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Preliminary Findings of Structural Quality Requirements in Malaysia Public Preschools from Multiple Stakeholders' Perspectives

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Abstract
Stakeholders define preschool quality in their own context. This study aimed to explore the structural quality requirements in Malaysia public preschools from the triparty stakeholders' perspectives: the top-down, bottom-up, and outside-in. This study adopted a case study design and an in-depth interview data collection method. The thematic analysis revealed three structural quality elements required in Malaysia settings: human, conducive environment, and other supporting factors. The preliminary finding of the study highlighted the identification of teacher assistant as one of the structural quality requirements in Malaysia public preschools. Perhaps future study be extended into a quantitative method to offer generalisation.

Keywords: Preschools; Stakeholders; Structural Quality

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1.0 Introduction

Preschool quality has become the universal focus of provision and practice, as more voices are added to the discourse, covering policy makers, policy implementers, preschool teachers, parents, researchers, and educators. Each of these stakeholders tries to define quality in their own context. Quality revolves around decent teaching syllabus for preschool teachers, while for parents, quality might mean the availability of proper infrastructure and equipment. Thus, this study aimed to explore the structural quality requirements in Malaysia public preschools from the triparty stakeholders' perspectives: the top-down or policy makers, bottom-up or policy implementers, and outside-in or policy receivers.

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2.0 Literature Review

Part of the challenge in ensuring high-quality preschool is that there is no single formula for achieving it (Burchinal, 2018). There is no single or universal definition of quality as it varies by national and international context. The consensus is that quality must be comprehensive. Consequently, defining and measuring preschool quality becomes a complex task.

There is a large body of literature that attempts to understand the definition of preschool quality (Brinkman et al., 2017; Hartman et al., 2016; Hu et al., 2018; Slot et al., 2015, 2018). Regardless of the different perspectives on what makes up a high-quality setting, a common meaning found in most academic literature is in terms of structural and process quality (Slot et al., 2018). While the two elements are closely related, they offer different ways to comprehend, differentiate, and measure the quality in early childhood care and education (ECCE) settings.

2.1 Structural Quality

Structural quality comprises inputs to process-characteristics which create the framework for the processes that children experience (Cryer et al., 1999). In the ECCE context, these inputs include factors, such as staff qualifications and skills, group size, as well as the facilities of teaching and care. A situation considered to be of high structural quality may have teachers with high qualifications, small group size, with a hygienic environment and equipped with proper facilities and furniture. Most structural quality measures can be regulated by policy as it is typically contributed by the human, financial, and time resources (inputs) that are required to deliver services.

Several studies have relied on structural characteristics as the measure for preschool quality (Brinkman et al., 2017, Hu et al., 2018). Studies have also found that these structural characteristics are associated with children's development (Burchinal, 2018; Melhuish et al., 2015), the ultimate indicator of quality care. Though these characteristics represent only a piece of the overall quality, they help in setting the stage for process characteristics.

2.2 Process Quality

A comprehensive understanding of the quality components requires another part of elements: an examination of what happens in the early care setting, that is, the process quality.

Process quality refers to the aspects of the classroom environment as experienced by children – their interactions with teachers and peers, and the materials and activities available to them (Anders, 2015; Slot et al., 2015). Several studies have shown that process quality elements have influenced the children's experiences, wellbeing, and development (Slot et al., 2015, 2018). A setting considered to be of high process quality may involve regular, supportive engagement between teachers and children, a stimulating curriculum, and effective pedagogical practices.

To understand the entirety of quality care children are receiving, it is necessary to understand both aspects of quality. Only with that comprehension can we examine the relationship between structural and process characteristics of quality to begin to address ways to improve and standardise the quality of early childhood care and education.

2.3 Relations between the structural and process quality

Structural quality involves the distal and regulatable factors, such as child-staff ratios, group size as well staff training and education (Slot, 2018). On the contrary, process quality concerns more of the proximal processes of children's daily experiences which involves the social, emotional, physical, and instructional aspects of teacher-child and peer interactions while being in the childcare settings (Slot et al., 2015).

