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**“Optimizing Innovation in Knowledge, Education and Design”**

## ***EXTENDED ABSTRACT***



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*“Optimizing Innovation in Knowledge, Education and Design”*

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Assalamualaikum warahmatullahi wabarakatuh,



First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality. I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services. By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality. I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

*Professor Dr. Roshima Haji Said*  
RECTOR  
UiTM KEDAH BRANCH



## WELCOME MESSAGE (i-SPIKE 2023 CHAIR)



We are looking forward to welcoming you to the 3<sup>rd</sup> International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPIKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPIKE 2023; your dedication and hard work are greatly appreciated.

*Dr. Junaida Ismail*

Chair

3<sup>rd</sup> International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023)





## **EQUAL EDUCATION (e2): EASY-TO-USE APPLICATION SOFTWARE TO PROVIDE AWARENESS ON EDUCATIONAL RIGHTS OF CHILDREN WITH DISABILITIES IN MALAYSIA**

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### **ABSTRACT**

Education is important to everyone, especially children with disabilities. It plays an essential role in their life because education will ensure children with disabilities have a bright future, enable them to make decisions and allow them to participate fully in society. In Malaysia, even though the government provides educational rights for all citizens, the educational rights of children with disabilities are not fully protected. They are not given equal educational rights as other normal children to access education since there are some requirements imposed by the Ministry of Education and schools' administrators. Besides, there are gaps in the current laws and regulations relating to the educational rights of children with disabilities in Malaysia, such as scattered laws, too general, and loopholes. Not to mention, society's negative perceptions towards children with disabilities also prevent them from enjoying their educational rights. Hence, children with disabilities in Malaysia cannot access education equally as other normal children. This application is developed to provide understanding to Malaysians on the educational rights of children with disabilities and to enhance their knowledge and awareness of laws and regulations relating to the educational rights of children with disabilities. Besides, this application is developed to provide a platform for the parent of children with disabilities and members of society to exchange their views and thoughts regarding the special education system in Malaysia to enable children with disabilities to access equal educational rights as other normal children. The Equal Education (e2) application is easy to use, user-friendly, informative, efficient, and suitable to be used by all Malaysians.

**Keywords:** Equal Education, Children with Disabilities, Educational Rights, Special Education, User- friendly Application



## INTRODUCTION

Education plays an essential role in everyone's lives, especially children with disabilities. Education will ensure everyone has a bright future and enable them to build their character (Ajay Bhardwaj, 2016). Besides, it will allow children with disabilities to read, write, and be given the opportunity to make decisions involving their life (Muhammad Nadhir et al., 2016). Due to the importance of education, Article 26 of the Universal Declaration of Human Rights provides, "Everyone has the right to education". Furthermore, Section 28 of the Persons with Disabilities Act 2008 also provides educational rights for Persons with Disabilities (PWDs) and children with disabilities. Section 28 of the Act stated, "Persons with disabilities shall not be excluded from the general education, and children with disabilities shall not be excluded from pre-school, primary, secondary and higher education, on an equal basis with persons or children without disabilities, including vocational training and lifelong learning".

PWDs have been defined under Section 2 of the same Act as "include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society", while children with disabilities have been defined by World Health Organisation (WHO) as "any child unable to ensure by himself wholly or partly, the necessities of a normal individual and social life, as a result of deficiency either congenital or not, in his physical or mental capabilities". There are seven types of disability in Malaysia, namely hearing impairments, visual impairments, physical disabilities, speech difficulties, learning disabilities, mental disabilities, and multiple disabilities (Nurhidayah Abdullah et al., 2017). In 2019, the Ministry of Women, Family, and Community Development introduced six sub-categories of learning disabilities, namely Global Developmental Delay, Down Syndrome, Attention Deficit Hyperactivity Disorder, Autism, Intellectual, and Specific Learning Disabilities through the new Identification Document for PWDs Card (*Kad OKU*) (Ministry of Education, 2019).

However, even though Section 28 of the Persons with Disabilities Act 2008 provides educational rights for children with disabilities on an equal basis as other normal children, the children faced difficulties accessing education due to their disability status. Regulation 4 of the Education (Special Education) Regulations 2013 requires children with disabilities to attend a three-month probationary period to determine their suitability to attend schools. This requirement is considered as having the same effect as the previous requirement under the Education (Special Education) Regulations 1997, which classified the children into 'educable' and 'non-educable'. Hence, the requirement violates the educational rights of children with disabilities in Malaysia (Malaysian Human Rights Commission, 2015). Besides, the special education sector in Malaysia is currently facing an acute shortage of qualified teachers and special education specialists. Some states do not have sufficient spediaeducation teachers (Suhaila Shahrul Annuar, 2019).

Not to mention, not all special education teachers possess a qualification in special education. Hence, they have problems delivering education to children with disabilities since they possess very little knowledge and skills in managing children with disabilities (Dashwini Selvam & Ardzulyana Anal, 2022). Moreover, most mainstream schools in Malaysia lack disabled-friendly facilities such as railings, ramps, lifts, and accessible toilets (Malaysian Education Blueprint 2015-2025). Hence, children with disabilities face difficulty accessing education due to these infrastructural barriers.

