learning beliefs. Thus, to define quality and cultural relevance of learning outcomes, Profeta (2012) asserts that there is a need to address cultural variability as well as to remain sensitive to existing learning standards. Besides, matching the preschool design to user requirements derived from pedagogy, philosophy and policies should be considered (Rahim, 2001). This means that looking into existing policies and statutory requirements relevant to physical environment would also have to be considered in discussions of quality improvement. Hence, when these issues are taken into consideration together with assertions by Nicholson (2005) that the physical environment is capable of perpetuating ideas of the way children learn and how they are taught, contextual appropriateness becomes a vital consideration to understand the present preschool scenario in Malaysia. This paper sets out to investigate the contextual appropriateness of preschools in Malaysia reflecting on learning culture, relevant policies and the physical environment of existing private preschool establishments.

3. WHY CONTEXTUAL APPROPRIATENESS MATTER

Perceptions of the function of childcare and early learning differ in various societies (Friendly and Beach, 2005). For example, when it comes to cultural values, Kim and Omizo (2005) maintain that most cultural anthropologists agree that Asian values are premised on collectivism, conformity to norms, emotional self-control, and deference to authority. Conversely, Western child development models are steeped in an individualistic view of self-development and thus encourages a separate, independent self (Woodhead, 1998). Nevertheless, there may be shared common ideas with regards to early learning albeit countries differ in their histories and circumstances (Friendly and Beach, 2005). Hence, depending on the context of other influences in children's lives, past, present, and future, Woodhead, (1998) asserts that a prerequisite of quality assessment is the mediation of child development values between traditional and modern, indigenous and imported as well as national and local. Following this line of thought, contextual appropriateness holds significance in discussions of preschools with the need to look into pedagogy and curriculum, simultaneously with relevant guidelines or policies guiding the establishment of preschools. These aspects should then be compared to the existing environment of preschools to understand if the learning culture is reflective of the aspects espoused by a different culture.

3.1 GLOBAL VIEW ON PEDAGOGY AND CULTURAL INFLUENCES IN LEARNING

In general, pedagogy relates to the method and techniques of teaching and can be viewed from the perspective of either adult-centred pedagogy or child-centred pedagogy. In adult-centred pedagogy, children are provided with information by adults (teachers) who control interaction and provide direction while children would repeat what is expected from them with little thought in an automatic manner when responding as a group (Montie *et al.*, 2006). In contrast, child-centred pedagogy actualise when children are given more time to interact with adults and other children either in small groups or individually which provides them with more opportunity to express their thoughts,

opinions, and questions (Montie *et al.*, 2006).

As there are various approaches to teaching, the key issue is to understand how children learn and how different pedagogy is used to guide young children's learning in various contexts. Linking the type of pedagogy with the culture of different countries, Montie *et al.* (2006) claim that adult-centred teaching is typically upheld in countries with prevailing cultural belief that children should listen, obey and learn from adults. On the other hand, countries employing child-centred teaching prevail in cultures where independent thought and freedom of expression are encouraged to foster language learning. Table 1 summarizes the differences between adult-centred pedagogy and child-centred pedagogy.

Table 1: Difference between adult-centred teaching and child-centred teaching.

	Adult-centred Pedagogy	Child-centered Pedagogy
Social Interaction	Adults are primarily giving children information. Interaction is under the control of the adult and direction is from the adult to the child.	Children spend more time interacting with adults and other children individually and in small groups.
Individual/ Group Activities	Whole group activities and group responses are common generally repeat what is expected of them; responses require little thought and are apt to be automatic.	Children have a greater opportunity to express their own thoughts, opinions, and question
Cultural belief	Primary importance for children to listen, learn from, and obey those in authority	Encourage independent thought and freedom of expression

When the two pedagogies are viewed together with child development models, it seems clear the adult-centred pedagogy reflects more on Asian values while child-centred pedagogy is more closely linked to Western child development values. Nevertheless, with widespread recognition of the positive impact of child-centred pedagogy, more and more governments globally have opted to include child-centred pedagogy as part of their national preschool curriculum with play adopted as a central theme in the most preschool curriculum. However, incompatibility of pedagogy and learning culture concerns arising from adaptation of Western pedagogy approaches and learning culture practices in Asian contexts have been highlighted by Kwon (2002), Li (2005), Rao *et al.*(2013), and Tan (2017).

