

# Mixed-Methods Programme Evaluation of Disability Equality Training (DET) in Mongolia

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## ABSTRACT

**Purpose:** *An evaluation of a disability equality training (DET) programme, based on the social model of disability, was conducted to explore the changes in the participants' attitudes and behaviours in Ulaanbaatar, Mongolia.*

**Methods:** *This study is composed of two parts. First, the participants' attitude changes during DET sessions were examined through a descriptive quantitative and qualitative analysis of questionnaires and related documents. Second, the behavioural changes at the organisational and individual levels, the impact on society, and related factors were explored by quantitative and qualitative analysis of good practice cases: 39 participants were selected through purposive sampling and semi-structured interviews were conducted.*

**Results:** *It was found that most participants adopted the social model perspective within these sessions. A qualitative content analysis of the good practice cases also found that the majority of participants attempted to change their social environments after the sessions. Thematic analysis identified promotional factors, such as within-organisation dynamics and compatibility and barriers at the individual and organisational levels, which were associated with participants' behaviours after DET sessions.*

**Conclusion:** *The implications of these findings are discussed in connection with the strategic implementation of DET to promote disability-inclusive development. Future studies should examine the effectiveness of a strategy by considering the factors identified in this study and by using a reliable sample in various settings where DET sessions are conducted.*

**Key words:** *social model of disability, disability issues, agent of change, mixed methods, international development*

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## INTRODUCTION

Disability Equality Training (DET) has been implemented worldwide, from developing countries to developed countries. DET originated in the United Kingdom in the 1970s to promote the implementation of the Disability Discrimination Act (Gillespie-Sells & Campbell, 1991; Kuno, 2009; Mishima, 2009). As of 2019, DET has been implemented in more than 30 countries (Disability Equality Training Forum, n.d.). The sessions are currently conducted by various organisations, some with support from international bodies (Lordan, 2000; Kuno, 2009). Furthermore, international donor organisations, such as the Japan International Cooperation Agency (JICA), include DET in programmes related to disability and development in the Global South. However, a research gap exists regarding the evaluation of the DET programme and the factors that are associated with participants' behavioural changes after the sessions.

DET, which is based on the social model of disability, is implemented by DET facilitators who are disabled persons in order to create an inclusive society (Gillespie-Sells & Campbell, 1991). DET is often compared with Disability Awareness Training (DAT). Participants in DAT are likely to have simulated experiences of activity limitations, whilst those in DET are likely to experience social barriers and consider actions to address the issues (French, 1992; Carr et al, 2012). Participants in DET sessions, which include active dialogue between those present, are expected to shift their perspective to embrace the social model of disability and become agents of change in society (Carr et al, 2012).

Although literature suggests the importance of evaluating a DET's impact on society, there are a limited number of papers and not enough evidence (Walker, 2004; Igei, 2019). Few researchers have attempted an evaluation of the impact of DET on individual behaviours and organisational actions. Lordan (2002), for instance, mentions a case of physical accessibility that was improved after DET sessions, but the relationship between DET and the improvement is unclear in the study. As an exception, Igei's study (2020) applies randomised controlled trials to the impact evaluation of DET on taxi drivers in South Africa. The study reveals statistically significant differences in taxi drivers' attitudes and behaviours between an intervention group and control groups, such as offering appropriate assistance for passengers who are disabled persons. Since only a limited number of articles with limited target groups exist, the comprehensive evaluation of DET programmes should be performed.

In addition, most academic papers examining DET appear to give insufficient consideration to context and factors of participants' changes in society. Some researchers, for instance, argue that DET sessions should be flexible in accordance with participants' needs and background, and that they would be more effective if other interventions are mixed strategically with the sessions (Millington & Mottram, 1999; Reeve, 2000; Parkinson, 2006; Kuno, 2009). Whilst it would depend on the objectives and methodology of studies whether the main factors should be controlled, it is clear that describing the basic information of DET and its set interventions is necessary.

Few studies examine the factors and experiences leading to actual actions of DET participants, both as individuals and as agents within organisations (Higashida, 2020; Igei, 2020). Research indicates it is likely to be more difficult to capture the transition process of participants' shifting behaviours than their attitudes (Walker, 2004). Since an individual's behaviour after participating in DET appears to depend on the person's own choices in a unique social environment, it is important to consider multiple aspects, such as personal background and organisational factors as well as the influence of DET sessions.

## **Aim**

This study aims to examine the DET participants' changes of attitudes and behaviours, whilst exploring the factors associated with their actions after DET sessions.

## **METHOD**

### **Study Setting**

Mongolia is one of the developing countries where DET has been strategically implemented. The study site was Ulaanbaatar, the capital city, where about half of the national population, 1.49 million people, is concentrated (National Statistics Office of Mongolia, 2020). A technical cooperation project for promoting social participation of persons with disabilities in Ulaanbaatar city (DPUB) was jointly conducted from May 2016 to May 2020, by the Ministry of Labour and Social Protection (MLSP) in Mongolia and the JICA. The DPUB involved outcomes and activities focused on training DET facilitators who are all disabled persons (JICA, 2020). In addition, the Mongolian government listed DET as a disability-inclusive awareness activity within Goal 7 of the 'National Programme for Promotion of

Human Rights and Participation of Persons with Disabilities 2018-2020' (MLSP, 2019).

