UNIVERSITI TEKNOLOGI MARA

PIONEERING EDUCATIONAL PERSPECTIVES

Series 2025

THE World University Rankings 2023 TOP 1501+

TOP 126 UI GreenMetric World University Rankings

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

Contents

e-FinLex (e-FINANCIAL LEXICON) 349

Umi Insyirah Pakasa[1], Joycelyne Anak Nyandang[2]*, Norazimah Mejri[3] & Azlan Yusof Punding[4] 349

PRESERVING AND PROMOTING *DONDANG SAYANG* THROUGH MUSIC TRANSCRIPTION AND EDUCATION 353

Md Jais Ismail[1*], Tee Yong Lai[2] & Vinisha Rajendran[3] 353

INNOVATIVE PROBLEM SOLVING AND VISUALIZATION LEARNING AIDS (PROVA) FOR EXTREMUM OF FUNCTIONS 358

Ng Set Foong[1*] & Foo Fong Yeng[2] 358

TIME TO ENGLISH (TTE): TYPES OF SENTENCE 362

Nur Fadzilah Muhamad Zamani[1]*, Ira Syaqira Sukimin[2], Norhafizah Amir[3], Shahira Adam[4] & Susanna Bithiah Varma[5] 362

EMPOWERING STUDENTS WITH THE 4P'S SOMA FRAMEWORK: A NEW APPROACH TO CRITICAL THINKING AND REFLECTIVE LEARNING 366

Arenawati Sehat Binti Omar[1]* & Zalina Binti Mohd. Desa[2] 366

INNOVATIVE ANDRAGOGY: LEVERAGING AI AND ONLINE PLATFORMS TO ENHANCE ADULT LEARNING OUTCOMES 372

Hamidah Md Yusop[1*] & Zoel-Fazlee Omar[2] 372

MOOC WAVES AND OPTICS 376

Mohd Zaki Mohd Yusoff[1]*, Muhammad Firdaus Othman[2], Suraya Ahmad Kamil[3], Siti Zafirah Zainal Abidin[4] & Zalina Zainal Abidin[5] 376

PADLET UNBOXED: THE DIGITAL ENGAGEMENT EXPERIENCE 379

Nur Shuhada Ya'acob[1*] 379

CTU EASY ACCESS CENTER 383

Syaimak Ismail[1]* & Azhar Abdul Rahman[2] 383

KAEDAH ORANG LIDI (PIK) DALAM PENULISAN KARANGAN BM SPM KSSM 387

Mohamad Jalil bin Mohamad Yunus[1*] & Norhayati binti Mat Ali[2] 387

UTILIZING MOOCS FOR HOLISTIC LEARNING IN HALAL CERTIFICATION STANDARDS AND QURANIC AND HADITH COURSES 392

Nurulaina Saidin[1]*, Mohd Ashrof Zaki Yaakob[2], Fadilah Abd Rahman[3] Mohd Asmadi Yakob[4] & Hanifah Musa Fathullah Harun[5] 392

DbAPedia – LEARNING PLATFORM FOR DATABASE ADMINISTRATION COURSE 396

Norshadila Ahmad Badela[1*] & Mohd Noor Halmy Ab Latif[2] 396

ENGINEERING DESIGN: A GUIDE TO FINAL YEAR PROJECT (FYP) 400

Matzaini Katon* & Norhanifah Abdul Rahman 400

ENHANCING HTML LEARNING THROUGH REAL-TIME OPEN-SOURCE TOOLS 404

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

INNOVATIVE ANDRAGOGY: LEVERAGING AI AND ONLINE PLATFORMS TO ENHANCE ADULT LEARNING OUTCOMES

Hamidah Md Yusop[1*] & Zoel-Fazlee Omar[2]

[1,2]*Arshad Ayub Graduate Business School, Universiti Teknologi MARA (UiTM), Shah Alam, Selangor, Malaysia*

**Corresponding author: hamidahyusop@uitm.edu.my*

ABSTRACT

Teaching approaches that integrate artificial intelligence (AI) and online platforms into adult education are meant to optimise learning outcomes. By leveraging AI, the project enhances andragogy principles through personalized learning experiences, allowing adult learners to engage at their own pace and according to their unique needs. The design focuses on real-time feedback, adaptive learning pathways, and scalable solutions that cater to the diversity of adult learners. Key features include AI-driven analytics, personalized content delivery, and continuous assessment systems that align with adult learners' cognitive, emotional, and motivational needs. This innovation ultimately aims to transform traditional adult education into a more engaging, efficient, and accessible experience, supporting lifelong learning and professional development since it is accessible to all adult learners on online platforms such as YouTube.