For example in Hong Kong, Rao et al. (2013) noted that the Guide to the Pre-primary Curriculum which expresses the values and expectations of early child development highlights that children should not be over-burned academically. Although a child-oriented pedagogy is now recommended by the Hong Kong government, findings by Rao et al. (2013) indicate that these recommendations are at odds with the traditional academic-oriented approach typical of the learning culture there. In a separate study, review on Western Influences in Korean Preschool Education by Kwon (2002) reveal that teacher-centred pedagogy still prevails despite Montessori materials were adapted in Korean preschool classrooms. These studies are just two examples demonstrating that although the adaptation of child-centred pedagogy may be advantages and thus many Asian preschool pedagogy may be built upon Western philosophical influences, substantial cultural differences prevail between the learning cultures in various countries.

3.2 MIRRORING PEDAGOGY THROUGH PHYSICAL ENVIRONMENT

Not only does the physical environment have the aptitude to define how one teaches with learning spaces revealing learning approaches and people of the times (Oblinger, 2006), (Walden, 2015) posits

that physical environment can significantly influence performance, well-being, and social behavior. Thus it also indirectly influences knowledge and skills that are acquired by pupils (*ibid*). In fact, Yusoff et al. (2010) found that a spatial definition of classrooms has significant effect on children's behavior. In this sense, two related salient points would have to be considered to truly contribute positively to children's learning if child-centred pedagogy is adopted.

Firstly, the physical environment of preschools with child-oriented pedagogy which encourages children to spend more time interacting with adults and other children individually and in small groups would have to be richer with provisions for a variety of materials and stimulating learning and social spaces. These measurements are critical as the physical environment plays a role in providing sensory stimuli (Sousa, 2011), and in order to develop and refine children's sensory perceptions, the physical environment of preschools must be supportive and stimulating (Dudek, 2005). In this sense, physical environment factors catering to child-centred pedagogy would have to reflect the teaching and learning approach espoused through its design and would differ from preschool settings designed for didactic adult-centred teaching. Secondly, as young children learn through interaction with their physical, social, and cultural environments (Australian Early Childhood Association, 1996), how learning culture overrides the espoused pedagogy in different cultures should be looked at together with the pedagogy and physical environment set up of preschools.

As there is need to match design of preschools to user requirements derived from pedagogy, philosophy, and policies (Rahim, 2001), contextual appropriateness would call for culture to be considered alongside government recommended pedagogy as this shift may not be at once echoed in practice. With previous studies showing how educational reforms meet failure rather than success due to prevailing learning culture in different countries, this study reiterates the need to included understanding of cultural influences in learning when it comes to discussions of contextual appropriateness which in turn would affect the design of a preschool's physical environment. It follows that to accommodate the shift from adult-centred pedagogy to child-centred pedagogy, changes to the physical environment as a reflection of the pedagogy implemented would have to take place. As Eberhard (2009) notes, since changes in the environment change the brain, changes in the environment would be able to transform behavior.

3.3   UNDERSTANDING THE MALAYSIAN PRESCHOOL SCENARIO

The need for continuous monitoring of emerging of preschools as a means to provide enhanced service quality in Malaysia was highlighted by Mustafa and Azman in 2013. In essence, various acts and policies have been drafted and implemented to uphold the quality of preschools within Malaysia. Since 1996, preschool education was officially regarded as part of the national education system whereby consideration for this matter was made possible through the implementation of Act 550 in the National Education Act 1996 (Education Act 1996, 2006). Then, at the beginning of January 2003, the implementation of the National Preschool Curriculum (NPC), formulated through the Curriculum Development Centre, Ministry of Education was introduced. This implementation required that by law, all preschools, public and private must adhere to this curriculum.

