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Determining elementary teacher candidates cognitive structure on the concept of 'disabled people' through the drawing technique

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Abstract

Currently, around 10% of the world's population, or roughly 650 million people, live with a disability. According to the results of the in Turkey 2011 Population and Housing Survey, the proportion of the population with at least one disability is 6.9%. The aim of the study is to investigate primary teacher candidates cognitive structures related to 'disabled people' through the drawing technique. The data were collected from 89 teacher candidates participated in this study in the 2018–2019 academic year in Mehmet Akif Ersoy University. Each student was asked to draw a picture about disabled people. The students were encouraged if they want to write their own interpretation of the drawing 'in a couple of sentences. Of the drawings, 89 were subjected to the content analysis. Half of the drawings are multicoloured and black is second. Most of the teacher candidates (88%) handed wheelchairs to people with disabilities.

Keywords: Disabled people, drawing technique, teacher candidate.

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1. Introduction

An estimated 15% of the world's population—some 1 billion people—live with disabilities that have a direct impact on their daily lives. One in every four households has a disabled member. In UNDP programme countries, this statistic is even higher at 20%, 75% of whom are women. Persons with disabilities are not only poorer in economic terms but are also comparatively poorer in many domains, including access to health care, education, employment and social inclusion, as well as resilience to environmental degradation and climate shocks (WHO & WB, 2011).

Population of Turkey who have at least one type of disability were 4.876.000 explained by Turkish Statistical Institute in 2011. Percentage of registered disabled individuals is 29.2% for intellectual disability, 25.6% for chronic illnesses, 8.8% for orthopedic disability, 8.4% for visual disability, 5.9% for hearing disability, 3.9% for mental and emotional disability, 0.2% for language and speech disability and 18% for multiple disability. When appearance time of disability for registered disabled individuals is examined, 14.7% of them appeared at the prenatal period, 10.6% of them appeared during at birth, 18% of them appeared under 1-year old, 54.5% of them appeared at 1-year old and over. Nearly, 3.1% of them were unknown, 37.9% of registered disabled individuals think that they should receive education for only disabled persons with the same type of disability, 30.9% of them think that they should receive education at the classroom for only non-disabled persons, 29% of them do not have any idea. As comparing types of disability, first intellectual disabled individuals with 50.9% and second hearing disabled individuals with 47.7% think that they should receive education for only disabled persons with the same type of disability. Nearly, 64.5% of registered disabled individuals don't think that they suffer from discrimination, 22.3% of them think that they suffer from discrimination, 13.2% of them do not have any idea on discrimination (TurkStat, 2010).

Persons with disabilities are at an increased risk of poverty due to this reduced access to employment and lower wages; they also have extra costs of living associated with various barriers, such as medical care, assistive devices or personal support. Populations in poverty are also at an increased risk of disability due to malnutrition, unsafe working conditions, polluted environments and a lack of access to clean water and sanitation. Moreover, more than half of children with disabilities do not attend school and in some countries it is as high as 90%. Persons with disabilities are affected disproportionately in armed conflicts and during natural disasters and recovery. They are more likely to be left behind or abandoned during evacuation operations due to a lack of inclusive preparation and planning, as well as inaccessible facilities, services and transportation systems (UNDP, 2018).

Disability stigma fuels discrimination, isolation and segregation, exacerbating deprivation and human rights violations. Outright exclusion from education or segregation in sub-standard school settings creates lifelong barriers to economic opportunity (CRPD, 2016).

UNESCO's flagship Education for All Programme reports that only 2% of children with disabilities in the developing countries attend school. According to the International Labour Organization (ILO, 2015), persons with disabilities accordingly face greater degrees of poverty and unemployment relative to the rest of the population.

In terms of access to resources and opportunities, a comparative difference between persons with disabilities and non-disabled persons appears to begin as people and communities begin to rise out of poverty. The reason for this is clear—when people with disabilities are not included in new efforts to address poverty, they can be left behind. For example, if no school exists and no children in a village receive an education, the life of a child with a disability is little different in many respects from her siblings or peers. But, if a school is built and every child in the village, except for the disabled child, now attends school, that disabled child is at a distinct disadvantage. Not only will she be illiterate when literacy is the new norm, but by not attending school, she will be less likely to benefit from school-based health, nutrition and civic engagement programs (Groce & Kett, 2013).

Traditional solutions, rooted in charity and paternalistic impulse, can work to reinforce discrimination and other human rights violations against persons with disabilities. Furthermore, wrongheaded development interventions pursued without regard for disability rights principles can often undermine the very development objectives sought. This is perhaps most evident in the establishment of separate education systems and the building of segregated institutions and facilities for persons with disabilities. It is equally apparent that the mainstream development programs designed without attention to disability-inclusion work can disadvantage and discriminate against persons with disabilities.