Figure 1 gives an example of a standard session by the DET Forum Mongolia. The basic style is a 3-hour session that the DPUB strongly recommends but it is dependent on the request and situation of participant organisations. For example, a shortened version of one and a half hours (called 'an introduction type') is also used. Besides, after conducting DET, disability-inclusive service and manner training focusing on visual impairment, hearing impairment and mobility impairment is often conducted (called 'a set type').

**Figure 1: An example of a DET Announcement (simplified version)**

| <b>Disability Equality Training</b>   |                    |
|---|--------------------|
|   | DET Forum Mongolia |
| <p>Disability equality training (DET) is a disability awareness session used in 38 countries worldwide. It is a participatory learning method using illustrations and videos. Its distinctive feature is that disabled people are in charge of facilitators and encourage participants' learning.</p> <p>What is a disability? Where is it? What causes it? Through the dialogue between participants and facilitators, participants will discover the 'disabilities' hidden in the consciousness of society and people, and learn the approach of creating action plans and taking actions for addressing the issues.</p> <p>➤ Date and time: 14:00-17:00, 19 January 2019</p> <p>➤ Contents</p> <p>14:00–14:15 Self-introduction of facilitators and participants with warm-up</p> <p>14:15–15:30 DET First half: 'What is a disability?'</p> <ul style="list-style-type: none"> <li>• Exercise 1: What is a disability? (First time)</li> <li>• Exercise 2: Illustration analysis</li> <li>• Exercise 3: Video analysis</li> <li>• Exercise 4: What is a disability? (Second time)</li> <li>• Halfway wrap-up: Focus on the Convention on the Rights of Persons with Disabilities</li> </ul> |                    |

15:30–15:45 Coffee break

15:45–17:00 DET Second half ‘Taking action’

- Exercise 5: Inclusion and integration
- Exercise 6: Listen to the voices of disabled people
- Exercise 7: Good practice of reasonable accommodation
- Exercise 8: Action plans
- Wrap-up and closure

In total, 46 disabled persons became DET facilitators in Mongolia, including 11 senior facilitators. Of the senior facilitators, three became DET trainers who can train new facilitators, through a specific training course in December 2019. As of February 2020, 312 DET sessions had been held by the DET facilitators, and 10,250 people participated in the sessions (MLSP, 2020). Thus, Ulaanbaatar is an appropriate place for evaluating the impact of DET on factors influencing the changes in participants’ attitudes and behaviours.

## Research Design

The project team discussed an appropriate and feasible design for this study, beginning in February 2019. The initial team included the DPUB’s project members, namely, from the MLSP and JICA, and disabled people. The comprehensiveness of the research scope was considered, together with a sense of field reality, and practical methods that local stakeholders can apply in the future.

The evaluation research design was then created based on the four-level approach framework (Kirkpatrick & Kirkpatrick, 2006; Yonehara, 2014; Higashida, 2020), which comprised reaction and satisfaction (1st level), learning and understanding (2nd level), behavioural change (3rd level), and results and impacts (4th level). A mixed-methods approach was applied to the four-level approach from a pragmatic perspective (Creswell & Clark, 2017).

Considering the context of DET in Mongolia, it was decided to include the following components in two phases. In the first phase, the researchers analysed the quantitative and qualitative data from those who had just completed a DET session, including questionnaires focusing on the participants’ satisfaction with DET (1st level), and the degree of change in attitudes or adopting the perspective of the social model of disability (2nd level). In the second phase, data was analysed from semi-structured interviews with those who had completed a DET session,

focusing on the degree and factors of change in behaviours (3rd level), and the impact of these sessions as perceived by the participants (4th level).

The Joint Coordination Committee consisting of 30 participants, including 15 government officials and 8 representatives from non-governmental organisations (such as Disabled People's Organisations), officially approved the plan of this evaluation research project on 5th July, 2019.

## **Phase One**

### **The degree of satisfaction (1st level)**

In each DET session, participants were required to anonymously fill out questionnaires that DET facilitators distributed and collected after the session. This was done between 28th October, 2016 and 22nd June, 2018 (n = 2,475). The five-point Likert scale questions included 'To what extent do you think DET is useful to you?' and 'To what extent do you think that the understanding of disability has advanced?' (from 1 = 'not at all' to 5 = 'very much'). Initially, these questionnaires were intended to provide feedback to the DET facilitators to reflect on their own practices. They were also useful for a simple analysis of the degree of the participants' satisfaction with the sessions. Approximately 50% (n = 1,238) of the collected answers were extracted using a systematic extraction method.

### **The degree of adopting the perspective based on the social model of disability (2nd level)**

The following method was used to analyse the degree to which participants changed their attitudes according to the social model of disability. The researchers collected the worksheets that participants were required to fill out twice in each DET session. These had two blank spaces, each with heading words—'Disability is...' ('Хөгжлийн бэрхшээл гэдэг нь'). Participants were instructed to write down their thoughts following the heading, before and after certain DET exercises such as group work of problem analysis on social barriers. This offered information on how individual participants changed their thoughts through DET exercises.

Data was collected in two different situations. Each DET session varies in terms of group dynamics between participants, the style and characteristics of DET facilitators, different materials and physical environments such as venues, among others. Two sessions were held at the same venue but were conducted by different facilitators using different materials. For instance, a video titled 'Talk',

which was edited in the UK and translated into Mongolian, was used in the first session. Another video titled 'I am You', which was edited in Japan and also translated, was used in the second session. The number of collected worksheets was 26 (from 7 males and 19 females; the response rate was 86.7%) in the first session (June 2019) and 18 (from 2 males and 16 females; the response rate was 85.7%) in the second session (September 2019).