Besides, because of the negative perception towards children with disabilities, they have been treated negatively, including their chances of being admitted to schools. Lack of understanding and

knowledge of society regarding disability leads to negative perceptions and attitudes towards children with disabilities (Thompson et al., 2011). As a result, children with disabilities in Malaysia are not able to access education on an equal basis as other normal children as required by Section 28 of the Persons with Disabilities Act 2008 due to the requirement of a three-month probationary period, lack of qualified special education teachers, and lack of disabled-friendly facilities in schools.

## RESEARCH METHODOLOGY

This research adopts qualitative research methodology through library-based research. The researchers will examine the laws available such as the Federal Constitution, the Persons with Disabilities Act, the Education Act 1996, and the Education (Special Education) Regulations 2013. Besides, books, journal articles, and government websites will be analysed to obtain data and information regarding the educational rights of children with disabilities in Malaysia. The data and information obtained through library-based research are essential to assess the effectiveness of the current laws and regulations in protecting the educational rights of children with disabilities in Malaysia to enable them to access an equal education as other normal children.

## FINDINGS

Even though the government provides educational rights for children with disabilities through several laws and regulations, their educational rights are not fully protected since the current laws and regulations are scattered, too general in nature, and there are some loopholes in the laws. Furthermore, society's negative perceptions towards children with disabilities also prevent the children from accessing education on an equal basis as other normal children.

Currently, no application in Malaysia provides similar features as our invention in educating Malaysians to understand the educational rights of children with disabilities in Malaysia. With its easy-to-use and user-friendly interface, this application is suitable to be used by all Malaysians. Besides, the language used in this application is simple, and the design is modern, making it enjoyable to be used.

## COMMERCIALISATION POTENTIAL

The Equal Education (e2) application has great potential to provide understanding to Malaysians on the educational rights of children with disabilities in Malaysia and enhance their knowledge and awareness of laws and regulations relating to the educational rights of children with disabilities. Furthermore, this application will be a game changer in providing a platform for the parent of children with disabilities and society to share their experiences, views and thoughts regarding the importance of education for children with disabilities and feedback on Malaysia's current special education system. Hence, it will allow Malaysians to understand the educational rights of children with disabilities and enhance their awareness of the importance of equal education for all children in Malaysia. This application targets Malaysians and will benefit everyone, including society, parents of children with disabilities, and children with disabilities themselves, in educating and creating awareness of the educational rights of children with disabilities. Besides, this application is very convenient to

be used by everyone since it is user-friendly and easy to be used by all Malaysians. This application implements green elements in the product and is eco-friendly since no paper will be used. All the information regarding the educational rights of children with disabilities can be accessed through this application easily.

## CONCLUSION

In order to allow children with disabilities to access education on an equal basis as other normal children, and to protect their educational rights, all the barriers, including infrastructural and attitudinal, must be removed. It can be achieved by educating Malaysians on the importance of education to everyone, including children with disabilities. Their knowledge and awareness of the educational rights of children with disabilities must also be enhanced. So, the Equal Education (e2) application provides a solution to enhance the understanding of Malaysians on this matter. Therefore, children with disabilities will have the opportunity to access equal education as other normal children.

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## REFERENCES

- Ajay Bhardwaj. (2016). Importance of Education in Human Life: A Holistic Approach. *International Journal of Science and Consciousness*, 2(2). 23-28.
- Dashwini Selvam & Ardzulyana Anal. (2022). Pengetahuan dan Kemahiran Guru Pendidikan Khas dalam Melaksanakan Program Pendidikan Khas Integrasi (PPKI) Masalah Pendengaran. *Jurnal Pendidikan Bitara UPSI*, 15(1). 19-28.
- Human Rights Commission of Malaysia. (2015) *The Right to Education for Children with Learning Disabilities: Focusing on Primary Education*. <https://www.right-to-education.org/resource/malaysia-right-education-children-learning-disabilities-focusing-primary-education>
- Ministry of Education (MOE) National Education Blueprint (2013-2025). Putrajaya: Malaysian Ministry of Education.
- Ministry of Education. (2019). *YAB TPM Serah Kad OKU Kepada Murid SK Presint 9(2) Putrajaya*. <https://www.moe.gov.my/menumedia/media-elektronik/berita-dan-aktiviti/yab-tpm-serah-kad-oku-kepada-murid-sk-presint-9-2-putrajaya>
- Muhamad Nadhir Abdul Nasir & Alfa Nur Aini Erman Efendi. (2016). Special Education for Children with Disabilities in Malaysia: Progress and Obstacles. *Malaysian Journal of Society and Space*, 12(10). 78-87.

Nurhidayah Abdullah, Hanira Hanafi & Nur Izzati Mohd Hamdi. (2017). The Rights of Persons with Disabilities in Malaysia: The Underlying Reasons for Ineffectiveness of Persons with Disabilities Act 2008. *International Journal for Studies on Children, Women, Elderly, and Disabled*, 1. 127-134.

#### *Persons with Disabilities Act 2008*

Suhaila Shahrul Annuar. (2019, January 16). Tambah Guru Pendidikan Khas. *Harian Metro*. <https://www.hmetro.com.my/mutakhir/2019/01/412680/tambah-guru-pendidikan-khas>

Thompson, D., Fisher, K. R., Purcal, C., Deeming, C., & Sawrikar, P. (2011). *Community attitudes to people with disability: Scoping project*. Creative Commons CC-BY Attribution 3.0 Australia.

#### *Universal Declaration of Human Rights 1948*



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