UNIVERSITI TEKNOLOGI MARA

PIONEERING EDUCATIONAL PERSPECTIVES

Series 2025

THE World University Rankings 2023 TOP 1501+
TOP 128 UI GreenMetric
MDEC Premier Digital Tech Institution
THE IMPACT RANKINGS 2022 TOP 101-200
MyRA

PIONEERING EDUCATIONAL PERSPECTIVES

Series 2025

Chief Editors:
Nur Alyani binti Khairol Anuar
Muhammad Irfan bin Mokhtar

Editors:
Aqeela binti Ahmad Kamiri
Hawa Syamsina binti Md Supie
Nurul Nadiah binti Rasdi
Qistina Azra binti Mohani
Siti Aishah binti Taib
Nurul Hijah binti Jasman
Siti Mariam binti Mohammad Iliyas

Published by:
Academy of Language Studies, Universiti Teknologi MARA
Cawangan Johor, Kampus Pasir Gudang, Jalan Purnama,
Bandar Seri Alam, 81750 Masai, Johor Darul Ta'zim.
07-3818455
edgii.apbpg@gmail.com

Copyright © Pioneering Educational Perspectives: Series 2025

All rights reserved. No part of this publication may be reproduced in any form or by electronic or mechanical means, including information storage and retrieval systems, or transmitted in any form or by any means, without the prior permission in writing from the publisher.

e-ISBN : 978-967-0033-31-0

Published date: 2025

Chief Editors:
Nur Alyani binti Khairol Anuar
Muhammad Irfan bin Mokhtar

Editors:
Aqeela binti Ahmad Kamiri
Hawa Syamsina binti Md Supie
Nurul Nadiah binti Rasdi
Qistina Azra binti Mohani
Siti Aishah binti Taib
Nurul Hijah binti Jasman
Siti Mariam binti Mohammad Iliyas

Published by:
Academy of Language Studies, Universiti Teknologi MARA Cawangan Johor, Kampus Pasir Gudang, Jalan Purnama, Bandar Seri Alam, 81750 Masai, Johor Darul Ta'zim.
07-3818455
edgii.apbpg@gmail.com

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.

e-ISBN: 978-967-0033-31-0

EAT SABAH AUTHENTIC 160
Sairah Saien[1,*] & Sylvia Nabila Azwa Ambad[2] 160
PEMBANGUNAN APLIKASI MUDAH ALIH eREPORT V2.0 (MyPROJLOG) 164
Noorashikin Binti Mustafa[1]*, Haslina Binti Tawyer[2] & Irma Binti Maaman[3] 164
PEMBANGUNAN DAN PENILAIAN APLIKASI WEBWISENOTE SEBAGAI SUMBER RUJUKAN BERPUSAT 168
Irma Binti Maaman[1,*], Noorashikin Binti Mustafa[2] & Haslina Binti Tawyer[3] 168
INNOVATIVE APPROACHES TO RESTAURANT OPERATIONS: USING CLOUD-BASED POS IN EDUCATION 172
Nurshayzwani binti Abd Samad[1,*] 172
AR-GREENBUILDING 176
Haleefa Mahmood[1]*, Eddie Rosman Abdul Jalil[2], Mazni Kasbolah[3], Hasnul Hariz Marzuki[4] & Maihani Shariff Fudin[5] 176
PROMOTING SUSTAINABLE EDUCATIONAL INCLUSIVITY THROUGH OFFLINE DIGITAL LEARNING 180
Najmi Najiha Mohd Zaid[1]*, Nur 'Izzah Mohammad Shuhaimi[2], Ai'syah Abd Mutalib[3], Nurul Adawiyah Mohamad Johdi[4] & Marina Mohamad Amir[5] 180
ED-STAT: OPTIMIZING TEACHING AND LEARNING OF INTRODUCTION TO STATISTICS 184
Muhammad Zulkhairi Zakariah[1,*], Akmal Shafiq Badarul Azam[2], Muhammad Shahimi Ariffin[3], Muhammad Anas Abdul Razak[4] & Mohd Zuhaili Kamal Basir[5] 184
I-POTTY PRO: EMPOWERING PRESCHOOL CHILDREN'S TOILET INDEPENDENCE THROUGH ENGAGING DIGITAL SUPPORT 188
Noor Amiera Alias[1,*], Masne Kadar[2], Farahiyah Wan Yunus[3], Katie Cremin[4] & Nurul Ku Harmila[5] 188
AG LEX FACILI: LAW OF AGENCY MADE EASY 192
Zuramaznum Sainan[1], Nasreen Miza Hilmy Nasrijal[2,*] & Baharuddin Alias[3] 192
E-MODUL KURSUS ASAS BAHASA ISYARAT MALAYSIA (EM-KABIM) 196
Vestly Kong Liang Soon[1,*], Pollie Lim Poh Yue[2], Norazlin Binti Mohd Rusdin[3], Kway Eng Hock[4] & Grace Annammal A/P Gnana Piragasam[5] 196
EzLy-DReAM: A DUAL-OPTION DIGITAL RECORDING ASSESSMENT METHOD FOR THE SUSTAINABLE USE OF PRE-INSTALLED AUTO-TRACKING CAMERAS IN CLASSROOMS 200
Norliawati Mohd Sidek[1,*], Nur Aina Zaimul Khalil[2], Nur Hayani Zaimul Khalil[3], Nur Aqilah Ghazali[4] & Puteri Lailatul Aqashah Mohd Rosdi[5] 200
MIM SAKINAH 101 204
Murihah Abdullah[1,*], Izzat Rafiq Burhanudin[2], Muhammad Najibullah Mohamed Suhami[3], Affan Badrol Hisham[4] & Nor Farhah Saidin[5] 204
FLASH3R 208
Ra Flora anak Raban[1,*], Dora anak Aling[2], Radzi bin Tajudin[3], Pollie Lim Poh Yue[4] & Vestly Kong Liang Soon[5] 208