Qualitative content analysis was applied to the collected document data by two evaluators (the first author and the research assistant). After an open coding based on the meaning of the description, tentative categories were created. When the two evaluators had different opinions on the categorisation, they would both discuss and reach an agreement. Six categories with their sub-categories were generated, namely, 'traditional/religious matter', 'individual impairments/dysfunction', 'different conditions and special needs', 'physical environment and people's attitudes', 'interaction between impairments and environment' and 'discrimination, rights and participation'. In the next step, a simple tabulation was performed to apply an appropriate category to each relevant clause for the quantification and summarisation of the data. Afterwards, each sentence was classified into one major disability model—'individual or traditional/religious', 'social' and 'other'—analysing changes within every individual before and after the exercise. A qualitative data analysis software, MAX QDA2018, was used in the process.

## **Phase Two**

### **The degree and factors of change in behaviours after a DET session (3rd level) and the perceived impact (4th level)**

Phase two examined the degree and factors of behaviour change after a certain period following the DET session, and the impact perceived as well as the actions taken afterwards. This phase focused on the participants' subjective experiences, including perceived processes and factors of actions taken within their own individual and organisational contexts. Mainly qualitative data collection and analysis were applied to semi-structured interviews, supplemented by quantitative analysis on the same data.

The interview candidates were selected by purposive sampling. The selection criteria were those who (a) had participated in a DET session within the last 18 months and (b) were recommended by DET trainers and the project members

because they were expected to show a change in attitude and take action. Of the 43 candidates selected by this method, 39 people (15 from the government sector, 14 from public facilities and institutions and 10 from the non-governmental or business sectors) expressed willingness to be interviewed. The interviewees were 11 males and 28 females. Their average age was  $34.3 \pm 9.9$  years. Approximately 82.1% participated in a standard session of 3 hours, including a set session with other interventions.

The semi-structured interviews were conducted individually, followed by field visits if necessary, between September and December 2019. The three interviewers (authors) used interview guides and recorded the proceedings with the written consent of the interviewees. Each interview lasted between 45 and 90 minutes.

By using the data that could be converted to nominal or ordinal scales, actions taken and factors associated with the participants' behavioural changes at the organisational and individual levels after DET sessions were explored. Reported cases were categorised into 'physical accessibility improvement', 'informational accessibility improvement', 'awareness raising', 'livelihood supports', 'service/manner improvement', 'survey and analysis' and 'promotion of social participation'. Multivariate discrimination analysis, namely Hayashi's Quantification method type II, was applied to the data.

Thematic analysis, whilst referring to Braun and Clarke (2006), was applied to the narrative transcription of the 39 interviews. The initial codes were generated based on similar meanings or semantic contents in segments of data. Using the initial codes, the researchers searched for themes within candidates, focussing on the process, factors and contents of participants' reported behaviours and attitudes. After reviewing these candidates, the main themes and sub-themes were defined and named. Main themes consisted of 'Promotional factors at the individual level', 'Promotional factors at the organisational level', and 'Barriers to taking an action'. MAX QDA2018 software was used for the analysis. Each interviewee was given a letter and number combination as an anonymous identification code during the analysis.

## RESULTS IN PHASE ONE

### **The Degree of Satisfaction (1st level)**

The first question, 'To what extent do you think DET is useful to you?', had an average of approximately  $4.4 \pm 0.8$  in the five-point Likert Scale. The second



question, 'To what extent do you think that the understanding of disability has advanced?', had an average of about  $4.1 \pm 0.9$ .

### The Degree of Acquiring the Perspective based on the Social Model of Disability (2nd level)

Table 1 displays the results of the qualitative content analysis on the description of disability given by participants, before and after DET group work. The percentage of descriptions of 'traditional/religious matter' and 'individual impairments/dysfunction'—which can be considered descriptions based on the traditional medical model of disability—decreased from 53.0% before DET session activities to nought afterwards. By contrast, the percentage of descriptions of 'physical environment and people's attitudes' and 'interaction between impairments and environment'—which can be considered descriptions based on the social and interactional models of disability—increased from 7.6% and nought, respectively, before DET session activities, to 36.9% and 6.0% afterwards.