Structural and process quality indicators provide two different perspectives when it comes to defining the quality of ECCE. While each has a unique approach to observation, a high process quality generally resulted from a high structural quality. Studies have shown that structural quality provides a basis and is linked to process quality (Burchinal, 2018, Hu et al., 2018, Slot et al., 2015, 2018). Burchinal (2018) found associations between group sizes and ratios and staff–child interactions, while Munton et al. (2002) pointed out that the staff–child ratio may be specifically important for young and vulnerable children, who need more one-on-one attention. In addition, studies also found that staff members' formal education and training are associated with a higher quality of care and sensitivity in interactions (Burchinal, 2018). Other structural factors, such as years of experience (Hu et al., 2018) and in-service professional development (Slot et al., 2015), have also been found to be related to process quality. Slot et al. (2015) claim that strong structural features may produce a positive outcome of process quality. However, it is asserted that process aspects are more predictive to child development as compared to structural aspects when they are concurrently assessed (Hu et al., 2018).

Structural features are theorised to set the stage for process quality by creating the conditions in which high-quality, developmentally supportive processes can occur (Slot, 2018; Slot et al., 2015). This hypothesis has motivated some countries to set minimum standards for at least several aspects of structural quality due to its regulatable features (Brinkman et al., 2017). Yet, there exists mixed empirical evidence in support of the hypothesis that structural features drive process quality (Hu et al., 2018; Slot et al., 2015). Despite this large body of research, however, Slot et al. (2015) claim that the relationship between structural quality and process quality has not yet been fully investigated across a range of cultural contexts, especially in countries outside the US with different structural quality policies.

3.0 Methodology

The data was obtained from qualitative research for the doctoral degree of one of the authors that was collected within a six month-period from November 2020 until May 2021. This study adopted a qualitative single case study on the Ministry of Education (MoE), designed to explore the structural quality requirements in *prasekolah* programme as perceived by multiple preschool stakeholders. This

study is confined to the area of Wilayah Persekutuan Putrajaya as preschool programme in Putrajaya resembles a comprehensive setting for Putrajaya population since there is no other state in Malaysia that has a 100 percent rate of primary schools with annex preschool programme in that individual school.

This study employed an in-depth interview data collection method. The key informants were selected through purposive sampling technique. This study utilised both the conventional face-to-face interview and online interview method as data collection was conducted during the COVID-19 pandemic. The number of key informants in this study was eighteen, consisting of triparty public preschool stakeholders: 1) five top-downers or policy makers, 2) eight bottom-uppers or policy implementers, and 3) five outside-inners or policy receivers.

From the policy maker's perspective, the researcher managed to interview three officers from the School Management Division (SMD), MoE (with all of them having preschool background), and two preschool experts; one from the Universiti Perguruan Sultan Idris (UPSI), while the other was from the National Child Development Research Centre (NCDRC), UPSI. For policy implementer category, two officers from Jabatan Pendidikan Wilayah Putrajaya (JPWP), MoE (with none having any preschool background) and six preschool teachers (from five different schools in five different precincts in Putrajaya area with all opted to teach preschool classes), who are the actual actors on the ground, were successfully interviewed. The final group interviewed was the policy receiver, which involved five mothers (from the same five schools where the teachers were being selected) who sent their children to *prasekolah* in Putrajaya and acted as proxies to their children. Three are working mothers, while the remaining two are housewives. Three out of five top-downers interviewed were males while the bottom-uppers and outside-inners interviewed were all females.

A thematic analysis method was applied to analyse the data with NVivo 13 software being employed. The first task of the analysis involved transcribing the voice recordings into textual formation. Next, coding was applied to highlight the similarities and differences to define categories and themes within the collected data. After extracting the contents, the themes were identified based on the appropriate categories.

4.0 Findings

The analysis revealed three main themes: human factors, conducive environment factors, and other supporting factors. A summary of the emerging themes and sub-themes from answering the research question is illustrated in Figure 1.

