

NATURE AS CONTENTS AND CONTEXTS IN
CHILDREN'S LEARNING IN PRESCHOOLS IN
MALAYSIA: A GROUNDED THEORY STUDY

BY

SITI NOOR FAUZIAH ABD RAHIM

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ABSTRACT

This study aims to develop a substantive framework for a nature-based teaching and learning implementation in preschool education setting in Malaysia. This is to address a major shortcoming that this subject has been under-researched and existing literatures have neglected to account for its current implementation in the Malaysian context. This study attempts to identify the extent and methods used by the teachers to implement nature-based teaching and learning in their classroom teaching practices. It also aims to discover the issues and factors impeding the implementation from the perspectives of preschools teachers, preschools officer, and preschools supervisors. This will enable teachers, academics, readers, policymakers, and stakeholders to understand the situation better and to develop ways to enhance the implementation. Eighteen preschool teachers from public and private preschools in Malaysia, one preschool officer, and three preschool supervisors were involved in this research and they were selected through theoretical and purposive sampling. The Grounded Theory approach was applied in the qualitative research method and the data collection method comprised of semi-structured interviews, non-participant observation, and document analysis. Findings showed that nature-based teaching and learning in preschools in Malaysia is being implemented through nine mediums: lessons about plants, fruits, and vegetables; teach from the preschool garden; nature-based field trips; STREAM/STEM education; hands-on lessons and activities with plants; nature-based art activities; environmental sustainability activities; nature-based program and activities with families and the community; and physical activity through tele-matches and literacy games. The results also revealed four main issues that estranged the venture to integrate natural materials and natural environments in the teachers' educational practices: namely the technology and threat to children's relationship with nature and development; the danger of Covid-19 (Coronavirus) which decimates outdoor learning and nature-based activities; the teachers' preferences for and use of teaching aids and materials; and the teachers' dilemma in curriculum and teaching practices. The findings highlighted that the challenges to the implementation included: implementation accountability; parental beliefs and attitudes towards nature-based teaching and learning in preschool; conducting nature-based teaching and learning outdoors; managing children's behavior, safety and security; lack of physical supplies, facilities and natural resources; and time management. Despite these challenges, five key success factors were identified as significantly contributing to the critical success of the implementation, which appeared as teachers' motivations, accessibility and availability of natural green space and natural materials, good support system (within the preschool community), collaboration with the community, related agencies, and institutions, and encouraging teacher professional development training. Hence, the study has established a substantive framework for the implementation of nature-based teaching and learning in Malaysian preschools. Finally, the research proposed five best practices for successfully implementing nature-based teaching and learning in a preschool setting, including the following: utilizing readily available natural materials in teaching and learning; utilizing the natural environment as a classroom; extending learning beyond the preschool gates; well-planned lesson plans and activities; and safety concerns during the teaching and learning process. By highlighting the current implementation of nature-based teaching and learning in Malaysian preschool education settings, this study helps policymakers, academics, and

preschool teachers to better understand the situation and to put great efforts to incorporate nature into preschool teaching and learning in every possible way.



