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Teachers' Behavioral Intention and Acceptance of Technology-Based System Intervention Among Children with Autism Spectrum Disorder (ASD)

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Abstract

The fourth pillar of the United Nations Sustainable Development Goals is 'Quality education' to provide peace and prosperity to the world population; in addition, Special Education Reforms under the Malaysian government scope are influenced by the 'Shared Prosperity Vision 2030'. Special needs education underlines the importance of technological integration in the learning environment to support the communication, teaching, and learning needs of neurodiverse learners. The teachers are an intermediatory link between the learners and their parents and caregivers. Technological advancements assist educators in transforming the educational needs of neurodiverse learners at all academic levels. The early intervention-based teaching and learning process is advocated worldwide, as it has shown positive cues toward neurodiverse learners, especially those with Autism Spectrum Disorder (ASD). However, very little is known about the perception and behavior of teachers toward acceptance of technology-based intervention. Therefore, to bridge the identified gap in academic literature, this study explores the teachers' behavioral intentions concerning technology for teaching children with ASD. A conceptual framework has been developed based on the Unified Theory of Acceptance and Use of Technology 2 model (UTAUT2) and other recent studies to address the problem and identify possible stakeholder solutions. The developed hypothesis will be tested later through a survey-based self-administered questionnaire among the special education teachers in different parts of Malaysia and after the data analysis is performed using SmartPLS 3.2.6. The pre-test and pilot study results affirm the positive viability of the study for continued future work. © 2023, Penerbit Akademia Baru. All rights reserved.

Author Keywords

Autism Spectrum Disorder (ASD); behavioral intention; SDGs; special education teachers; Use of Technology; UTAUT2

References

- Farooq, Muhammad Shoaib, Salam, Maimoona, Jaafar, Norizan, Fayolle, Alain, Ayupp, Kartinah, Radovic-Markovic, Mirjana, Sajid, Ali
 - Acceptance and use of lecture capture system (LCS) in executive business studies: Extending UTAUT2

(2017) Interactive Technology and Smart Education, 14 (4), pp. 329-348.

- Khan, Mohammad Shadab, Mohamadali, Noor Azizah KS, Maher, Zulfikar Ahmed, Nisa, Syed Qamrun, Shaikh, Humaiz, Shah, Asadullah
 - Information technology (IT) based intervention among individuals with ASD (autism spectrum disorder): A review
 - (2019) 2019 IEEE International Conference on Innovative Research and Development (ICIRD), pp. 1-3. IEEE

- Jimenez, Bree A., Besaw, Jessica
- Building early numeracy through virtual manipulatives for students with intellectual disability and autism
- (2020) Education and Training in Autism and Developmental Disabilities, 55 (1), pp. 28-44.
- Sandbank, Micheal, Bottema-Beutel, Kristen, Crowley, Shannon, Cassidy, Margaret, Dunham, Kacie, Feldman, Jacob I., Crank, Jenna
 - Project AIM: Autism intervention meta-analysis for studies of young children (2020) *Psychological Bulletin*, 146 (1), pp. 1-29.

Siyam, Nur

Special Education Teachers' Perceptions on Using Technology for Communication Practices

(2018) Journal for Researching Education Practice and Theory (JREPT), 1 (2), pp. 6-18.

- Althobaiti, Shatha
 (2020) Special Education Teachers and Autism Spectrum Disorders: The Role of Objectives of Saudi Arabia's Vision 2030 and Special Education Teacher Burnout, PhD diss., Concordia University Chicago
- Yusof, Anuar Mohd, Daniel, Esther Gnanamalar Sarojini, Low, Wah Yun, Aziz, Kamarulzaman Ab.

Teachers' perception of mobile edutainment for special needs learners: the Malaysian case

(2014) International Journal of Inclusive Education, 18 (12), pp. 1237-1246.

- -Teck, Wong, Osman, Rosma, Choo, Pauline Swee, Rahmat, Mohd Khairezan Understanding student teachers' behavioural intention to use technology: Technology Acceptance Model (TAM) validation and testing (2013) International Journal of Instruction, 6 (1), pp. 89-104.
- Nizar, Nur Nabihah Mohd, Rahmat, Mohd Khairezan, Maaruf, Siti Zuraida, Damio, Siti Maftuhah

Examining the use behaviour of augmented reality technology through MARLCARDIO: Adapting the UTAUT model

(2019) Asian Journal of University Education, 15 (3), pp. 198-210.