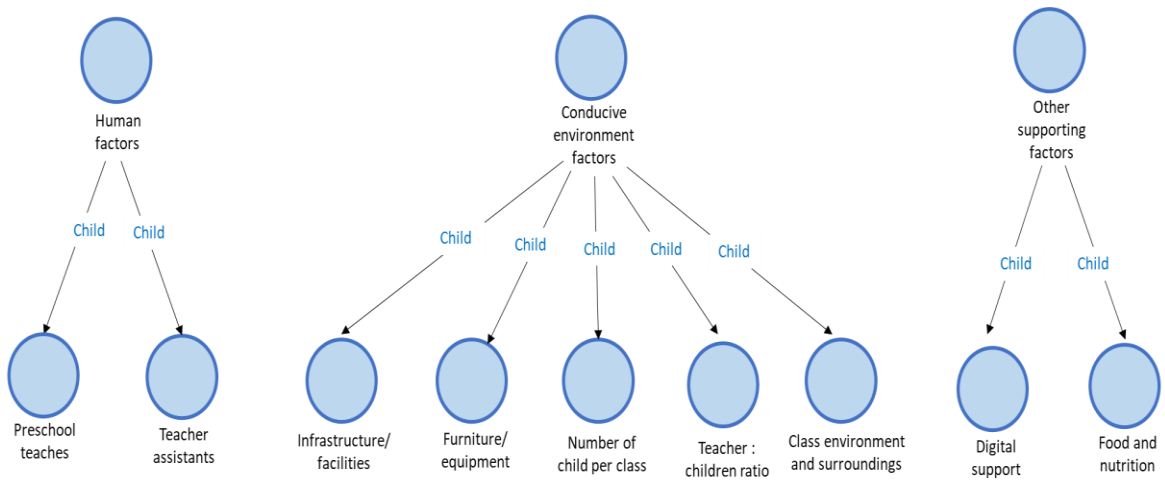

Figure 1: Emerging themes and sub-themes from the analysis

4.1 Human factor

Based on the data analysis, human factors top the list of the structural quality requirements for public preschool programme in Malaysia. Human factors consist of two sub-themes: preschool teachers and teacher assistants.

All eighteen key informants unanimously agreed on the human factor as the main theme with preschool teachers' sub-theme at top of the list. The entire sample collectively viewed preschool teachers as the primary requirement for any preschool programme. As highlighted by a top downer:

"I believe the most important one is the qualified teachers. Without teachers, no class can be conducted. It's like a plane without a pilot. You can't fly a plane without a pilot. Similarly, no class can be conducted without a teacher." (Mr K, SMD, MoE, policy maker)

His view was supported by another key informant from the bottom-upper category:

"Teachers come first before any other things. Without teachers, no class can be conducted." (Datin R, JPWP, MoE, policy implementer)

Mrs U, a mother of two, from the outside-inner group, also stated her opinion clearly that teachers are vital in any preschool programme:

"The role of a teacher is important. We as parents must acknowledge that." (Mrs U, home-based tailor, policy receiver)

Most previous studies hardly highlighted the importance of teacher assistants as the structural requirements in any preschool programme. However, in this study, most of the key informants agreed on the support and handiness of teacher assistants in running a preschool programme. This can be seen from a response by a preschool expert from the top-downer category:

"The role of teacher assistant is important. To assist teachers, to cook and to help in running a preschool class." (Associate Professor Dr. H, UPSI, policy maker)

The same view was shared by a preschool teacher, the actual implementer on the ground:

"To run a preschool class, we need both the preschool teacher as well as the teacher assistant. A teacher won't be able to run a class single-handedly." (Teacher K, preschool teacher, policy implementer)

Amongst other responses from the key informants regarding the importance of teacher assistants include:

"We do need teacher assistants. If there is only one class with a teacher and no teacher assistant, we are not going to open that class." (Mr. R, SMD, MoE, policy maker)
"To open up preschool classes, we need both teachers and teacher assistants…" (Mr. K, SMD, MoE policy maker)
"To show the importance of their roles, teacher assistants were upgraded from daily allowances to monthly salary." (Dr. M, SMD, MoE, policy maker)

4.2 Conducive environment factors

The second theme concerned the conducive environment factors. Based on the analysis, there were five sub-themes that fell under the conducive environment factors, namely infrastructure or facilities, furniture or equipment, number of children per class, teacher : student ratio, and class environment and surroundings.