**Table 1: Participants' Attitude categories towards Disability before and after DET**

| Category   | Subcategory  | Before |       | After |       |
|--|--|--------|-------|-------|-------|
|  |  | n      | %     | n     | %     |
| Traditional/<br>religious matter                   | Religious understanding  | 2      | 3.0   | 0     | 0.0   |
|  | Traditional understanding  | 1      | 1.5   | 0     | 0.0   |
|  | Spiritual power  | 1      | 1.5   | 0     | 0.0   |
| Individual impairments/<br>dysfunction             | Dysfunction due to impairments                                   | 16     | 24.2  | 0     | 0.0   |
|  | Individual impairments   | 12     | 18.2  | 0     | 0.0   |
|  | Lack of efforts and confidence                                   | 3      | 4.5   | 0     | 0.0   |
| Different conditions and special<br>needs          | Special needs and aid  | 7      | 10.6  | 4     | 4.8   |
|  | Different condition  | 2      | 3.0   | 7     | 8.3   |
|  | Influences by others   | 2      | 3.0   | 0     | 0.0   |
| Physical environment and people's<br>attitudes     | Disability due to environment factors                            | 4      | 6.1   | 8     | 9.5   |
|  | Special environment  | 1      | 1.5   | 0     | 0.0   |
|  | Surrounding people's attitudes and<br>behaviours                 | 0      | 0.0   | 21    | 25.0  |
|  | Reasonable accommodation and<br>appropriate assistive technology | 0      | 0.0   | 2     | 2.4   |
| Interaction between impairments<br>and environment | Interaction between impairments and<br>environment               | 0      | 0.0   | 5     | 6.0   |
| Discrimination, rights and<br>participation        | Restriction of participation,<br>independent living              | 14     | 21.2  | 16    | 19.0  |
|  | Discrimination and disability in society                         | 1      | 1.5   | 16    | 19.0  |
|  | Restrictions on rights and inadequate<br>legal system            | 0      | 0.0   | 5     | 6.0   |
| Total  |  | 66     | 100.0 | 84    | 100.0 |

**Note:** Some cases have more than one item per person because of the categorisation of each clause.

An additional analysis, the intrapersonal comparison, was performed using the same data source. After the classification of a dominant type of disability model per person, the researchers calculated the number of transitional-type cases. Whilst the number of persons whose description was classified into the 'individual or religious' model was the highest before DET (71.1%), the percentage of persons whose description was classified into the 'social' model was the highest after DET (68.9%). The percentage of those whose description transitioned from 'individual or traditional/religious' or 'other' models to the 'social' model was the highest (60.0%), whilst the percentage of those whose description was in line with the 'social' model and remained as such was 6.7%.

The following case is an example of an intrapersonal transition from the religious model before DET to the social model after it.

### **(Case 1)**

**BEFORE:** (Disability is) a kind of a lack of organs and health that humans should have, given by God.

**AFTER:** (Disability is) an issue, due to some environmental conditions, which people face when they participate in society.

Before participating in DET the description was one of mixed religious and individual (medical) models. Following DET, possibly due to the focus on environmental issues, the description changed to what could be the social or the interactional model of disability.

Participants' descriptions that transitioned from the individual model to the social model are illustrated by the following cases.

### **(Case 2)**

**BEFORE:** (Disability is) when intellectual and physical development is below the normal development.

**AFTER:** (Disability) relates to our understanding and view of other people.

### **(Case 3)**

**BEFORE:** (Disability is) when a person cannot use his/her functions by himself/herself.

AFTER: (Disability is) a situation in which a person who has physical and mental impairments cannot equally and fully participate in society, by comparison to a person without disability, due to the individual and social view, a lack of communication, and physical barriers.

#### **(Case 4)**

BEFORE: (Disability is) physical and mental disabilities, and those who cannot participate in society freely due to these disabilities.

AFTER: (Disability is) 1) discrimination and environment, 2) restricted equality and human rights.

Before DET these descriptions were focused on insufficient development at the individual level, in comparison to other people; they can be classified into the individual or the medical model. By contrast, after DET the descriptions focused on the association with social barriers, represented by the use of the term 'our' or the public's understanding of and perspectives regarding disability. They can be classified into the social or the interactional model because the relationship within adequate public awareness, including the participant's attitude, is a social barrier.

Similarly, the expression of being inferior, worse or incapable was observed in the descriptions given by four participants before attending DET, which then transitioned from the individual model to the social or interactional model after DET.

## **RESULTS IN PHASE TWO**

### **The Degree and Factors of Changing Behaviours after a DET Session (3rd level)**

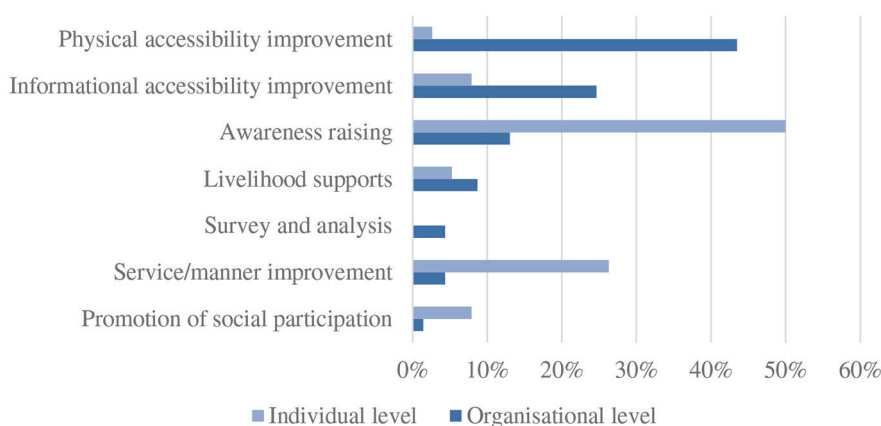
Among the interviewees, 89.7% self-reported a change in their attitudes towards disability and 76.9% reported taking actions related to inclusion. Figure 2 shows the cases of actions reported by the interviewees at organisational and individual levels after DET sessions. The data does not show the percentage of all DET participants in Ulaanbaatar but indicates the tendency within the selected sample to change their attitude and behaviours.