خلاصة البحث

تهدف هذه الدراسة إلى تطوير الإطار العمل الموضوعي لتطبيق التعليم والتعلم البيئي في بيئة التعليم لمرحلة رياض الأطفال في ماليزيا. وذلك لمعالجة النقص الرئيسي المتمثل في أن هذا الموضوع لم يتم البحث عنه بشكل كافٍ وأن الدراسات السابقة قد أهملت تفسير تنفيذها الحالي في السياق الماليزي. تحاول هذه الدراسة تحديد النطاق والأساليب التي يستخدمها المعلمون لتنفيذ التعليم والتعلم البيئي في ممارسات التعليم في الفصل. كما تهدف إلى اكتشاف القضايا والعوامل التي تعوق التنفيذ من وجهة نظر معلمي رياض الأطفال، ومسؤول رياض الأطفال، ومشرفي رياض الأطفال. والأمر سيمكن ذلك المعلمين والأكاديميين والقراء وواضعي السياسات وأصحاب المصلحة من فهم الوضع بشكل أفضل وتطوير طرق لتعزيز التنفيذ. عينة البحث تتكون من ثمانية عشر معلمًا لرياض الأطفال من رياض الأطفال العامة والخاصة في ماليزيا، وموظف واحد لمرحلة رياض الأطفال، وثلاثة مشرفين في مرحلة رياض الأطفال. وتم اختيارهم من خلال أخذ العينات النظرية والهادفة. تم تطبيق منهج النظرية الأساسية في هذا البحث الكيفي وطريقة جمع البيانات تتألف من مقابلات شبه منظمة، وملاحظة غير المشاركة، وتحليل الوثائق. أظهرت النتائج أن التعليم والتعلم البيئي في رياض الأطفال بماليزيا يتم تنفيذهما من خلال تسع وسائل: دروس حول النباتات والفواكه والخضروات؛ تعليم من الحديقة في رياض الأطفال، رحلات ميدانية بيئية؛ تعليم STREAM / STEM؛ الدروس العملية والأنشطة مع النباتات؛ الأنشطة الفنية البيئية؛ أنشطة الاستدامة البيئية؛ البرامج والأنشطة البيئية مع الأسر والمجتمع؛ والنشاط البدني من خلال المباريات عن بعد وألعاب محو الأمية. كشفت النتائج أيضًا عن أربع قضايا رئيسية أبعثت مشروع دمج المواد الطبيعية والبيئات الطبيعية في الممارسات التعليمية للمعلمين: وهي التكنولوجيا وتهديد علاقة الأطفال بالطبيعة والتنمية، خطر فيروس Covid-19 (فيروس كورونا) الذي يقضي على التعلم خارج الفصل الدراسي والأنشطة البيئية؛ تفضيلات المعلمين واستخدامهم لوسائل التعليم والمواد؛ ومعضلة المعلمين في المناهج وممارسات التعليم. وأبرزت النتائج أن التحديات التي تواجه التنفيذ تشمل: مساءلة التنفيذ؛ معتقدات ومواقف الوالدين تجاه التعليم والتعلم البيئي في مرحلة رياض الأطفال؛ إجراء التعليم والتعلم البيئي خارج الفصل الدراسي؛ إدارة سلوك الأطفال وسلامتهم وأمنهم؛ نقص الإمدادات المادية والتسهيلات والموارد الطبيعية؛ وتنظيم الوقت. على الرغم من هذه التحديات، تم تحديد خمسة عوامل نجاح رئيسية على أنها تساهم بشكل كبير في النجاح الحاسم للتنفيذ، وهي دوافع للمعلمين، وإمكانية الوصول إلى المساحات الخضراء الطبيعية والمواد الطبيعية وتوافرها، ونظام دعم جيد (داخل مجتمع

رياض الأطفال)، والتعاون مع المجتمع والهيئات والمؤسسات ذات الصلة، وتشجيع تدريب التطوير المهني للمعلمين. ومن ثم، فقد أنشأت الدراسة إطارًا موضوعيًا لتنفيذ التعليم والتعلم البيئي في رياض الأطفال بماليزيا. وأخيرًا، اقترح البحث خمس ممارسات أفضل للتنفيذ الناجح للتعليم والتعلم البيئي في بيئة رياض الأطفال، بما في ذلك ما يلي: استخدام المواد الطبيعية المتاحة بسهولة في التعليم والتعلم؛ الاستفادة من البيئة الطبيعية كالصف الدراسي؛ توسيع نطاق التعلم خارج بوابات رياض الأطفال؛ خطط الدراسة والأنشطة جيدة التخطيط؛ ومخاوف السلامة أثناء عملية التعليم والتعلم ومن خلال تسليط الضوء على التنفيذ الحالي للتعليم والتعلم المعتمدين على الطبيعة في إعدادات التعليم ما قبل المدرسة الماليزية تساعد هذه الدراسة صانعي السياسات والأكاديميين ومعلمي ما قبل المدرسة على فهم الموقف بشكل أفضل وبذل جهود كبيرة لدمج الطبيعة في التدريس والتعلم في مرحلة ما قبل المدرسة بكل طريقة ممكنة.



APPROVAL PAGE

The dissertation of Siti Noor Fauziah Abd Rahim has been approved by the following:

Mastura Badzis
Supervisor

Nik Suryani Nik Abdul Rahman
Co-Supervisor

Siti Rafiah Abdul Hamid
Internal Examiner

Mazlina Che Mustafa
External Examiner

Mohamad Naqib Eishan Jan
Chairman

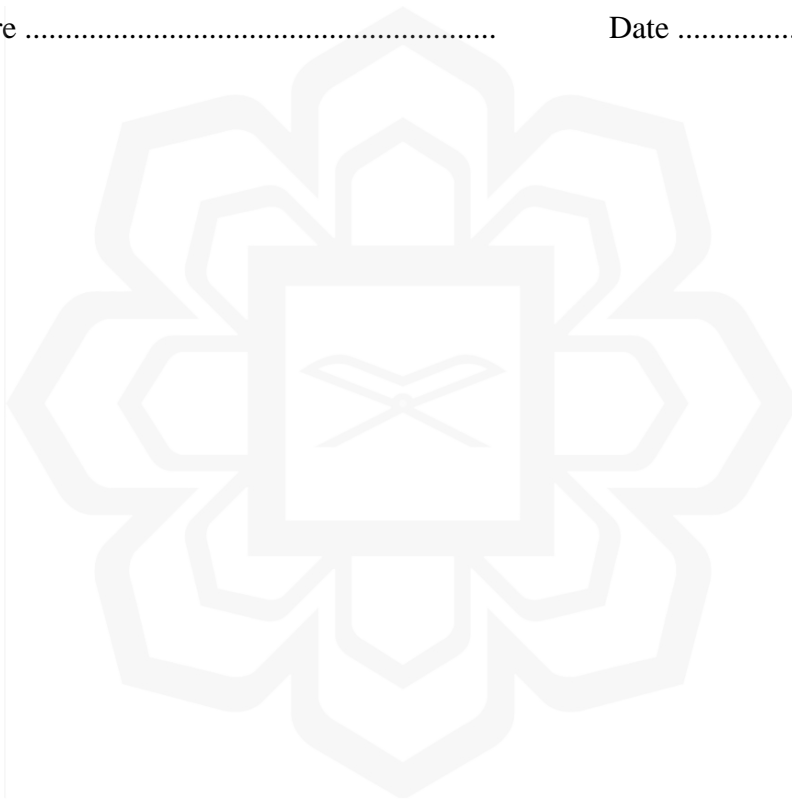
DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Siti Noor Fauziah Abd Rahim

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In the name of the Almighty Allah, the Most Gracious and Merciful.

All praise is due to Him alone; we have no knowledge of His other than what He has taught us. In truth, it is He who is perfect in knowledge and wisdom, through which this dissertation has finally attained its present form. All blessings and peace be upon the Prophet Muhammad (s.a.w), his family, and all his companions.

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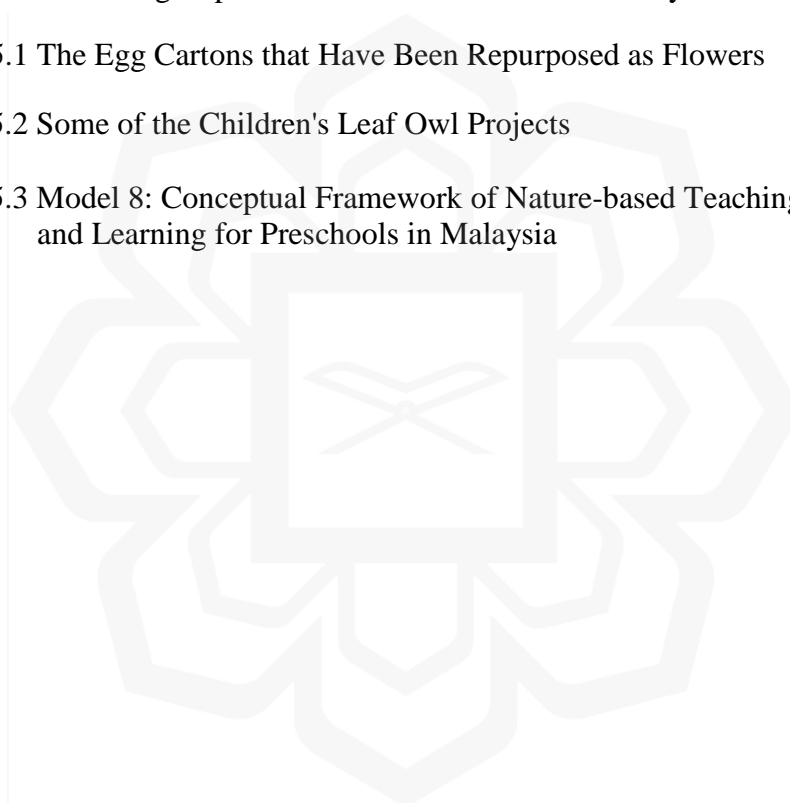
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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Education is not only about achieving a higher form of knowledge; it is also about adequately preparing and equipping our children with the knowledge and tools they need to succeed in the larger world outside. Education should create a learning environment or ambiance that encourages children to learn and achieve their objectives. This is where children can recognize and appreciate positive changes in their behaviour, as well as learn new information and a desire to learn more. Children learn in a variety of ways that adults do not. In this way, children's learning is shaped not only by what happens inside the classroom but also by what happens outside of it. Because of its importance in early learning, the environment is often referred to as the 'third teacher' (after parents and educators); human beings can also learn a lot from the natural environment around them.