Primarily, the requirement of good infrastructure and facilities for a quality preschool was generally shared by most of the key informants. Amongst the responses from the key informants include:

> *"A preschool should have a conducive learning environment, which encompasses of separate learning, playing and dining area, proper toilets..." (Dr. F, NCDRC, policy maker)*
> *"To run any preschool class, we first need to identify a proper area with a proper class size…" (Miss M, JPWP, MoE, policy implementer)*
> *"A preschool should have good facilities, such as a proper and separate learning, playing, and eating area, its own clean toilet…" (Mrs L, research officer, policy receiver)*

In addition, the key informants also highlighted the furniture and equipment aspects of the classroom. Specifically, they mentioned tables, chairs, and writing boards.

"When the government implemented teaching and learning from home during the COVID-19 pandemic hit, the first thing parents bought besides a laptop was a white board because most houses have tables and chairs that can be converted into learning areas. That shows how important furniture is." (Mr. K, SMD, MoE, policy maker)
"I started a preschool class from scratch. At that time, the only furniture available were a long table, a few benches, and a blackboard. That is actually enough for a teacher to start running a basic preschool class." (Teacher Hi, preschool teacher, policy implementer)
"Unlike primary schools, infrastructure and furniture in prasekolah are smaller to cater for preschool children's size. It is important for the children to feel comfortable while learning." (Teacher M, preschool teacher, policy implementer)

Thirdly, the number of children per class has been highlighted as one of structural quality requirement for preschool programme. The key informants emphasised on the maximum number of twenty-five children per class.

"It is hard to control if the number of children exceed than twenty-five per class. We need the right number of children so that we can handle them properly." (Teacher K, preschool teacher, policy implementer)
"The preschool class size is smaller than the mainstream primary school class. Therefore, any number exceeding twenty-five children per class will make the class crammed." (Teacher Ha, preschool teacher, policy implementer)
"The preschool that my son went to was conducive because there was a cap of twenty-five children per class. And I believe it's just the right number for a preschool class." (Mrs. A, special need primary school teacher, policy receiver)

All categories of key informants (the top-downer, bottom-upper, and outside-inner) believed that the number of children per class is linked directly with children: teacher ratio. Thus, it was also highlighted as one of the important requirements for preschool structural quality.

"It's a known fact that a class of preschool has a teacher and a teacher assistant with a maximum of twenty-five children." (Associate Professor

Dr. H, UPSI, policy maker)
"If there are four classes, there should be four teachers and four teacher assistants. Otherwise, we don't open the class." (Mr. R, SMD, MoE, policy maker)
"It should be a teacher, a teacher assistant and a maximum of twenty-five children in a class." (Datin R, JPWP, MoE, policy implementer)
"It is a standard that each preschool class has a teacher and an assistant with twenty-five children. There are some isolated cases, whereby a class exceeds that twenty-five children limit." (Teacher N, preschool teacher, policy implementer)
"Each class has a teacher and an assistant with a maximum of twenty-five children…" (Mrs. E, lab assistant, policy receiver)

A preschool class in Malaysia is considered operating at its ideal capacity by most key informants when class size is kept at twenty-five children per class with the supervision of a teacher and a teacher assistant. Diversions from such typical situation perhaps is considered as non-optimal.

Finally, the class environment and surroundings have been identified as another essential structural quality elements by the key informants. A couple of the top-downers highlighted that:

"Apart from teachers, I think the internal and external environment factors are also important. We need conducive learning environment." (Dr. F, NCDRC, policy maker)
"Of course, it would be good if preschool classes can have its own building, like the private providers have. A proper learning environment for children." (Mr. K, SMD, MoE, policy maker)

Their views were being supported by key informants from both the bottom-upper and outside-inner categories:

"We need to assess the physical environment before we decide to open a new preschool class. Assess the safety and security aspects of the area prior to approval for class opening." (Miss M, JPWP, MoE, policy implementer)
"A better class condition would be a plus points to attract parents to send their children there, apart from safety and cleanliness (Mrs S, housewife, policy receiver)
"As parent, I need to know that my child is in a safe environment." (Mrs L, research officer, policy receiver)

4.3 Other supporting factors

Apart from the two important structural quality requirements, this study found another emerging theme as important requirements for preschool programmes, that is other supporting factors, without which the structural quality elements deemed incomplete. Two sub-themes fall under the main theme of other supporting factors: digital support, and food and nutrition.