Nevertheless, albeit comprehensive policies being developed and implemented to act as guidelines for establishing preschools and for maintaining a certain quality level, studies have shown that there are gaps between the aspired and implemented. In fact, a sizeable portion of private

preschools was found not adhering fully to the requirements in the NPC which is compulsory for use in both public and private preschools. According to Ng (2010), private schools felt that enrolment would be affected if they adhered to NPC which do not encourage the use of excessive workbooks and homework as parents were perceived to prefer the use of homework and workbooks. Similarly, Chee *et al.* (2017) found that teacher-centred teaching approaches prevailed in the classroom despite the importance and requirement of teaching and learning approaches consistent with preschool education as specified in the NPCS were acknowledged by teachers. A review conducted by the Curriculum Development Centre (2008) found that learning through play practices rarely happens in preschools despite claim counter claims by teachers. Instead, drills and memorization were used with the aid of activity books, instructional charts, and whiteboards to teach in preschools (Chee *et al.*, 2017). Bakar *et al.* (2015) brought to attention that besides formal approach in education, unsuitable environments and sources for play hamper teaching practices of the espoused pedagogy. Thus, efforts to improve the quality of preschool education can be achieved only if stakeholders are aware of factors promoting a better environment (Mohidin et al., 2015).

3.4 GUIDING POLICIES AND PHYSICAL ENVIRONMENT RELATED GUIDELINES FOR PRESCHOOL ESTABLISHMENTS IN MALAYSIA

3.4.1 NATIONAL PRESCHOOL CURRICULUM STANDARD CONTENT

While pedagogy refers to how to teach, the curriculum denotes the content or subject matter thought. In Malaysia, since 2003, NPC has been made compulsory for all preschool programs including public and private agencies (Federal Ministry of Education, 2015). This curriculum was revised to the National Preschool Curriculum Standard (NPCS) or Kurikulum Standard Prasekolah Kebangsaan in 2010 and is presently used. Various teaching and learning approaches were highlighted in order to achieve the learning and development components specified. These approaches included child-centred learning; learning through play; inquiry-based learning; holistic approach; thematic approach, project-based learning; mastery learning; contextual learning; and learning based on multiple intelligences theory.

The NPCS does not provide guidance in terms of physical environment factors which would be appropriate for supporting these approaches. Generally, only three components related to the physical environment were mentioned including safety and health concerns; flexibility of furniture arrangement and accessibility of materials; as well as learning spaces with easily accessible and appropriate equipment.

3.4.2 PLANNING GUIDELINES

Planning guidelines for preschools are included in the Education Facilities Subchapter 9.20.2 in chapter nine of the Encyclopaedia of Town and Country Planning. While site area requirements for the other educational facilities such as Primary School, Secondary School, Vocational School, Technical and Higher Education Institutions (HEIs) were included, there was none prescribed for preschools. Only education facility standards for preschools were included as shown in Table 2.

Table 2: Education Facility Standards

Population Standard	Acreage	Distance/ Required Travel Time	Maximum Size	Car Park (CP) Requirements
2500	740 m^2/ 8000 sq ft	0.2 km – 4.0 km (5 minutes)	60 pupils or 4 classes	1 cp/ 3 staff 1 cp / 10 students

Source: *Garis Panduan Perancangan* (2012:200)

3.4.3 GUIDELINES FOR THE ESTABLISHMENT OF PRESCHOOLS

In order to facilitate local authorities and technical agencies in planning and reviewing preschool development applications, Guidelines for the Establishment of Kindergarten and Child Care Centre (JPBD, 2012) was developed and must be read in conjunction with Local Plan, Special Region Plan as well as related guidelines related to the Town and Country Planning Department of Peninsular Malaysia. The guidelines also help developers in site preparation and building preschools according to designated premise categories, while simultaneously aiding preschool providers in the process of establishment, registration, and application of business premise license.

However, the guideline only specifies allowable premises for establishing preschools, minimum floor area per child and staff- child ratios. It does not mention physical environment characteristics and design elements that are related to the pedagogy espoused by NPCS. Interestingly, deliberation for establishing preschools located within residential lots is open for considerations although it has been specified in the guidelines that preschool establishments are not allowed on residential lots (JPBD, 2012, p. 8). As deliberations are based upon conditions designated by local authorities, the physical environment may further differ in terms of contextual appropriateness depending on the locality and requirements of the local authorities as requirements differ from one local council to the next. With no other guidelines, policies or minimum standards are in place for guiding the development of physical environment to be supportive of the curriculum and pedagogy prescribed in the NPCS, physical environment facilities and qualities differ vastly from one preschool establishment to another.