Regarding the results for the individual-level behavioural changes after DET sessions, 'awareness raising' was in the majority (with half of the total cases), followed by 'service/manner improvement' (at 26%). Within the 'awareness

raising' category, teaching close friends and families and continually promoting disability understanding were present in six cases each. In the 'service/manner improvement' category, appropriate practice in the field was the sub-category encountered the most (four cases).

In terms of behavioural changes at the organisational level, accessibility improvement (sum of physical and informational) was the highest (at 68%), followed by 'awareness raising' (at 13%). In the 'physical accessibility improvement' category, refurbishment of the parking area was the highest (seven cases), followed by the establishment of a ramp and clearance of steps (five cases). In the 'informational accessibility improvement' category, allocation of sign language interpreters was the highest (six cases).

**Figure 2: Categorisation of Actions taken at Individual and Organisational Levels**



**Note:** Cases that contained any actions at the individual level (n = 31) and organisational level (n = 34) were extracted. The data includes plural cases that one participant self-reported.

### The Perceived Impact (4th level)

During the interviews and field visits, the researchers observed several cases which indicated that the participants' attitude and behaviour changes after DET sessions impact society and individuals. They were identified by reviewing the self-reported good practices and visiting the actual sites.

First, some interviewees reported the general feedback from customers, including "we heard that toilets have become easier to use" (P3) and "Doors have become lighter so

*that they are easier to open*" (P7). Furthermore, organisers (P12) of the 4th Asia-Pacific Community-Based Inclusive Development (AP-CBID) Congress in 2019, whose preparation training included DET, showed a quite positive overall evaluation done by participants, including the satisfaction with transfer and guidance.

Second, some interviewees mentioned usage situations and the emergence of the voices of disabled people. Although the direct causal relationship with DET sessions was unclear, a library staff member (P1) felt that the number of users who are disabled people had increased recently, and other interviewees (P28, P31, P32) stated that the frequency of seeing disabled people outside in the city had also increased.

In another case in the government sector, after DET sessions a district office of social insurance improved the environment of the medical and labour examination committee. The staff members heard the voices of disabled persons who said they would avoid having to do an application procedure twice in different places (P9).

In the private sector, the management staff of a mega telecom company (P24) reported that after DET sessions they commenced the new activity of hiring disabled persons, in cooperation with the General Authority for Development of Persons with Disabilities where a DET facilitator works. Consequently, up to this study's interview date, approximately seven disabled persons had applied for job opportunities. The company simultaneously requested seminars or training from the government sector and DPUB to create a decent work environment and reasonable accommodation.

Third, some interviewees pointed out the staff attitudinal changes towards disability and disabled people. A staff member from a government institution reported,

*"Before holding seminars, including DET, some staff members felt that they didn't want to touch and come into contact with persons with disability, giving them a displeased feeling. But now I don't hear such kind of talks from our staff."*

Some interviewees from private companies stated that staff members, including those who did not participate in DET, at the organisation level got interested in a barrier-free environment and universal designs. The manager of a hotel company (P10), for instance, visited the good practice cases regarding universal designs and considered applying such an environment. Another person, a bank manager (P14), reported that he intentionally expanded the actions within a branch office, including the creation of a priority reception support for those in need.

Fourth, some participants mentioned the impact of sharing the social model view of disability with others, particularly in educational settings. For instance, an interviewee who was concurrently working as a teacher (P18), attempted to convey the meaning of disability based on the DET perspective in her classroom. She felt that the understanding in the class had increased. Similarly, a lecturer from the Mongolian State University of Education reported that DET had contributed to the understanding on disability and motivation to learn among students, some of whom took modules on inclusive education.

Fifth, other interviewees narrated how DET impacted their own perspectives in life. A volunteer for the AP–CBID Congress who is a student stated,

*“DET impacted me very much. I am now considering my future career, like working in a related field.”*

Furthermore, two disabled persons who participated in DET (P26, P31) decided to apply for a DET training of facilitators a few months later. As DET facilitators, both of them would like to make a positive contribution to disseminate knowledge based on the social model of disability.

## **Exploring Factors associated with Behavioural Changes in Participants**

### **Quantitative analysis**

The factors connected with behavioural change at the individual level are shown in Table 2. A weak correlation ratio overall ( $\eta^2 = 0.28$ ) was found. The individual attitude changes had a relatively stronger positive correlation with non-disabled persons and those under the age of 30.

Using the same data, the researchers analysed the factors related to behavioural changes at the organisational level (Table 3). A weak correlation ratio overall ( $\eta^2 = 0.31$ ) was found. In addition to the change in participants' attitudes, a specific type of DET session, namely the 3-hour session with other interventions, contributed to the organisational actions.

