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PIONEERING EDUCATIONAL PERSPECTIVES

Series 2025

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Chief Editors:
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Preface

Pioneering Educational Perspectives: Series 2025 is a collection of thought-provoking insights and research contributions exploring contemporary educational trends and practices. This eBook presents a diverse range of perspectives on innovative teaching methodologies, digital learning strategies, and transformative approaches in education. Designed to serve as a resource for educators, researchers, and practitioners, it aims to inspire meaningful discussions and advancements in the field. Through carefully curated chapters, this publication offers fresh ideas and practical solutions to enhance learning experiences in an ever-evolving educational landscape.

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I-POTTY PRO: EMPOWERING PRESCHOOL CHILDREN'S TOILET INDEPENDENCE THROUGH ENGAGING DIGITAL SUPPORT

Noor Amiera Alias[1*], Masne Kadar[2], Farahiyah Wan Yunus[3], Katie Cremin[4] & Nurul Ku Harmila[5]

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ABSTRACT
Toilet independence is crucial for preparing children for school readiness, yet parents and teachers often lack the knowledge and effective methods to guide children through this critical milestone. This study aimed to develop and assess the usability of I-Potty Pro, an innovative, occupational therapy-based app for toilet training. A cognitive interview was conducted with three parents and two teachers who care for preschool children aged 3 to 4 years. The results revealed three main categories: 1) Less time-consuming, 2) User-friendly, and 3) Connectivity, along with an additional four categories: Completeness, Strategies, Challenges, and Cyberspace. The study confirmed that the app is time-efficient, concise, and easily accessible. However, a notable weakness is that I-Potty Pro requires a stable internet connection, which may limit accessibility in areas with poor connectivity. Despite this, the findings suggest that I-Potty Pro is well-positioned to meet the growing demand for digital tools in dual-working households, with scalability for use in both schools and homes. Future plans include offering subscription services, customizable content for special needs populations such as children with Autism, and broader implementation across schools in Malaysia. A pilot study is planned to further validate its effectiveness, with potential partnerships enhancing its academic and commercial credibility.

KEYWORDS: Toilet training, Occupational Therapy, Children, Teachers, parents

PROBLEM AND OBJECTIVE
One of the key factors or barriers to achieving toilet independence is the educational methods employed and parental expectations, which can significantly influence the success of the training process (Schum et al. 2002). Parents also lack knowledge about when to start and what skills are needed to prepare children for toilet training (Nawawi & Badayai 2021). Furthermore, parents and teachers struggle to find effective tools for guiding children through the essential milestone of toilet training, which is crucial for school readiness (Greer et al. 2016). The lack of structured, evidence-based resources, combined with uncertainty about the appropriate age to start and the necessary preparations, contributes to delays in toilet independence, negatively impacting children's confidence and preparedness for formal education. Consequently, when children continue to wear diapers due to delayed toilet training, it further increases the cost of living for families, adding financial strain on top of the developmental challenges. Therefore,

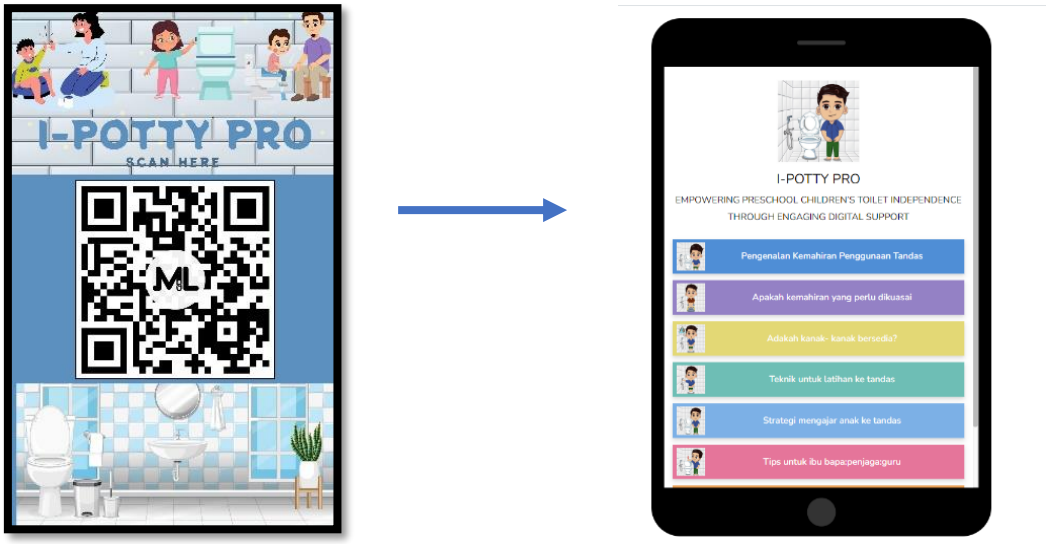
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this study aimed to develop and assess the usability of I-Potty Pro, an innovative, occupational therapy-based app for toilet training