In his book *How Children Learn* (1995), John Holt asserts that learning is as natural to children as breathing. Furthermore, according to Bullock (1994), children are naturally curious about their surroundings and enjoy exploring them. Children, particularly young children, learn through the active construction of knowledge through hands-on experience (Bandura, 1977; Dewey, 1938; Piaget, 1947; Vygotsky, 1998). In this regard, the child's environment shapes his or her experience and stimulates the child's formation of understanding of the world (Sebba, 1991).

Rather than seeing nature as merely a decorative backdrop for play, children interact with it explicitly and creatively. Children can be engrossed in nature for hours as they examine plants and insects and play with mud and water. Naturalist Intelligence is the eighth domain of Howard Gardner's Multiple Intelligences, according to Gardner (1983). Gardner defines it as the ability to recognize flora and fauna, to make other important distinctions in the natural world, and to put that ability to good use (Gardner, 1993, p.206). Children's learning activities in nature allow them to use all of their

senses, closely observe, and differentiate a variety of natural materials such as leaves, pebbles, and flowers based on their appropriate characteristics.

Engaging in learning activities with nature, breathing fresh air, and observing the flora and fauna, and the green trees provide a real and open-ended experience for children. As children use all their senses to make the most of the natural world, they also encounter real nature that is, not just the information from books, pictures, or the experiences of others. In this way, learning becomes meaningful as children gain experiences in real-world situations and can relate directly to prior experiences or concepts that are learned in the classroom (Norazizah, Sopia & Noor Ashikin, 2016; Miller, Tichota & White, 2014). Direct experience with nature also helps children feel a part of the natural world, develop a deeper connection with nature, and later foster responsibility to care for nature (Beery, Chawla & Levin, 2020). Undoubtedly, children who have gained more nature experience in their daily learning activities are more advanced, and capable, of applying knowledge and experience to a new and real-life situation, which gives meaning to their lives.

The integration of children learning with nature is consistent with the Standard National Preschool Curriculum (SNPC), which is also known as the Kurikulum Standard Prasekolah Kebangsaan (KSPK), and that places children at the center of learning activities. Children are actively involved in their learning and have more opportunities to communicate with peers, developing cooperation skills because of this child-centered approach. More importantly, education policy is now geared toward producing global citizens who are well-versed in global and environmental sustainability issues, as well as be driven to address them. Perhaps most importantly, through a strong connection between children and nature, children are able to recognize the interdependence between themselves as human beings, and the natural environment, and thus understand the importance of environmental preservation (Geng, Xu, Ye, Zhou & Zhou, 2015). Children who feel connected to nature are more likely to protect it.

The concept of children learning with nature is also consistent with UNESCO's Four Pillars of Education: Learning to Know, Learning to Do, Living Together, and Learning to Be (Delors, 1998, p.21-22). In its 1996 report, *Learning: The Treasure Within*, the Commission has identified life-long learning as the key to meeting the

challenges of the 21st century, and the four pillars of learning as proposed are seen as fundamental principles for reshaping twenty-first-century education. As previously stated, children learning with nature focuses on children learning about the natural world around them by actively exploring, experimenting, discovering, and creating. This early exposure gives children the ability to make decisions and choices, as well as to participate in their learning process. Because children are active participants in this process, it provides opportunities for socialization and collaboration with teachers and other peers to achieve common goals. Furthermore, by learning with nature, children understand and recognize the connection that exists between them and their immediate surroundings.