**Table 2: Multivariate Discrimination Analysis of Behavioural Changes at the Individual Level after DET Sessions (n = 39)**

| Item   | Category                        | Score | Range |
|--|---------------------------------|-------|-------|
| Disabled person  | Yes                             | -1.75 | 1.98  |
|  | No                              | 0.23  |       |
| Gender   | Male                            | -0.09 | 0.12  |
|  | Female                          | 0.03  |       |
| Age (years)  | < 30                            | 0.77  | 1.78  |
|  | 30–39                           | 0.04  |       |
|  | > 40                            | -1.01 |       |
| Times of attending DET session                                 | 1 time only                     | -0.19 | 0.68  |
|  | More than twice                 | 0.49  |       |
| Type of DET session  | 3 hours                         | 0.10  | 0.37  |
|  | 1 and a half hours              | -0.15 |       |
|  | 3 hours and other interventions | 0.22  |       |
|  |                                 |       |       |
| Experience of interaction with disabled person(s) (before DET) | Yes                             | -0.51 | 1.18  |
|  | No                              | 0.68  |       |

**Note:** Correlation ratio  $\eta^2 = 0.28$

**Table 3: Multivariate Discrimination Analysis of Behavioural Changes at the Organisational Level after DET Sessions (n = 39)**

| Item                             | Category                        | Score | Range |
|----------------------------------|---------------------------------|-------|-------|
| Times of attending DET session   | 1 time only                     | -0.06 | 0.22  |
|                                  | More than twice                 | 0.16  |       |
| Type of DET session              | 3 hours                         | -0.61 | 1.72  |
|                                  | 1 and a half hours              | -1.07 |       |
|                                  | 3 hours and other interventions | 0.65  |       |
|                                  |                                 |       |       |
| Participation in DPUB activities | Yes                             | 0.30  | 0.53  |
|                                  | No                              | -0.23 |       |
| Change of attitude after DET     | Yes                             | 0.19  | 1.67  |
|                                  | No                              | -1.48 |       |
| Positional level                 | Manager and higher              | 0.11  | 0.26  |
|                                  | Others                          | -0.15 |       |

**Note:** Correlation ratio  $\eta^2 = 0.31$

## Qualitative analysis

### Promotional factors at the individual level

This main theme associated with promotion of behavioural changes after DET was divided into two sub-themes: 'Readiness of the individual' and 'Attitude changes relying on conditions of DET'.

The 'Readiness of the individual' represents the perspectives and experiences of those who participate in DET. A female participant (P4), who has a sister with impairments and was facing difficulties, was hopeful of solving the issues in society even before participating in DET. This does not mean, however, that only those who had made plans in advance were inspired to take action. A participant who had not interacted with disabled people before DET (P12), said that he was stimulated by DET facilitators in the session, like "*electric shocks*", to adopt a new perspective regarding disability.

'Attitude changes relying on conditions of DET' is related to the objectives of DET to change participants' attitude and behaviours towards disability issues. The project manager of DPUB (P33) explained,

*"Because DET has been integrated into any disability-related seminars and workshops, participants can learn the basic view on disability. Based on such common understanding, we can discuss the next steps that should be taken together."*

However, as mentioned earlier, participants have different training experiences in varying conditions, such as the time framework (one and a half hours or 3 hours) and contents, set training or not, the number of times participating in DET (the first time or not), and interaction with group members, among others. A library staff member (P1), for example, expected to receive support training for disabled people instead of DET, but she noticed that the DET session formed a basis for the set training to gain perspectives regarding disability in society. Furthermore, a government officer (P4) said that participants, including her, could discuss concretely what actions the government authority should take, by following a set training of DET with an accessibility check. In other examples, participants who undertook DET more than twice (P18, P28), reported that they were able to have a better understanding of the meaning and implications, such as discovering different barriers and coming up with new ideas for actions, after re-watching the video material 'Talk' in the second session.



Some participants mentioned the different quality of each DET session. A government officer (P4), who participated in DET sessions twice, pointed out the possibility that the extent of influence and learning in DET would vary depending on the skills of the facilitators. A DET trainer (T1) explained that because of the obvious differences in competency and skills between facilitators, the DPUB has conducted follow-up training continually for them.

### **Promotional factors at the organisational level**

Within-organisation dynamics and compatibility form a theme associated with actions taken as a member of an organisation. It is divided into the following sub-themes: 'Promotion of a key person's understanding', 'Participation as an organisation', 'Compatibility with an organisation's momentum and timing', and 'Budget arrangement'.

The 'Promotion of a key person's understanding' includes cases in which those in charge of coordinating a DET session within an organisation functioned as mediators in taking organisational actions after the session. A senior officer of a government division related to transportation, for instance, played a substantial role in passing a policy plan for improvement of physical accessibility. Although her boss had not participated in DET, she submitted a draft plan to a related committee and facilitated its adoption. This case indicates the importance of participation of a key person within an organisation, who has authority and can play a coordination role for organisational actions.

A similar case is illustrated by a social policy section chief in a district in Ulaanbaatar (P28). She stated, "*There are many things which we can do without any budget*", and has acted on her own initiative at a grassroots level, in cooperation with local stakeholders. She emphasised the importance of promoting the upper echelons' understanding of the social model of disability because the process of obtaining approval became smoother than before participation in DET and DPUB's activities. An officer in a human resources division in the same district (P29) reported her chief's practices. She said that the chief implemented activities for promoting public understanding of disability in the district and such follow-up activities after DET fostered understanding within the organisation.

The 'Participation as an organisation' sub-theme is related to the 'Promotion of a key person's understanding'. It includes cases where participation in DET of multiple members within an organisation, including the upper echelons, led to

organisational actions. According to a chief of the General Authority for Social Insurance (P4), most of the staff in the headquarters participated in DET. She said it felt easier to discuss a new policy on accessibility and service improvement within the organisation because of the basic and common understanding among the staff. A similar situation was also identified in the private sector. For example, a hotel manager (P7) stated that the staff members, including her bosses, discussed ways of improving physical accessibility just after DET. According to her, her bosses finally decided to improve the physical and informational accessibility in the hotel.