DESIGN DESCRIPTION

This app consists of six tabs in Malay version: Pengenalan (Introduction), Apa kemahiran yang perlu dikuasai? (Skills Needed for Toilet Readiness), Adakah kanak-kanak bersedia? (Characteristics of Toilet Independence), Teknik untuk latihan ke tandas (Techniques for Toilet Training), 6.Tips untuk ibu bapa/penjaga/guru (Strategies, and Tips for Parents, Caregiver and Teachers). Each tab is designed to assist teachers and parents in guiding children through toilet training, providing accessible information anytime and anywhere. All the content is organized and sourced from evidence-based studies. All important aspects, such as the suitable age to start toilet training, tools, and materials needed, are included in the introduction. This app is easy to understand; however, it requires parents to have an email and internet connection to access it. The content is developed in Malay, as Bahasa Melayu is the national language of Malaysia. The intellectual property rights for I-Potty Pro, including patents and trademarks, are currently under application to secure its unique concept and technology (IP/PT/00252).

VISUALS



NOVELTY AND UNIQUENESS

I-Potty Pro is innovative in its integration of occupational therapy principles with a digital platform, providing evidence-based, structured guidance for toilet training. Unlike traditional tools, I-Potty Pro offers an interactive, user-friendly interface that allows parents and teachers to access resources ubiquitously. The app's comprehensive approach covers all aspects of toilet training, from readiness skills to strategies and tips, ensuring that users have a complete toolkit at their fingertips. The techniques suggested including *Three combination techniques* (Greer et al. 2016), the *Child-Oriented Toilet Training Method, and Foxx and Azrin's Method of Toilet Training in Less Than One Day* (Thomson et al. 2008). All of these techniques have been validated by previous studies. This unique combination of professional insight and digital accessibility sets I-Potty Pro apart from existing solutions, which often require parents and teachers to search for information online or rely on paper materials. At the same time, we can support environmental sustainability by going paperless.

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BENEFITS TO MANKIND

I-Potty Pro addresses a critical need in early childhood development by providing a structured, accessible tool for toilet training, preventing delays in this essential milestone. The app fosters independence and confidence in children while easing the burden on parents and teachers. By promoting consistent training practices, I-Potty Pro reduces stress and frustration, positively impacting family dynamics and early education. This aligns with Malaysia's commitment to the Education 2030 Agenda and the 5-Year National Progress Report on SDG 4 (UNICEF, 2021), which emphasize every child's right to quality care and holistic development during early childhood.

COMMERCIAL POTENTIAL

I-Potty Pro has strong market potential, particularly among dual-working households and educational institutions seeking effective tools for early childhood development. Its scalability makes it suitable for widespread adoption in preschools, daycare centers, and homes. The app's competitive advantage lies in its evidence-based approach and the inclusion of customizable content for special needs populations, such as children with Autism. Future business models could include subscription-based services, premium features, and partnerships with educational institutions, ensuring a sustainable and profitable growth trajectory.

PUBLICATION

The innovation has been published under the following citation: Alias, N. A., Kadar, M., Wan Yunus, F., & Cremin, K. (2023). An Exploration of Understanding Teaching Motor Skills Related to Self-Care Skills among Typical Preschool Children: Parents' and Teachers' Perspectives. *Journal of Occupational Therapy, Schools, & Early Intervention*, 17(2), 201–215. https://doi.org/10.1080/19411243.2023.2168825.

CONCLUSION

I-Potty Pro represents a significant advancement in the field of early childhood development by offering a comprehensive, accessible solution for toilet training. Its combination of occupational therapy principles with digital technology makes it a unique and valuable tool for parents, teachers, and caregivers. Moving forward, further validation through pilot studies and the exploration of additional features tailored to special needs populations will be key to enhancing the app's impact and commercial success.

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