

DEVELOPMENT OF INTERACTIVE ONLINE DISABILITY EQUALITY TRAINING (E-DET) TO PROMOTE INCLUSIVENESS IN SOCIETY

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ABSTRACT

The global COVID-19 pandemic has forced technology to be integrated in education, and the Disability Equality Training (DET) for dental students was no exception. DET is a part of the Special Care Dentistry (SCD) integrated module teaching activity in the General Dental Practice course for dental undergraduates University Malaya (UM). Dental students were trained to manage dental health for people with disabilities, as well as other medical conditions in SCD. Hence, DET is carried out to promote inclusiveness in society and inculcate positive awareness towards people with disabilities (PWD). Additionally, the training facilitates dental students to become agents of change in developing a more inclusive and enabling society. Thus, this project aimed to develop the facilitator's guidebook and redesign conventional DET into interactive online DET (e-DET) for dental students. The module content was developed based on the DET framework with modification to suit the application to dental practice. The facilitator's guidebook provided background, learning objectives, the conduct of e-DET and the role of the facilitator to assist in programme implementation. The e-DET was implemented into three separate online sessions for the Year 3 dental students with designated facilitators. Implementation of activities was via Google slides with Pear Deck for disability seminar, e-DET forums with PWD in Microsoft Teams, and production of disability awareness videos by dental students on YouTube. Facilitators reported on the practicality of the guidebook and most students expressed positive learning experience feedback on e-DET. Improvement in dental students' understanding was reflected concerning the environmental and social barriers PWD may encounter in dental practices. In general, e-DET is beneficial in safeguarding the sustainability of teaching and learning activities in the new norm.

Keywords: interactive, online learning, disability equality training.

1. INTRODUCTION

The coronavirus pandemic has caused deviations in the teaching-learning process in higher education institutions and has influenced the interaction between teachers and students. Numerous disciplines that greatly depend on active hands-on learning had to find innovative and creative means for the continuation of teaching in online mode. It complicates things when interactive teaching is a fundamental approach to enhance learning like in a general dental practice course. This includes Disability Equality Training (DET) which is a part of the Special Care Dentistry (SCD) integrated module in General Dental Practice I (DIA 3010) taught for the Year 3 dental undergraduates, in the Faculty of Dentistry, University Malaya. In general, DET emphasis on the 'Social Model' perspective and 'Action Plan Making' to promote an understanding of disability, environmental and social barriers that PWD may encounter. The methods in conducting DET is based on the 'Facilitated Participatory Learning' (Kuno, 2012).

In the pre-pandemic era, DET was carried out through face-to-face (f2f) teaching which allows active participation and involvement from trainees in group discussion/ activities, and disability

simulation exercises (Mohamed Rohani & Mohd Nor, 2021). The training is important in promoting disability awareness and preparing the dental students in managing patients with disabilities at Special Care Dentistry (SCD) clinics. DET also aims to facilitate participants in becoming agents of change in developing a more inclusive and enabling society. However, in the pandemic era, there is a swift transition towards remote teaching and learning, either synchronous or asynchronous to ensure sustainable education. In view of that, the DET module was revised to suit the online platform. As in DET, lack of activities or interactions between teachers and students in an online learning environment may influence the degree of focus and engagement to the subject taught. The ability of e-learning facilitators handling and delivering the program is considered one of the key factors influencing the success of the program. Hence, there is a need to develop a facilitator's guidebook on the conduct of e-DET to ease the delivery of newly re-designed interactive online DET (e-DET) that integrates multiple digital tools to enhance students' engagement.