It is also supported by the perspective of Islam as a religious belief, in which Allah has created the Universe and, in fact, everything in the Universe, including nature, is fashioned by Him; Allah is the one who adorns this world and skies with the sun, moon, stars, rivers, seas, gardens, various animal species, and small insects; Allah is the one who controls natural processes such as rain, waves, eclipses, droughts, and many others; Allah also creates all animals and plants, as well as their reproductive abilities. Human beings, as Allah's vicegerents and His trustees on earth, should govern this world justly. Allah owns nature and its elements, and everything in nature is proof of His existence and supremacy. The Quran describes nature as an Open-Book to be rehearsed by humans in order to see His signs through many of its beautiful verses one of which is: "Behold! In the creation of the heavens and the earth; in the alternation of the night and the day: in the sailing of the ships through the ocean for the profit of mankind; in the rain which Allah sends down from the skies, and the life which He gives therewith to an earth that is dead; in the beasts of all kinds that He scatters through the earth; in the change of the winds, and the clouds which they trail like their slaves between the sky and the earth; (Here) indeed are Signs for a people that are wise" (Qu'ran; Al-Baqarah: 164).

The Quran proclaims in this revealing verse that we should look to nature to learn about our Creator. This earth is essential to humankind. Water, land, plants, and animals are not only available on earth to support life, but also to represent a common chain. We, as humans, are undeniably in need of all these elements to live. As a result,

to properly govern this Universe, it must be ensured that all elements are in their proper place, and that function perfectly.

However, the rapid development of the material world is sacrificing the natural environment and gradually demolishing it in the name of livelihood and advancement. Values deteriorate because of greedy behaviour toward wealth and physical satisfaction. Our natural resources are being eroded and depleted. This brought many alarming environmental issues to the planet, such as landslides, floods, drought, and famine, among other things. Meanwhile, with the abolishment of these natural environments, our young generation gradually lost the ability to observe and explore their natural world freely and easily. Furthermore, the existing learnings on environmental issues such as global warming, the greenhouse effect, and natural disasters are insufficient to raise awareness among the youth (Saripah, Yeop Hussin & Zainudin, 2013). As a result, it is critical to teach and connect our young children to nature, especially since it is still visible, available, and free of cost. More fundamentally, it is hoped that early exposure to nature beginning in the preschool years will foster a deep sense of responsibility and affection for the environment from a young age.

Without a doubt, the preschool years not only provide children with a foundation for learning but also allow children to socialize with a range of people (i.e teachers, peers). Early education learning also allows children to explore and experience various resources and places, such as the natural environment around them. Children will discover the joy of learning when they are provided with a conducive and rich learning environment, which is followed by developmentally appropriate practice.

However, children's exploration and discovery in nature are often viewed as a dangerous space and a risk to their safety (Bento & Dias, 2017), and they are frequently advised to avoid these forms of ventures. Similarly, parental fears about dangers lurking in the mud and overprotective parenting prevent families from allowing children to do what comes naturally to them, which is to explore nature, wonder about nature, and get a little messy both at preschool and at home (Brussoni & Olsen, 2012). This situation certainly inhibited the children's ability to explore and learn new things. Nature deprivation in children can lead to a variety of developmental outcomes, including a loss of interest and freedom in nature exploration and learning, nature withdrawal,

physical inactivity, and a lack of emotional connections with nature (Soga & Gaston, 2016; Collado, Staats & Corraliza, 2013).

Preschool Education in Malaysia

According to UNESCO, early childhood education and care (ECEC) is the “holistic development of a child’s social, emotional, cognitive, and physical needs in order to lay a solid and broad foundation for lifelong learning and wellbeing.” Early Child Care and Education (ECCE) in Malaysia plays an important role in achieving this goal as the central programme that provides a range of facilities to cater to the needs of young children from toddlers to six years old (UNESCO, 2006).

In Malaysia, ECCE is divided into two age groups: (1) Childcare centres for children aged newborn to four years old, and (2) Preschools for children aged four to six years old. Different ministries are in charge of administering this programme. The Ministry of Women, Family and Community Development (MWFCD) manages the first group (0-4 years), while the Ministry of Education (MOE), Ministry of Rural and Regional Development, National Unity Department, and Department of Islamic Development Malaysia manage the second group (4-6 years). All public preschools in Malaysia are overseen by these four ministries. Aside from public preschools, there are many private preschools that are run by the private sector and non-governmental organizations (NGOs), which are also overseen by the Ministry of Education (MOE). Preschool institutions in Malaysia are known by a variety of names in the local language, including MOE preschool (under MOE), Tadika KEMAS (under Ministry of Rural and Regional Development), Tadika PERPADUAN (under National Unity Department), and Tadika Islam/KAFA (Department of Islamic Development Malaysia) (Ministry of Education, 2007).

Preschool’s Curriculum in Malaysia

In practice, the goal of ECCE is translated through The Standard National Preschool Curriculum (SNPC) or Kurikulum Standard Prasekolah Kebangsaan (KSPK), which