The 'Compatibility with an organisation's momentum and timing' sub-theme, although it overlaps with the above sub-themes, is the relationship between the timing of an implemented DET session with an organisation's condition of readiness. It includes implementation at the time of planning the year's activities within the organisation, when upper management and the head of an organisation changed, and when administrative instructions for improvement measures were given, among others. It is exemplified by the branch manager of a major bank (P14), who explained that DET was implemented at the time when the company's top management was changed and new policies were created. Although it is inappropriate to consider the causal relationship of DET with the bank's activities, he said that DET was one of the catalysts for promoting understanding of disability and the organisation's action.

A member of a youths' leadership training programme (P21) stated that a team had just discussed a plan regarding some social issues before participation in DET. Since they had attended other seminars on disability issues, this was at a time when their momentum to obtain in-depth understanding on the issues was on the rise. The association of DET with substantial actions was not clear in these cases, but DET became one of the factors that inspired organisations to tackle social issues.

Related to the 'Budget arrangement' sub-theme, some stakeholders attempted to negotiate with the government sector in charge in order to obtain the necessary funds. According to a manager-level staff of an airport (P10), after a DET session they made an official budget request to the ministry in charge through the Sub-commission of Rights of Persons with Disabilities that has been established under each ministry. By contrast, based on the explanation of practices and achievements in one district in Ulaanbaatar, some interviewees (P18, P28) emphasised the importance of actions such as renovation work, whether they have an adequate budget or not.

## Barriers to taking an action

This main theme represents factors that prevented participants from taking actions based on the social model of disability, even though they had planned to do so after the session. It includes the following sub-themes: 'Limitation of budget and time', 'A lack of know-how and skills', 'Outside the scope of discretion and authority', 'Conflicting environment', 'Lack of organisational capacity' and 'Issues of DET implementation'.

In this main theme, the 'Limitation of budget and time' sub-theme is the most frequent barrier perceived by participants. An interviewee from a public institution (P3) stated,

*"It is a good idea to renovate the inside facility, but we cannot allocate the huge amount of money. I think we need to think about the priority."*

A government staff member (P4) also stated,

*"Actually, it is just a budget matter. What we can do is to improve the environment in the authority using the existing renovation budget."*

'A lack of know-how and skills' represents a situation in which participants wanted to act, but could not do so because of a lack of knowledge and skills. For example, a staff member of the public library (P1) stated that she would like to voluntarily make a software application of a digital accessible information system but did not know how to create it by herself (After the interview, the researchers introduced her to a person who knew how to create it).

'Outside the scope of discretion and authority' captures cases in which action was prevented due to regulations and rules within an organisation. A branch manager of a private company explained that the range of implementation by a branch office is defined by the headquarters. Therefore, the staff at the branch did what was possible within their discretion, such as renovating the entrance and main floor in order to improve physical accessibility. Also, an officer in the government sector stated that there are cases when they cannot proceed with the implementation of disability-inclusive policies, including the amendment of accessibility-related standards and rules, without official approval at the upper administrative levels.

The 'Conflicting environment' sub-theme indicates the possibility of a conflict that might arise from taking a particular action, as an advantage to one could

cause inconvenience to another. A manager of a business hotel (P7) explained,

*“We want to change carpets so that wheelchair users can move around in the hotel more easily, but we have not decided yet. Because some staff explained it would affect the use of other customers, we are on the process of discussion.”*

Another example was provided by a section chief in a public institution (P12). He stated that the institution was now working towards introducing new facilities and they had to keep the renovation of the existing facilities at a minimal level.

The ‘Lack of organisational capacity’ sub-theme indicates an issue of capability development of some organisations, including Disabled People’s Organisations. A manager of the social policy section in the local government sector (P28) suggested that capacity development in human resources and organisations regarding disability issues, as well as the promotion of social participation by disabled people, are required. According to her, the voices of disabled people are necessary in order to promote disability-inclusive activities, including planning, monitoring and evaluating. However, she felt that the social participation of disabled people has been quite limited, particularly in rural districts.

Some interviewees pointed out ‘Issues of DET implementation’ and offered suggestions for DET. As mentioned in the ‘Attitude changes relying on conditions of DET’ sub-theme, some participants felt that a one-time DET session was likely to be inadequate because they forget their perspectives regarding the social model of disability. According to a manager in the government sector (P9),

*“DET is a very good measure, but it is one training session. As I review other participants’ reactions, a one-time is not enough...A set training of DET with other training would also be nice.”*

Other participants (e.g., P26) suggested some improvements, such as a follow-up DET for participants, a set training with more practical work, and a flexible schedule.

## DISCUSSION

This study mainly aimed to examine the DET participants’ attitude and behaviour changes in Ulaanbaatar, through their experiences in the local context. Using the framework of the four-level approach for training evaluation (Kirkpatrick & Kirkpatrick, 2006), together with mixed-methods, the authors attempted to analyse the degree of satisfaction with a DET session (1st level); the degree of attitude change, or gaining the perspective based on the social model of disability

(2nd level); the degree and factors of change in behaviour after a certain period of the DET session (3rd level); and the impact of the DET session as perceived by participants (4th level).