2. DEVELOPMENT OF E-DET MODULE AND FACILITATOR'S GUIDEBOOK

The initial stages for any e-learning program are essential to ensure effectiveness as it is important to have a good understanding of learners' needs, identifying appropriate content, and finding the right mix of learning activities and technical solutions in creating an effective and engaging program (FAO eLearning Academy, 2021). A clearly defined aim for e-DET will help the project to achieve good results and justify it needs to be the tool used for promoting inclusiveness in society. Literature review and expert group discussion were the early steps carried out in redesigning and developing the e-DET module to suit the dental profession. The module content framework was based on the "Doing disability equality training: a handbook for trainers" book by Kuno (2012). Identification of the essential components and exercises that need to be included in the modules were carried out and were modified mimicking scenarios in dental clinical practice for e-DET guidebook. Development of the facilitator's guidebook and adaptation is important in assisting dental students' learning and for program implementation for this newly developed module. The 21 pages e-DET facilitator's guidebook is divided into four main components (Figure 1). The guidebook is then converted into a virtual flipbook using flipbookpdf.net, which makes it easy to access and compatible with any devices (i.e., mobile, laptop or tablet).

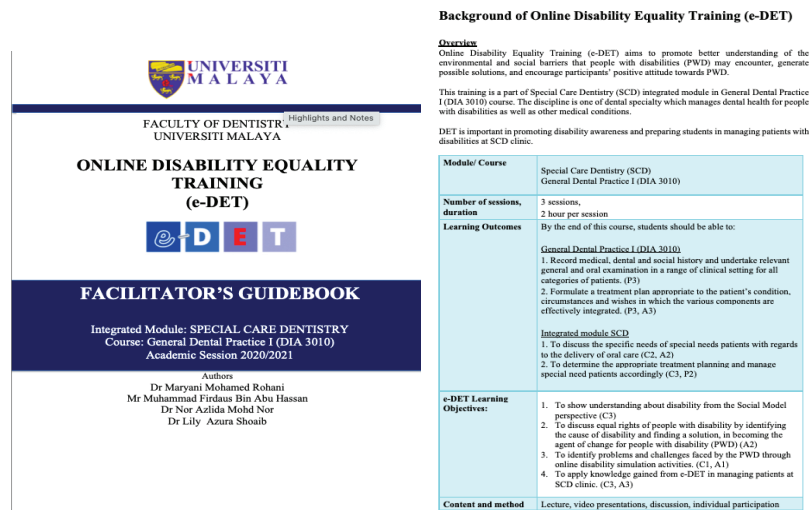


Figure 1. The facilitator's guidebook on the conduct of E-DET

The e-DET module implementation is structured into 3 separate online sessions (2.5 hours for each session) involving four main components. The summary of the module content is as follow:

Component 1: Introduction to the training comprising background information of e-DET, brief overview of the whole program including learning objectives and outcomes, the overall conduct of e-DET sessions and the teaching methods/tools used.

In terms of implementation, various teaching methods and student response systems (SRS) were incorporated in e-DET to ensure active student engagement during the implementation of this online training (Farrell & Brunton, 2020).

Component 2: The Social Model perspective in which understanding and discussing PWD in becoming the agent of change/inclusiveness in society. The student's participants were exposed to exercises combining an inclusiveness approach, video analysis and virtual simulation activities via online platforms such as Google Meet Platform, Microsoft Teams and Pear Deck. Pear Deck was used to prompt questions and get real-time answers by maintaining the anonymity of the students. For example, two YouTube videos were shown to the students showing wrong action and right actions towards PWD, and the students were asked to discuss their observations using Pear Deck. The students were also provided with video links concerning disability sensitivity training. In the virtual disability simulation activities, the students were asked to write their names without using their hands, type a word in the chatbot while being blindfolded. In each exercise, the facilitators were provided with prompting questions to guide the participants with regards to the "Social Model of Disability".

Component 3: The activities designed for "Action Plan Making" were to expose the participants and enable them to recognize the unique challenges of different individuals with different types of disabilities encountered and unique solutions for each problem they encounter in their daily lives. The students were divided into five smaller groups consisting of 10 to 11 students each for this session.