4. METHODOLOGY

This paper sets out to investigate the contextual appropriateness of preschools in Malaysia by reflecting on existing learning culture, relevant policies and physical environment. While secondary data analysis was used to provide insights into pedagogy and guidelines for establishing preschools, to uncover learning cultures and the corresponding physical environment settings of four for- profit preschools, a case study approach using qualitative analysis was employed. Four case studies in Johor Bahru were selected with observations conducted based upon the natural settings of preschools. The study was conducted in two phases, starting with a pilot study to test the logistics and feasibility of the study as well as to determine the efficiency of observation tactic before the main study was conducted.

4.1 SAMPLING METHOD AND CASE STUDY SELECTION CRITERIA

Purposive homogeneous sampling was used to select four preschools in Johor Bahru. Criteria for selection included registered private preschool within residential settings adapted from corner lot terrace houses. Private preschools were selected as they represent 40% of preschools in Malaysia as compared to government and government-aided preschools at 24% and other educational agencies at 36% (Department of Statistics Malaysia Official Portal, 2016).

4.2 PROCEDURE

4.2.1 OBSERVATION

To uncover existing learning culture and physical environment settings, the continuous recording was used to ensure that natural event streams are recorded (Salkind, 2000) while daily logs and

vignettes were used for data documentation.

4.2.2 INTERVIEW

To gain further insights into the learning culture of preschools, semi-structured interviews were conducted with the principal and teachers of the respective preschool. Data obtained were then transcribed before analysed qualitatively to generate significant themes.

4.3 PILOT STUDY

The pilot study was conducted in a private preschool which was converted from a shophouse with no outdoor play area but a central open place indoors for children to play. Based on this pilot study, two main modifications were made to the initial methods. First, time scale observation was changed to continuous observation. Secondly, the interview with the principal highlighted that parents preferred preschools that have outdoor play areas. Thus, the researcher felt that there was a need to readdress the criteria for case study selection to encompass preschools converted from residential terrace houses.

4.4 LIMITATIONS AND DELIMITATIONS

Due to a lack of time and logistics, only four preschools from Johor Bahru were selected for this study. The delineation of the contextual appropriate physical environment of preschools in Malaysia forms the delimitation of this article.

5. FINDINGS

To uncover existing learning culture and physical environment settings in the respective preschools, each of the case studies was analyzed based upon their respective pedagogical orientation and physical environment merits. Findings are summarized in Table 3.

6. DISCUSSION

In general, findings indicated that the existing learning culture in preschools differed from child-centred approaches espoused in the NPCS. Three of the case studies upheld teacher-centred pedagogy whereby activities were subject-based, obedience was expected of children and play was predominantly supervised. Only Case Study #4 adopts a play and literacy-based learning where children were free to voice their opinion in class. However, workbooks were also used as part of classroom activities and play was supervised by teachers. One of the reasons a more play-based approach was not undertaken was because teachers felt that there was insufficient time for play. A teacher mentioned that children had to complete their workbooks based on the syllabus. Concerns on managing children were also voiced with regards to implementing a child-centred pedagogy. While Case Study #4 provided children with opportunities to express their thoughts and allow children to spend some time interacting with teachers and their peers during lessons, the principal of this preschool noted that:

"Not all teachers agree with children voicing (their) opinion in classes and allowing time for play. Only those agreeable take up employment here." She further elaborated on her experience in hiring teachers whereby there were instances in which teachers who were experienced in academic-based preschools did not agree with the preschool's pedagogy and thus revoked their own