The social context of drawings, peers or in interactions with significant adults, also impacts on the drawing process and the meanings constructed and conveyed (Braswell & Callanan, 2003). Individual drawings are used to access person views and experiences by as they draw and paying attention to their narratives and interpretations (Veale, 2005).

If we focus on persons intentions, we consider the process of drawing and recognise their drawings as purposeful. A drawing, thus, becomes a constructive process of thinking in action, rather than a developing ability to make visual reference to objects in the world. Drawings not only reflect their cultural context but also constitute a cultural practice (Cox, 2005).

This paper has centred on elementary teacher candidates' drawings of disabled people figure and connections between mental perceptions. Assessing person drawings is relation to their emotional adjustment and compositional elements. Stanczak (2007) has explained the meaning of images resides most significantly in the ways that participants interpret those images, rather than as some inherent property of the images themselves.

2. Method

In research, less traditional research methodology was used. The main aim of this paper is to elementary teacher candidates determine sensitivity insights into about living of disabled people and as in living contexts. It was argued the possibilities and limitations of collecting and analysing this kind of visual data. Then, we revealed how these compare and contrast with daily living conditions.

The focus of visual analysis is on the story of the production of an image, the image itself and how it is read by different audiences. Visual narratives can be categorised as found a painting or photograph and made (Riessman, 2008).

Those producing the results have been teacher candidates, and the drawings have been produced as a part of the courses they have taken with us. Drawings of figures have been used in disciplines, such as psychology, art therapy and education for a number of purposes. For instance, drawings were used to determine child cognitive and emotional development and to test different concepts.

Visual images were characterised by the two researchers as being distinguished by narrative and conceptual messages. Pictures drawn by students explained actions, events or processes.

More specifically, the research questions were:

1. How the participants do sense disabled people?
2. What is represented as the main focus in their thinking?
3. How is with society interaction visualised in the drawings?

2.1. Data collection and analysis

The participants in this study (*N* = 89) were third year university students had been taken with pedagogy lessons. The majority of the participants were female students (76%).

Each student was asked to draw a picture about disabled people. The students were encouraged if they want to write their own interpretation of the drawing 'in a couple of sentences'. Different colours were used, but some of the drawings were black and white because of depending on a pencil has been used. Of the drawings, 89 were subjected to the content analysis.

Two raters coded the set of drawings independently (using codes, such as disabled people, environment, with or without disabled tools, objects, sort of activity and major colour), and if there were any differences, these were negotiated until the agreement was reached. The drawing-writing technique produced six categories.

3. Findings and conclusions

After this qualitative analysis, quantification was done with the results reported in the form of a table as shown in Table 1

Table 1. Content of drawings

Theme	Code	*f*	%
Types of disabilities	Physical	83	71.55
	Visual	25	21.55
	Hearing	7	6.03
	Mentally	1	0.86
Environment	Outdoor	75	84.26
	Indoor	12	13.48
	Mix	2	2.24
Disability tools	Wheelchair	77	54.60
	Stick	22	15.60
	Goggles	19	13.47
	Crutches	11	7.80
	Seeing eye dog	6	4.25
	Prosthesis	5	3.54
	Handcuffs.	1	0.70
Objects	Disable symbol	128	63.05
	Vehicle	12	5.91
	Tree	12	5.91
	Sun	12	5.91
	Balloon	8	3.94
	Globe	7	3.44
	School	7	3.44
	House	6	2.95
	Rainbow	5	2.46
	Mirror	3	1.47
	Heart	3	1.47
Sort of activity	Daily life	50	55.55
	Sportive activity (walking (*f* = 8), basketball (*f* = 5), soccer (*f* = 5), tennis, ballet, cycling)	26	28.88
	Recreative activity (rope (*f* = 2), game (*f* = 2), kite)	5	5.55
	Others (gardening (*f* = 2), transporting (*f* = 2), shopping (*f* = 2), competition, demonstrating)	8	10.00
Major colour	Multi-colour	45	50.56
	Black	34	38.20
	Green	4	4.49
	Blue	4	4.49

Orange	2	2.24

The first that comes to mind is understood that physical disabilities (71.55%). Visually impaired people were drawn in second place (21.55%).

Drawn environment for people with disabilities is mainly open space (84.26%).

Wheel chair (54.60%) while the first that comes to mind symbol, stick (15.60%) and goggles (13.47%) were less drawn.

Half of the drawing, while the other half is related to everyday life (55.55%) related to sporting events.

Various objects are included in the pictures. The most common are the symbols of disability. Half of the drawings are multicoloured and black is second. The arrangements made in daily living conditions are mostly made for the physically and visually impaired. It reflects this situation in the drawings. It is pleasing that the disabled environments are open spaces. A disabled wheelchair is a wheelchair that

matches the warning signs in everyday life. The promotion of sports activities that require special skills reflects the confidence with disabilities.

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