1. Activity one: The musical chair interview involved 5 groups that took turns interacting with 5 guests representing PWD in 5 different channels using the Microsoft Teams. Each group was given 20 minutes in each channel. A lecturer and a PWD with their unique disability were assigned to each room. A sign language interpreter was assigned to the room with a person with a hearing impairment. Students were allowed to experience direct interaction with PWD and asked questions related to real-life challenges, experiences and barriers faced in their daily lives including in dental clinic settings. Following completion of all five channels, the students were gathered in the general link for a short discussion reflecting the overall session.
2. Activity two: A short sign language exercise was conducted, teaching the students with sign language commonly used in dentistry.

At the end of the session, students were briefed for video assignments according to their groups which will be presented in the final session (session three) of e-DET.

Component 4: Presentation and reflection on what they have learned about PWD. Students were required to present their disability video assignment virtually to the whole class. During the presentation, each of the groups was asked to share their experiences and challenges in producing the video and acting as PWD. Q&A sessions were carried out following each video presentation for the whole class to discuss and reflect on issues related to the produced videos. All facilitators provided feedback on students' performance and their ability to communicate positive messages about PWD using a video presentation. This activity is used to develop students' interpersonal skills in preparing them as agents of change.

Prior to the module implementation, students were asked to answer questions related to people with disabilities (pre-test) At the end of the session, students were again asked to answer the same questions as post-test evaluation via Google Form. Post-mortem discussion was conducted among facilitators as a process evaluation on the overall e-DET programme.

3. RESULTS

3.1: Students' pre and post e-DET evaluation test results

As presented in Table 1 following the implementation of e-DET more than 91.6% (n=42) scored 9 to 11 marks for the students' knowledge related to the PWD test, compared to 34.7% (n=16) before participating in the training. In addition, most students reflected positively towards e-DET learning experience as well as their engagement and involvement in online learning activities. The majority of them expressed that the content of the training was relatable to better prepare them to treat patients with disabilities. The main problem raised by a few students was related to their poor internet connection during the session.

Table 1. Students' pre and post-evaluation scores for students' knowledge related to PWD.

Score	Pre-evaluation frequency (n=46)	Percentage (%)	Post-evaluation frequency (n=46)	Percentage (%)
5	1	2.2	0	0
6	2	4.3	0	0
7	10	21.7	2	4.3
8	17	37.0	2	4.3
9	14	30.4	14	30.4
10	2	4.3	13	28.3
11	0	0.0	15	32.6
Total	46	100	46	100

3.2: Facilitator's Feedback

During the post-mortem session, positive feedback was obtained from facilitators about the guidebook in assisting them to implement the e-DET. As it was the first time the training was conducted online, a structured guidebook plays an important role to ensure the smooth running of the programme as well as serves as an important reference for novice facilitators. The content was also found suitable for dental students and met learning objectives with relevant scenarios, making the training more relevant to dental students. The small group collaborative sessions complemented e-DET and were reported to be very interactive and engaging. The construct of e-DET guidebook has proven to assist in smooth delivery of e-DET resulting in improving students' understanding about people with disability and its application to dental practice.

4. CONTRIBUTION AND USEFULNESS/COMMERCIALISATION

The newly developed e-DET module is the first interactive online training program in its fields designed specifically for dental undergraduates and PWD. This module has the potential to be commercialised to other dental schools and can be modified for other fields of undergraduates. e-DET can be offered either virtually or as a blended learning tool in the future. It can also be offered as a micro-credential course marketed not only for dental students but also for dental health care professionals.

5. CONCLUSION

By having a well-structured facilitator's guidebook, the facilitators involved managed to effectively conduct the e-DET sessions despite being the first implementers of e-DET. Thus, this newly developed e-DET guidebook and online module may be useful for other dental schools and the Department of Social Welfare, who seek to emulate this effort. This online module also served as a new method of delivering DET to promote an inclusive society in the new norm. By incorporating a variety of online learning tools and methods to maintain students' engagement in the virtual learning environment.

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