Table 3: Summary of existing learning culture and physical environment settings

Case Study	#1	#2	#3	#4
Setting	Non-Gated Residence	Non-Gated Residence	Non-Gated Residence	Gated Residence
Type of Conversion	A combined corner and intermediate double-storey terraces house. Only the ground floor used for both units.	A combined corner and intermediate single-storey terrace houses.	Corner single-storey terrace house.	A combined corner and intermediate double-storey terrace houses. Both levels utilized.
Operating Hrs	8.00 am -6.00 pm Full day only	8.00 am -6.00 pm Half-day / Full day	8.00 am -6.00 pm Half-day / Full day	8.00 am -6.00 pm Half-day / Full day
Existing Learning Culture / Pedagogical Orientation	Subject-based.	Subject-based.	Subject-based.	Eclectic: play and literacy-based- adopts Cambridge English Young Learners Examination (YLE)
	Some aspects of play-based predominantly on structured play.	Some aspects of information and communications technology (ICT)	Some aspects of play-based predominantly on semi-structured play.	Children free to voice an opinion in class and raises hands for turn to speak
	Emphasis on children's obedience.	Emphasis on children's obedience.	More informal and laid back time table.	Adopts American Sign Language (ASL) for kinaesthetic experience
Outdoor Environment				
	Ground surface covered with cement. No grassed surfaces.	Ground surface covered with cement. The grassed surface at one corner.	Fully tiled ground surface. No grassed surfaces.	Tiled surface with the dedicated grassed surface. Timber decking beside sandpit.
	Two plastic playhouses located at one end, a set of interconnecting plastic tunnels at the other end.	Small plastic slide Swing	Cone hurdles	Sandpit with play materials and timber stump. Designed timber balancing beams
Sheltered Outdoor Physical Environment	The extended area between the corner unit and fence wall fully shaded. (utilised as classroom and dining area) The shaded area on the front façade utilized as morning exercise and performance rehearsal area)	Extended porch at corner unit and semi –extended porch at the intermediate unit (utilised as parents/ children reception area, transition zone from class to class).	Existing porch. No extension made.	The extended area between corner unit and fence wall fully shaded. (utilised as parents/children reception area, dining area, and play area)
	Part tiled surface (classroom/dining) part concrete surface	Concrete ground surface.	Tiled Surface	Part safety surface, part concrete
	Tricycle and bicycle parking bay		Adult sized table and chairs	Slide with tunnel
Indoor Physical Environment				
	A variety of materials including storybooks stored and labelled clearly in racks but children are not allowed to access them. Materials for play determined by teachers. Walls were painted with imaginative characters,	Less variety of materials and equipment for play but a wide range of literary and mathematic related materials glued on walls in all classrooms.	Less variety of equipment. Variety of materials for learning through play stored within one classroom but not directly accessible to children. Materials for play determined by teachers. Storybooks on racks	Less variety of equipment and materials observed. Storybooks on racks located outside at common areas directly accessible by children. Teachers bring along 'busy bag' with materials for the craft to

Case Study	#1	#2	#3	#4
	maths problems and spellings.		located outside at common areas directly accessible by children.	occupy children after lessons.
	Classroom not enclosed; defined by furniture. Mat placed on the floor as demarcation of space used both during classes and during play. Classroom directly at entrance utilized as a play area for all children.	1 classroom not enclosed. Other classrooms are enclosed (classrooms within transition space directly at the entrance). No indoor play area observed.	2 classrooms enclosed, one not enclosed. Nursery classrooms utilized as a play area.	Enclosed and unenclosed classrooms (classrooms within transition spaces) Common area on ground level utilised as an indoor play area (yoga, etc).
	No spaces for children to leave an impression and manipulate. No display board for children's work.	No spaces for children to manipulate. But display board available in each classroom displaying children's works.	No spaces for children to leave an impression and manipulate. No display board for children's work.	No spaces for children to leave an impression and manipulate. No display board for children's work.
	No dedicated spaces for privacy and restoration.	No dedicated spaces for privacy and restoration.	No dedicated spaces for privacy and restoration.	No dedicated spaces for privacy and restoration.
Indoor/ Outdoor Connection	Classrooms have a good indoor/outdoor connection. But children's movement between indoors and outdoors is restricted.	Only one classroom observed to have a good indoor/outdoor visual connection. Children's movement between indoors and outdoors is restricted.	The less appropriate connection between indoor and outdoor. Children's activities concentrated indoors.	Not all classrooms have a good indoor/outdoor connection. Windows of classrooms on upper floor are closed and shaded. (air-conditioned and uniformly lighted) Children's movement between indoors and outdoors determined by teachers.
Others	Facilities for children: WC and sinks based on children's anthropometric.	Facilities in the toilet not modified to fit children's anthropometric.	Facilities in the toilet not modified to fit children's anthropometric.	Opening between units under staircase based on children's anthropometric. Sinks at the kitchen based on children's anthropometric.

employment there. The reason why teachers disagreed with the implementation of a more child-centered pedagogy according to her was that teachers with didactic teaching experiences prefer not to 'sweat it out' by engaging with children during play. These teachers were more comfortable with the instructive mode of teaching and preferred having control over the children's activities. This statement holds true as one of the teachers remarked that:

"It is difficult to control children when they are too active especially when they are very excited to try a new lesson or learn new things."