First, the descriptive analysis of the questionnaires collected just after DET showed a high degree of participants' overall satisfaction with the sessions. Second, the descriptive data analysis written by participants before and after the sessions revealed that most of them experienced a perspective change on disability, based on the social model. Third, the majority of interviewees, selected through purposive sampling, self-reported changing their attitudes and taking actions. Fourth, some cases illustrated a social impact of participants' actions after DET sessions. The impact ranged from a small to a relatively large scale, which was probably dependent on their living and working environments.

In terms of factors associated with the actions taken by participants after the session, the multivariate discrimination analysis identified that a set session of 3 hours of DET with other interventions has a relatively high partial correlation coefficient (A negative correlation ratio between the change in perspective and action-taking on one side, and the participants among the disabled persons on the other, was observed. Those who had already gained perspectives regarding the social model before attending DET might have affected the analysis in the small sample size). The qualitative analysis also implied relationships with the other promotional factors of taking actions at the organisational level, such as the coordination with key persons in organisations with an intention of conducting DET sessions, and the authority to implement any changes.

These findings suggest that a certain version of DET sessions is most likely to lead to actions and change. As Igei (2020) reveals in South Africa, the findings of this study support the importance of integrating DET with other interventions and conducting DET in cross-cutting sectors. Some participants, for example, implied that they were able to take actions because they also participated in and learnt from other activities, such as an accessibility check in society, and service and manner training based on the reasonable accommodation perspective. Indeed, the context of implementing DET sessions varies in Ulaanbaatar; some DET sessions, for example, were independently conducted and other DET sessions were integrated with seminars and workshops for various stakeholders, not only from the government sector but also from non-governmental and business sectors. Therefore, there would be room for re-examining the overall plan and

vision of DET in the Mongolian context.

The findings of the study, in particular from thematic analysis, also indicate that even if participants learnt the view of the social model of disability in DET sessions, their subsequent actions depended on promotional factors and barriers at the individual and organisational levels. DET manuals for its facilitators and trainers (Gillespie-Sells & Campbell, 1991; Carr et al, 2012; Kuno, 2018) explain how to conduct DET and its fundamental perspective (the social model of disability and human rights), but the present findings suggest the importance of assessing and monitoring the situations and reality of participants, including organisational and environmental barriers, after taking part in sessions. This means that DET sessions could be adjusted after considering the tendencies and contexts of participant groups through pre-interviews and post-interviews (or consultations) with them.

### **Implications**

The findings of this exploratory study carry implications for policy and practice. Two main implications are emphasised, namely, the significance of DET sessions and the issue of DET sustainability. First, the findings support DET as a powerful measure to promote disability-inclusive policies and practices in line with the social model of disability in Ulaanbaatar. Since this project aimed to promote the social participation of disabled people by removing barriers in society, DET based on the social model matched it well. Although many models of disability exist, such as the charity model, the medical model and the human development model (Marks, 1997; Mitra, 2018), the findings indicate that DET can be used to foster a common view based on the social model and human rights, and to promote changes of the social environment through voluntary actions taken by the participants as agents of change (Carr et al, 2012).

Second, one of the critical issues of DET, which was technically supported by donor organisations, is related to sustainable development in the local context. The system of continually conducting and developing DET must be secured. In other words, if DET does not continue substantially after the end of the technical cooperation project in Ulaanbaatar, the impact of DET on society may be limited in the future. There are some possibilities of conducting DET regarding an implemented entity and budget, exemplified by individual DET facilitators, business and non-government organisations (such as DET forum) which earn income from participation fees and subsidisation, and the government sector

which hires DET facilitators directly. Hence, a critical re-examination of the system and situation would be significant.

### **Limitations**

This study has several limitations related not only to methods but also to the theoretical analysis. Since the selected sample and applied methods differed between Phase one and Phase two, careful interpretation is required. Cases selected by purposive sampling would be expected to show better practices than those who were not selected. Therefore, the findings cannot be generalised with exaggeration of good practice cases of Phase two.

Second, a critical view on the methodology and findings is also fundamental. DET, which is conducted by disabled people, has become a social movement with a radical philosophy (Millington & Mottram, 1999). In addition, Kuno (2018) argues that DET has been influenced by Paulo Freire's pedagogy, such as critical consciousness. This means that an evidence-based approach, considering objective findings over the impact of such a critical practice and social movement, could cause a conflict or a kind of power relationship between the narratives of DET stakeholders and academic discourses of researchers. Hence, continuing a critical debate on impact evaluations and related studies is suggested.

### **CONCLUSION**

Notwithstanding its preliminary character and limitations, this paper advances studies on DET in natural field settings. Participants' attitude changes in line with the social model of disability, and actions taken by individuals and organisations were clearly identified. In addition, this study has findings and implications that have not hitherto been highlighted by the prominent papers on DET, including DET manuals. For instance, the contexts and possible factors of participants' attitude and behaviour changes seemed to be complicated. This indicates that stakeholders of DET sessions, such as DET facilitators, need to consider the background of each participant, ranging from personal motivations to their organisational environments. The findings also showed the implications for conducting DET sessions in the Mongolian context. The findings emphasised the importance of strategic implementations of DET, including considerations regarding DET forms and other additional interventions in each unique context.

It is therefore suggested that future studies should examine the effectiveness of a strategy by considering the factors identified in this study and by using a reliable sample in various settings where DET sessions are conducted.

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