e-ISBN: 978-967-0033-31-0

PROMOTING SUSTAINABLE EDUCATIONAL INCLUSIVITY THROUGH OFFLINE DIGITAL LEARNING

Najmi Najiha Mohd Zaid[1]*, Nur 'Izzah Mohammad Shuhaimi[2], Ai'syah Abd Mutalib[3], Nurul Adawiyah Mohamad Johdi[4] & Marina Mohamad Amir[5]

[1,2,3,4,5]*Centre for Foundation and General Studies, Universiti Selangor*

**Corresponding author: najminajiha@unisel.edu.my*

ABSTRACT

Access to quality language education remains a significant challenge in regions with limited or no internet connectivity, leaving millions of learners excluded from modern digital learning tools. This project introduces an offline digital language game, designed to bridge the gap by offering a fun, interactive, and accessible language learning experience without the need for internet access. Delivered via a simple plug-and-play pen-drive, the game can be instantly played on any screen or compatible device, making it ideal for schools and communities with minimal infrastructure. This product incorporates adaptive learning, interactive gameplay, and gamification aspects to ensure engagement and participation from the users. Additionally, the game fosters digital literacy, helping learners in underserved areas become familiar with technology without relying on an internet connection. By promoting educational inclusivity and bridging the digital divide, this offline digital language game offers a scalable, low-cost solution that empowers learners in remote and under-resourced areas, contributing to global efforts for equitable and sustainable education.

KEYWORDS: Offline digital, Digital learning, Learning inclusivity, Quality education, Offline digital learning.

PROBLEM AND OBJECTIVE

While online platforms have made language learning more accessible to many, there are still some communities excluded as they have limited or no access to the internet (Chiou & Tucker, 2020). This causes hindrances towards educational inclusivity and perpetuates inequalities in language acquisition, which is essential for academic success and future opportunities (DeLuca, 2013; Wang et al., 2022). There is thus a critical need for a solution that delivers the benefits of digital language learning without relying on continuous internet connectivity (Li & Lan, 2021). Our offline digital language game addresses this need by offering an interactive and engaging language learning experience that can be used in any environment. The primary objective of our offline digital language game is to promote educational inclusivity by providing a fun and interactive way for learners to acquire language skills without the need for internet access. The game is designed to be adaptable to different languages and age groups, making it a versatile tool for learners across various cultural and linguistic contexts.

DESIGN DESCRIPTION

According to Hjort and Tian (2021), millions of learners, particularly in remote and under-resourced areas, are excluded from quality education due to limited internet connectivity. Based on our own experiences and coming from an area where the internet connection is sometimes disrupted, we decided on creating an offline digital learning aid that is able to help the educators or learners continue their learning sessions despite not having a strong internet connection.

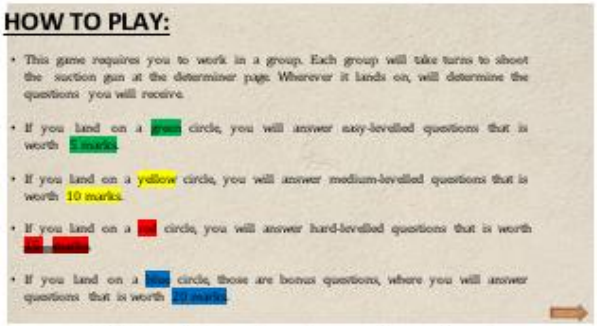
e-ISBN: 978-967-0033-31-0

The purpose of this product is to enable not only educators but also learners from excluded areas to have access to digital games even without internet connection. Some of the main key features of our product is that it is accessible offline, where the game operates entirely without internet, making it accessible in remote areas or regions with unreliable connectivity. Besides that, our product highlights an interactive gameplay, where our language game uses gamified elements such as levels, rewards, and challenges to keep learners engaged and motivated. Lastly, our product highlights the concept plug-and-play, where our product will be delivered on a pen-drive, allowing users to simply plug it into any screen or compatible device (such as a TV or computer) and instantly start playing. This eliminates the need for installation, internet access, or complex setup, making it highly accessible for schools and communities with limited technical infrastructure.