Besides these factors, in relation to the consistent supervision of children concerns regarding safety factors surfaced. A majority of teachers believed that it was their responsibility to ensure the safety of children at all times. Thus, free play rarely happen while materials for the play were deemed necessary to be distributed by teachers. Two notable remarks from teachers included:

"Teachers must ensure children's' safety, thus supervision of play and materials (are only) handed out during lessons when necessary."

"Stimulating children through challenging facilities is good with extra caution from teaches to ensure the safety of children"

Findings also reveal that upon closer inspection, the physical environment is reflective of the respective preschool's pedagogical orientation and learning culture. As compared to Case Study #4, preschools that enforced adult-centered pedagogy had less stimulating and inviting physical

environment. One of the reasons given was because teachers believed that to adopt a more child-centred pedagogy such as implementing play in learning, no specific space was required. Instead, implementation of play in learning is based on teacher's aptitude for incorporating play into lessons rather than physical environment factors:

"Any place could be a suitable place for "learn through play", depending on the teacher's own creativity and imaginative ability."

From this point of view, the physical environment of the preschool was not deemed as important nor was it thought of to enhance teaching and learning. In addition, one of the principal cited financial setbacks as one of the reasons a more stimulating physical environment was not possible. While she believed that play should happen outdoors, financial assistance from the government is required. Two noted comments with regards to financial setbacks are as follows:

"Government should provide more free packages for preschool children to get involved in outdoor activities."

"I like Western ideas. But this will require a significant amount of capital. Will have to operate with a little loss of profit. If fees were too expensive, it would be difficult for children to enter the preschool".

As shown in these four case studies, the physical environment of preschools vastly differs. Together with the lack of physical environment guidelines highlighted previously, this shows that present preschool establishment guidelines not only do not provide adequate strategies for developing physical environment reflective of pedagogies advocated in NPCS, but the guidelines also do not provide a minimum standard to ensure that preschools achieve a certain quality.

7. CONCLUSION

This paper investigates contextual appropriateness of preschools in Malaysia reflecting on learning the culture, relevant policies and physical environment as understanding the influences of pedagogy in the National Preschool Curriculum Standard (NPCS), requirements for the preschool establishment and existing learning culture are imperative to ensure physical environment recommendations are contextually appropriate. Findings suggest that existing guidelines do not provide adequate strategies for developing physical environment reflective of child-centred pedagogy advocated in NPCS. Instead, the overall physical environment of preschools is reflective of the learning culture of preschools and vastly differs from one another. With regard to learning culture child management, time and financial factors were all part of teachers' concern for implementing child-centred pedagogy. This study thus demonstrates the importance of including learning culture in discussion of contextual appropriateness.

It is suggested that future studies relating to the development of the physical environment of preschools consider aspects of learning culture as well as relevant policies and guidelines simultaneously to close the gap between the aspired and implemented. As the physical environment have the capacity to inhibit or enhance participation in learning, findings of this study would benefit service providers, educators, built environment designers as well as policymakers in decision making with regards to children's physical environment. This study hopes that when the physical environment of preschools are given more attention, enhancement of these settings will not only involve 'cosmetic'

changes through a painting on the walls with colourful characters but rather the transformation of the physical environment as a whole into an inspiring place where young children are spirited to learn and explore.

8. AVAILABILITY OF DATA AND MATERIAL

Information can be made available by contacting the corresponding authors.

9. ACKNOWLEDGEMENT

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Pearly Lim Pei Li is a PhD candidate at Universiti Sains Malaysia. She received her undergraduate in Architecture and Master of Philosophy degree specializing in Architecture from Universiti Teknologi Malaysia. Her specific interest is in the relationship between early Childhood Education and the Physical Environment of these establishments. Currently she works on projects addressing the Relationship between Context Appropriateness of Preschool Environment.

Professor Dr. Azizi BAHAUDDIN was trained as an architect and interior designer before joining Universiti Sains Malaysia as an Interior Design Lecturer. As an expert specializing in Exhibition Design and Interior Design, Professor Dr. Azizi's primary area of research has focused on the Relationships between Culture concentrating on Human Senses and Design. Many of his research topics combine Culture and Fine Art with Architectural Spaces.