KEYWORDS: Artificial intelligence, Adult learner, Andragogy, Heutagogy

PROBLEM AND OBJECTIVE

The rapid pace of technological change necessitates continuous learning for adult learners, yet traditional methods of andragogy often fall short in addressing the individual needs of these learners and do not fully utilize technological advancements to enhance learning outcomes. Traditional adult education frameworks, which emphasize problem-solving and experiential learning, need to be re-evaluated and integrated with modern technological tools to create a more personalized learning experience by highlight the importance of integrating andragogical principles into training designs, emphasizing that relevant experiences are crucial for mastering knowledge in practical contexts (Lestariningsih et al., 2020). This integration is essential for developing solutions that are informed by existing design principles and technological innovations.

Moreover, the transition from traditional face-to-face education to online learning environments poses significant challenges that can be mitigated through effective course redesign teaching strategies which assert that such redesigns not only facilitate the integration of technology but also enhance interactive learning experiences, which are aligned with andragogical principles (Kebritchi et al., 2017). This approach is further by the emergence of heutagogy, or self-determined learning, which emphasizes learner control and intrinsic motivation as the key elements that can be enhanced through the use of artificial intelligence (AI) and digital platforms in educational settings (Blaschke, 2012). By leveraging AI, the proposed learning system can adapt to individual learning styles and paces, thereby improving knowledge retention and application.

The challenges faced by adult learners, such as memory lapses and the pressure to achieve, can be alleviated through the fulfilment derived from effective learning experiences. Additionally,

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

the past findings indicate that an andrological framework at the institutional level is crucial for evaluating e-learning success, emphasizing the need for a macro perspective that encompasses technology, environment, and individual factors (NAM, 2023). In conclusion, the development of a learning system that integrates AI and digital platform are to enhance personalized learning experiences is not only timely but necessary. By addressing the gaps in traditional andragogical methods and leveraging modern technological tools, this project aims to create a flexible and adaptive learning environment that supports continuous improvement in teaching methodologies.

DESIGN DESCRIPTION

The design of the project focuses on integrating AI tools such as Microsoft Clipchamp and online platforms such as YouTube within adult education frameworks to provide a personalized and adaptive learning experience. Key features of the design include AI-driven content recommendation systems that tailor educational materials to the learner's performance and interests, and predictive analytics to track progress and suggest learning paths. The functionality revolves around creating an interactive and responsive learning environment that adapts to the pace and preferences of the learner. The target audience is adult learners in professional and academic settings especially MBA students taking strategic management courses, as well as institutions that seek to modernize their teaching methods. The unique selling point is the seamless integration of AI, which ensures continuous improvement in learning outcomes through data-driven insights and accessibility to online platforms for learning purposes such as recapping the lectures done in the classroom setting.

VISUALS

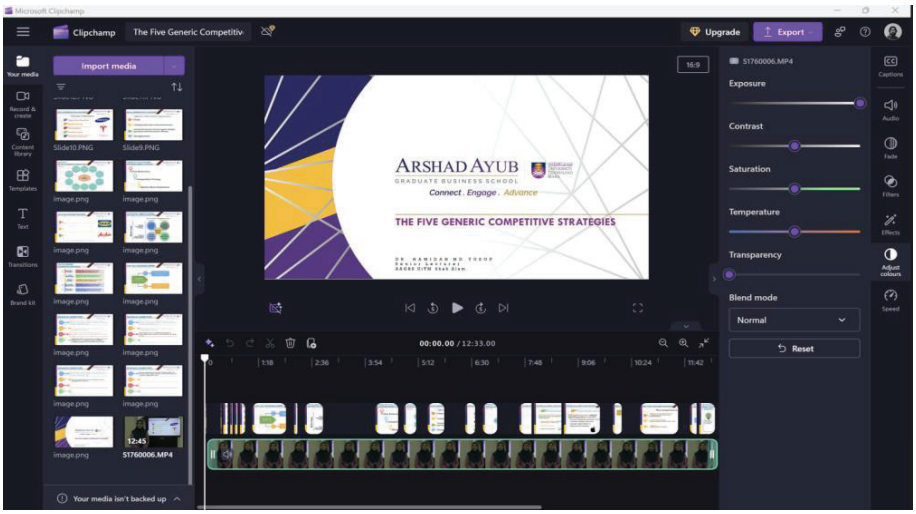


Image 1: Microsoft Clipchamp

Image 2 above depicts the teaching slides accompanied by recorded audio and video, which were edited using Microsoft Clipchamp before being uploaded to the online platform YouTube.