- Tamilmani, Kuttimani, Rana, Nripendra P., Wamba, Samuel Fosso, Dwivedi, Rohita The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation (2021) International Journal of Information Management, 57, p. 102269.
- Siyam, Nur
 Factors impacting special education teachers' acceptance and actual use of technology
 (2019) Education and Information Technologies, 24 (3), pp. 2035-2057.
- Niknejad, Naghmeh, Ismail, Waidah Binti, Mardani, Abbas, Liao, Huchang, Ghani, Imran A comprehensive overview of smart wearables: The state of the art literature, recent advances, and future challenges
 (2020) Engineering Applications of Artificial Intelligence, 90, p. 103529.
- Baio, Jon, Wiggins, Lisa, Christensen, Deborah L., Maenner, Matthew J., Daniels, Julie, Warren, Zachary, Kurzius-Spencer, Margaret
 Prevalence of autism spectrum disorder among children aged 8 years-autism and developmental disabilities monitoring network, 11 sites, United States, 2014 (2018) MMWR Surveillance Summaries, 67 (6), p. 1.
- Olusanya, Bolajoko O., Davis, Adrian C., Wertlieb, Donald, Boo, Nem-Yun, Nair, M. K. C., Halpern, Ricardo, Kuper, Hannah

Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016

(2018) The Lancet Global Health, 6 (10), pp. e1100-e1121.

- Kaur, Jasvindar, Engkasan, J., Sivanesom, R., Bahar, N., Noorand, M., Kamarudin, K.
 (2015) Technical report autism spectrum disorder research in Malaysia,
 Institute for Public Health, Ministry of Health
- Nuckols, Cardwell C.
 (2013) The diagnostic and statistical manual of mental disorders (DSM-5),

Philadelphia: American Psychiatric Association

- (2020) Early Child Developmental Disabilities, World Health Organization. WHO
- Cheng, Shu-Chen, Lai, Chiu-Lin
 Facilitating learning for students with special needs: a review of technology-supported special education studies
 (2020) Journal of Computers in Education, 7 (2), pp. 131-153.
- Shonkoff, Jack P., Phillips, Deborah A.
 Committee on Integrating the Science of Early Childhood Development; National Research Council and Institute of Medicine 2000

 (2013) From Neurons To Neighborhoods: The Science of Early Childhood Development,
- Pinchover, Shulamit, Shulman, Cory
 Behavioural problems and playfulness of young children with ASD: the moderating role of a teacher's emotional availability
 (2019) Early Child Development and Care, 189 (14), pp. 2252-2264.
- Kopcha, Theodore J.
 Teachers' perceptions of the barriers to technology integration and practices with technology under situated professional development (2012) Computers & Education, 59 (4), pp. 1109-1121.
- Ford, Earl S., Croft, Janet B., Mannino, David M., Wheaton, Anne G., Zhang, Xingyou, Giles, Wayne H.
 COPD Surveillance-United States, 1999-2011 (2013) CHEST, 144 (1), pp. 284-305.
- Lanini, Marco, Bondioli, Mariasole, Narzisi, Antonio, Pelagatti, Susanna, Chessa, Stefano Sensorized toys to identify the early 'red flags' of autistic spectrum disorders in preschoolers
 (2019) Ambient Intelligence-Software and Applications, 9th International Symposium on Ambient Intelligence, pp. 190-198.
 Springer International Publishing
- Anuar, Siti Nur Aqila, Mokhtar, Noor Fadhiha, Set, Kalsitinoor
 Teachers Behavior Toward Digital Education
 (2019) Journal of Information System and Technology Management, 4 (13), pp. 32-47.
- Baharuldin, Zuraidah, Jamaluddin, Shahrir, Shahril, M., Shaharom, N., Mohammed, S., Zaid, R.
 - The role of teacher readiness as a mediator in the development of ICT competency in Pahang Primary School (2019) *Journal of Educational Research and Indigeneous Studies*, 2 (2), p. 15.
- Majid, Faizah Abd, Shamsudin, Nurshamshida Mohd Identifying factors affecting acceptance of virtual reality in classrooms based on technology acceptance model (TAM)
 (2019) Asian Journal of University Education, 15 (2), pp. 1-10.
- Nasir, Muhamad Nadhir Abdul, Efendi, Alfa Nur Aini Erman Special education for children with disabilities in Malaysia: Progress and obstacles (2016) *Malaysian Journal of Society and Space*, 12 (10), pp. 78-87.
- Venkatesh, Viswanath, Thong, James YL, Xu, Xin
 Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology
 (2012) MIS Quarterly, 36 (1), pp. 157-178.

 Liu, Gi-Zen, Wu, No-Wei, Chen, Yi-Wen Identifying emerging trends for implementing learning technology in special education: A state-of-the-art review of selected articles published in 2008-2012 (2013) Research in Developmental Disabilities, 34 (10), pp. 3618-3628.

• Quick Facts 2018

(2018) Malaysia Educational Statistics,

- Sekaran, Uma, Bougie, Roger
 (2016) Research methods for business: A skill building approach,
 7th ed. John Wiley & Sons
- Sekaran, Uma, Bougie, Roger
 (2013) Research methods for business: A skill building approach,
 6th ed. John Wiley & Sons
- Memon, Mumtaz Ali, Ting, Hiram, Cheah, Jun-Hwa, Thurasamy, Ramayah, Chuah, Francis, Cham, Tat Huei
 Sample size for survey research: Review and recommendations
 (2020) Journal of Applied Structural Equation Modeling, 4 (2), pp. 1-20.
- Larson-Hall, Jenifer
 (2015) A guide to doing statistics in second language research using SPSS and R,
 Routledge

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