VISUALS



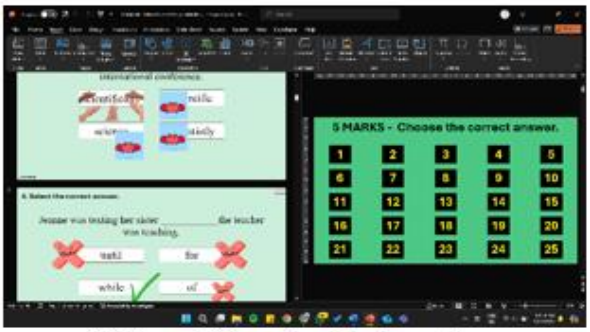
Picture 1: Welcome page



Picture 2: Instructions- how to play



Picture 3: Scoreboard



Picture 4: Easy-levelled question



Picture 5: Medium-levelled questions



Picture 6: Hard-levelled questions

NOVELTY AND UNIQUENESS

Our product offers a fully offline digital learning experience, unlike most digital language learning tools that rely on internet connectivity. This product provides a complete, immersive language learning experience entirely offline. Our product comes in the form of a plug-and-play pen-drive design that allows instant access to the game by simply connecting it to any screen or device, without any need for software installation or network connection. This ensures

e-ISBN: 978-967-0033-31-0

its usability even in the most resource-constrained environments. This seamless setup eliminates the complexity of conventional digital learning tools, offering an easy-to-use, low-tech solution for schools and communities with minimal technological infrastructure.

BENEFITS TO MANKIND

Our product promotes inclusivity of education to everyone. By providing an offline solution, it ensures that no learner is left behind due to geographical or technological barriers. The second benefit is our product can become a tool to mitigate digital divide. By advocating digital learning without the need for internet access, learners in areas where internet-based educational tools are unavailable can also partake in digital approach learnings. The third benefit of our product is that we aim to provide a sustainable education solution, supporting lifelong learning. As an offline and low-cost tool, this product is sustainable and can be implemented in various regions without the need for internet infrastructure, which supports the Sustainable Development Goals (SDGs) by promoting inclusive and equitable quality education (SDG 4).

COMMERCIAL POTENTIAL

Targets underserved regions, appealing to governments, NGOs, schools, and CSR programs with global adaptability. Offers offline access, plug-and-play simplicity, low cost, cultural adaptability, and personalized learning, making it ideal for low-resource areas. Our product is also easily scalable through low-cost pen-drive distribution, wide device compatibility, customizable content, and partnerships with governments, NGOs, and corporations. Lastly, our product requires minimal development costs, low-cost production via pen-drives, and minimal maintenance to ensure scalable, affordable distribution.

CONCLUSION

In summary, our product is an offline digital language game designed to provide accessible language learning in regions with limited or no internet connectivity. Delivered via a simple plug- and-play pen-drive, it allows learners to start playing instantly on any screen or compatible device. The game features grammar games and exercises, allowing it to be used for many different teaching plans. With its offline capability, it bridges the digital divide by offering a low-cost, scalable solution for schools, NGOs, and governments, enabling inclusive education in underserved communities. Its ease of use, affordability, and ability to function without internet make it ideal for low-resource environments globally. In the future, we plan to develop more learning materials including notes, exercises, tests and many more, still catering to the offline digital learning plan to ensure inclusive learning and equal education among everyone in the world.

REFERENCES

Hjort, J., & Tian, L. (2021). The economic impact of internet connectivity in developing countries. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3964618

Chiou, L., & Tucker, C. E. (2020). Social distancing, internet access and inequality. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3568255

DeLuca, C. (2013). Toward an Interdisciplinary Framework for Educational Inclusivity. *Canadian Journal of Education, 36,* 305-348.

Wang, Y., Derakhshan, A., & Pan, Z. (2022). Positioning an agenda on a loving pedagogy in second language acquisition: conceptualization, practice, and research. *Frontiers in*

e-ISBN: 978-967-0033-31-0

Psychology, *13*. https://doi.org/10.3389/fpsyg.2022.894190

Li, P., & Lan, Y.-J. (2022). Digital Language Learning (DLL): Insights from Behavior, Cognition, and the Brain. *Bilingualism: Language and Cognition*, *25*(3), 361–378. doi:10.1017/S1366728921000353