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

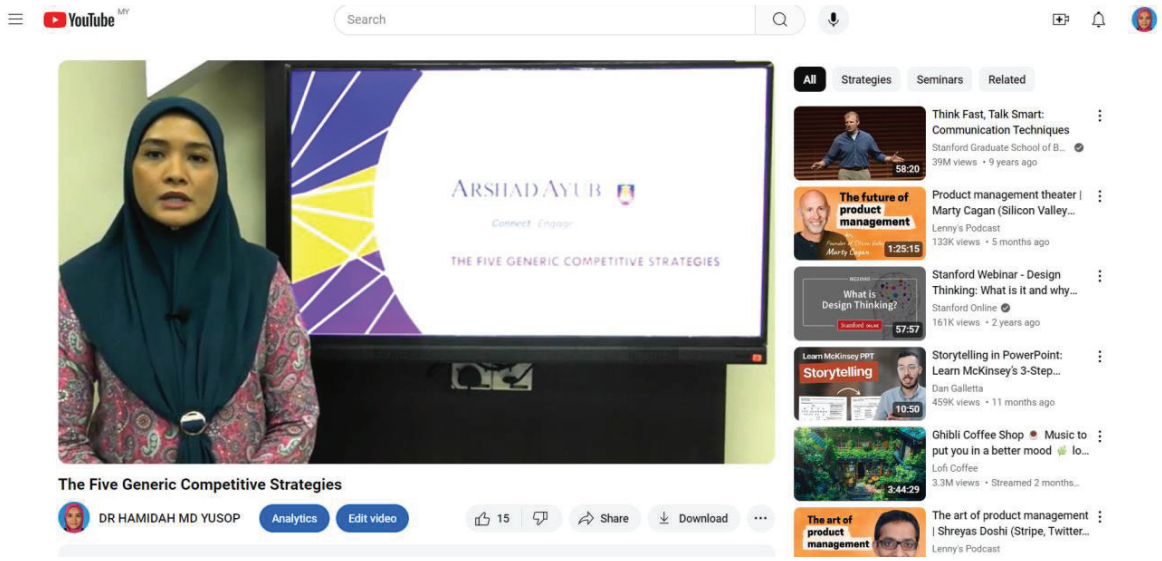


Image 2: YouTube Dashboard

The edited version of the instructional presentation (Image 2) was uploaded to YouTube via the instructor's account. The link (https://youtu.be/eDu0zsgQ7HU?feature=shared) was shared with all adult learners in the class, and the video was made publicly accessible to a broader audience.

NOVELTY AND UNIQUENESS

The innovation lies in the comprehensive integration and application of traditional teaching approaches with AI and digital platforms to all aspects of adult learning. While AI has been applied in education before, this design is unique in its focus on personalized and adaptive learning specifically for adult learners. It takes into account the distinct characteristics of adult learning, such as self-direction, problem-solving, and immediate application of knowledge. Unlike traditional methods, this approach leverages real-time data to make personalized recommendations, providing a more flexible and efficient learning experience. This is particularly relevant for adult learners who require education that can be integrated into their busy schedules and complex life demands.

BENEFITS TO MANKIND

This design has the potential to revolutionize adult education by making learning more accessible, personalized, and effective. Leveraging AI and online platform allows adult learners to engage in continuous, self-paced learning that fits into their personal and professional lives. This not only improves the quality of education but also enhances the workforce's ability to adapt to technological changes, thereby contributing to overall economic growth.

COMMERCIAL POTENTIAL

The design has significant commercial potential, particularly in the fields of adult education, corporate training, and professional development. Its competitive advantage lies in its scalability and adaptability across various industries and sectors. The AI-driven personalized approach differentiates it from existing educational tools, providing a more tailored experience that can be marketed to educational institutions, corporations, and online learning platforms such as micro-credentials. The business model could involve subscription services, licensing

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

the technology to educational providers, or offering the platform as a software-as-a-service (SaaS).

CONCLUSION

This project demonstrates a novel approach to adult education by integrating AI and digital platforms to create a personalized, adaptive learning experience. It addresses current gaps in traditional andragogy methods and offers a scalable solution for modern adult learners. Future developments could include expanding the system's capabilities to include more advanced AI features, such as predictive analytics for career progression or integrating virtual and augmented reality to enhance engagement. Overall, the project provides a forward-thinking solution to the challenges of adult education in the digital age.

REFERENCES

Blaschke, L. (2012). Heutagogy and lifelong learning: a review of heutagogical practice and self-determined learning. *The International Review of Research in Open and Distributed Learning, 13*(1), 56. https://doi.org/10.19173/irrodl.v13i1.1076

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education. *Journal of Educational Technology Systems, 46*(1), 4-29. https://doi.org/10.1177/0047239516661713

Kim, C. (2024). Exploring the higher education journey: adult learners in early childhood education. *Asia-Pacific Journal of Convergent Research Interchange, 10*(1), 611-621. https://doi.org/10.47116/apjcri.2024.01.47

Lestariningsih, F., Madya, S., & Nurkamto, J. (2020). Pedagogical problems encountered by teachers of English to computer science students in the Indonesian context. *Edulite Journal of English Education Literature and Culture, 5*(1), 1. https://doi.org/10.30659/e.5.1.1-13

NAM, S. (2023). The role of educational factors in the success of corporate e-learning: a case study. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi, 11*(2), 577-596. https://doi.org/10.18506/anemon.1127801