In this study, a few key informants highlighted the significance of digital support in running preschool programme, particularly during the pandemic COVID-19 hit. A policy maker at SMD, MoE mentioned that:

"We can't deny the need for modern gadgets like computer, LCD, and the like, particularly during the COVID-19 hit." (Mr. K, SMD, MoE, policy maker)

His view was being supported by a policy implementer in JPWP, MoE and a preschool teacher with sayings that:

"Time has changed…now we need the support of new technological gadgets to facilitate teaching and learning." (Miss M, JPWP, MoE, policy implementer)
"The new emerging gadgets like LCD, and the interactive learning are the in-thing now, particularly during the COVID-19 pandemic." (Teacher Ha, preschool teacher, policy implementer)

A policy receiver tended to agree with all of them that digital support is another structural quality elements that should be present in preschool programme.

"Teaching should incorporate latest, modern, and interactive teaching methods." (Mrs A, special need primary school teacher, policy receiver)

In addition to digital support, the key informants also expressed the need for healthy and nutritious food in the preschool programme. Amongst their responses include:

"The children need to eat nutritious food to become healthy. It is something that we provide in prasekolah." (Dr. M, SMD, MoE, policy maker)
"Here we provide food for the children. The assistants will take turn to cook and serve the food to children because small children don't go to canteen to get food during break, unlike the primary school children." (Teacher Ha, preschool teacher, policy implementer)
"I prepare food for my son to bring to school. But they do provide food during break in school, which I think is good, especially for busy parents who aren't always able to bring their children food." (Mrs. A, special need primary school teacher, policy receiver)

5.0 Discussions

This study reiterated the findings by Hattie, 2015 whereby teachers are primarily responsible for providing high-quality experiences to children, defined in terms of responsive, warm, and stimulating interactions (Schleicher, 2019), and of suitable and planned instruction

(Pianta et al., 2009). In the case of Malaysia, Kamaruddin et al. (2017) have stressed the need to reflect and improve teachers' quality, apart from the need for higher preschool management. Even until today, the shortage of quality preschool teachers is still one of the main concerns in Malaysia.

These preliminary findings were consistent with evidence from studies by Razak et al., 2019; and Tonge et al., 2016 indicating that conducive learning environment is a crucial structural quality requirement for any preschool programmes. Malaysian local authorities throughout the country are trying to provide guidelines for designing childcare centers' physical environment but presently, they are limited to general aspects and explanations (Nik Azhari et al., 2015).

Findings on this research were aligned with those of previous studies conducted by Bowne et al., 2017; Rodriguez & McKee, 2021; and Williams et al., 2018, on group size and adult-child ratio. With smaller groups, teachers are able to spend more time on one-on-one interactions with children (Hagekull & Hammarberg, 2004) and behaviour management can be less demanding (Wasik, 2008). Few other studies generally found that with lower-ratio settings, teachers spend less time managing children in the classroom and are able to provide more stimulating, responsive, and warm care (Burchinal, 2018).

6.0 Conclusion & Recommendations

In conclusion, this research has investigated the structural quality requirement in Malaysia public preschools based on multiple stakeholders' perspectives. It provided a clear description of the standard structural quality required in public preschools based on triparty stakeholders' perspectives. Even though there has been prior research on structural quality, this research has provided insights from the multiple stakeholders' point of view – top-down perspectives of policy makers, bottom-up views of policy implementers, and outside-in viewpoints of policy receivers. This study highlighted that human factors, conducive environment factors, and other supporting factors are the key elements of structural quality requirements in Malaysia preschool education. In addition, the preliminary findings of the study highlighted the identification of teacher assistant as one of the structural quality requirements in Malaysia public preschools, which most previous studies failed to stress on. Therefore, it is crucial for the Ministry of Education to enhance these elements of structural quality to guarantee the quality of preschool education in Malaysia.

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Paper Contribution to Related Field of Study

This research has identified a new element of structural quality requirement, that is teacher assistants, which has merely been highlighted in other earlier studies. Even though this research was mainly on Malaysian context, it adds to the understanding of structural quality requirements through a different and diverse lens and context.

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