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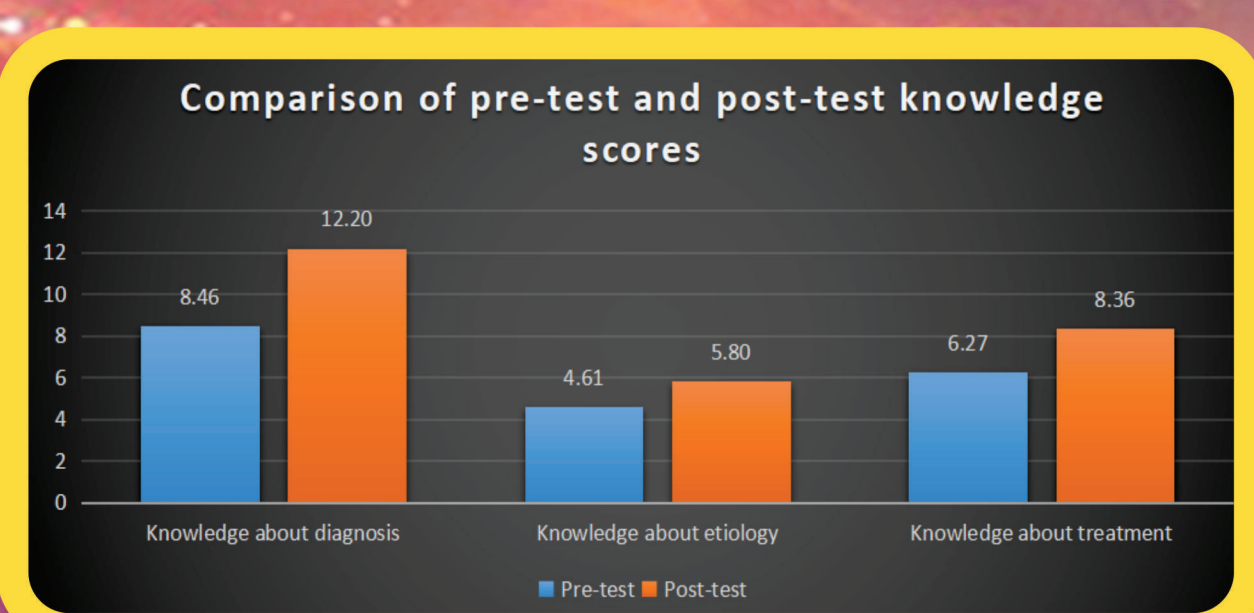
Bounthieng Vongsouangtham

INTELLECTUAL PROPERTY:

TRADEMARK (TM2019030854)

TRADEMARK (TM2019030862)

The Story of Khamdy - An e-Module for Teacher Training on Autism and Inclusive Education



INTRODUCTION

- **Autism Spectrum Disorder (ASD)** is a developmental condition that causes social communication delay and atypical behavioral patterns.
- World Health Organization reported that **1 in 160 children** has ASD (WHO, 2020).
- 6.25 million of school-age children worldwide are identifiable with this condition.
- However, many **mainstream teachers are lacking knowledge and skills to teach students with ASD** in inclusive settings, particularly in countries with limited resources.

PROBLEM STATEMENT

- Worldwide, more than RM4 billion has been spent over the past 10 years in laboratory research related to ASD (Maffei, 2020). However, many research outcomes **never take root in the classrooms where students with ASD await the benefits** (McNeill, 2019).
- As an agent of change, teachers are instrumental in delivering evidence-based pedagogical practices to embrace students with ASD in inclusive classrooms (Low, Lee, Che Aznan, 2019).
- One critical issue to be addressed now is to better equip the teachers with knowledge to address the special learning needs of students with ASD in schools.
- A successful ASD teacher training will expedite the implementation of inclusive education for students with ASD, as aspired in the **"Zero Reject Policy"** and **"Malaysia Education Blueprint 2013-2025"** by the Ministry of Education, Malaysia.

NOVELTY AND INVENTIVENESS

- To address the issue, we designed a self-sustainable virtual interactive e-learning application called **'The Story of Khamdy™'**, which is made available in Facebook Social Learning Platform as a for the purpose of **ASD teacher training**.
- A novelty of this e-module is its design using the **pictorial narrative approach**.
- A story was told through over 200 pictures that illustrate the everyday experience of a boy with ASD called Khamdy and how his parents and teachers helped him cope with different daily living challenges.
- **140 information about ASD and the teaching of ASD in inclusive settings** are delivered through this e-module.

INTELLECTUAL PROPERTY (IP) STATUS

- Two trademarks (TM2019030854, TM2019030862) and 23 copy-rights.

USEFULNESS AND APPLICATION

- This invention provides a **low-cost** and **high-impact** method of teacher training for the purpose of empowering non-specialist mainstream teachers to teach students with ASD in inclusive schools.
- The invention offers a solution for a **large-scale** ASD teacher training which is not constrained by time and geographical factors.
- Preliminary study indicated it can produce at least **30% increase in ASD-related knowledge** among the teachers.
- Teachers reported **high social validity** of the e-module for the intended training and **high user satisfaction** when assessed using Kano's e-learning Satisfaction Model.

STATUS OF INVENTION

TRL 9

COMMERCIAL POTENTIAL

- This invention provides a solution to **419,904 teachers in Malaysia** to acquire evidence-based strategies to teach students with ASD in schools.
- The empowering of these teachers to teach students with ASD in schools could potentially benefit over 40,000 diagnosed and undiagnosed students with ASD in Malaysia.
- As the invention is readily to be translated into other world languages, potentially it can reach to **90 million teachers in the world**.

POTENTIAL PARTNERS

- The design and development of this invention is supported by **The HEAD Foundation** (<https://headfoundation.org/>), a charitable organisation for human capital and education development in Asia.
- This invention has been identified by **The National Autism Society of Malaysia (NASOM)** and **Association for Autism in Laos (AfA)** as in-house professional development module.
- Two nationwide trainings (in Malaysia and in the Lao PDR) are scheduled to take place in 2020, reaching to over 30 NGOs in these two countries.

KNOWLEDGE MANAGEMENT

- Development of an online teacher training module for teachers in the Lao PDR to facilitate social communication of students with Autism Spectrum Disorder in schools (English-Lao Bilingual Version). The HEAD Foundation, RM150,000.
- An international comparative study of applying Social Network Analysis (SNA) to assess the social network structure of an online teacher training course on the topic of Autism Spectrum Disorder (ASD). Research University Individual Grant, RM44,000.
- The Stuart D.B. Picken Memorial Grant & Full Scholarship to attend The 11th Asian Conference on Education, Tokyo, Japan.
- Development of an ASD teacher training module through a pictorial narrative approach, 13/07/2019 - 15/07/2019, International Conference on Special Education, Surabaya.
- Perceptions towards disabilities among primary-school teachers in the Lao's People Democratic Republic: Insights into a cultural view of ASD, 13/07/2019 - 15/07/2019, International Conference on Special Education, Surabaya.
- The Story of Khamdy: E-Modul untuk guru tentang sosial komunikasi dan inklusi murid Autisme (ASD), 25/09/2019 - 27/09/2019, Special Education International Conference, Putrajaya.
- Teaching Students with Autism Spectrum Disorder (ASD): An E-module for Teacher Training in the Lao People's Democratic Republic, 31/10/2019 - 03/11/2019, The 11th Asian Conference on Education, Tokyo, Japan.

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