Environmental Accessibility Assessment for People with Vision, Hearing and Speech Disabilities in Mongolia

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ABSTRACT

Purpose: The main objective of this paper was to assess environmental accessibility for people with vision, hearing and speech disabilities in Mongolia, with particular focus on public buildings and public transportation.

Methods: A standardised internationally-used questionnaire, consisting of 29 questions, was used for the accessibility of public buildings assessment. The questionnaire results were grouped into categories and descriptive statistics were obtained. To determine quality and accessibility to public transportation a standardised sheet, consisting of 51 questions from the internationally accepted SERVQUAL, was used. This model is commonly used for measurement of the discrepancies between actual performance and customer expectations.

Result: Assessment of public buildings in Mongolia revealed that they were moderately accessible for people with vision, hearing and speech disabilities. The assessment of public transportation found that the discrepancy between actual performance and customer expectation is the highest across all indicators for people with hearing and speech impairments.

Conclusion: The research findings indicated a strong need to pay closer attention to the current environmental unfriendliness and inaccessibility faced by people with vision, hearing and speech disabilities.

Key words: Disability, visually, hearing, speech impairment, accessibility.

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INTRODUCTION

There are over 1 billion people living with some form of disability in the world, and 650 million of them reside in the Asia-Pacific Region (World Health Organisation, 2001). According to the official statistics in Mongolia, the number of people with disabilities in the country was 105,730, representing 3.08% of the total population in 2018 (National Statistical Office, 2018). In Mongolia, persons with disabilities and their households represent a population subgroup with substantially higher poverty and lower human development indicators than the rest of the population. For instance, 42% of households with persons with disabilities live in poverty compared to 18% of households with no persons with disabilities; 26% of persons with disabilities around 15–59 years of age are in employment compared to 63% of those without disabilities; and, 43% of persons with disabilities who are 6–18 years of age are unable to read compared to only 4% of people without disabilities. People with disabilities and the families of children with disabilities incur higher expenditure for health services than people without disabilities, including for medicines, diagnostic procedures, and travel costs associated with visiting Ulaanbaatar, the capital, for tests that are not available in provincial hospitals. This increased consumption contributes to higher levels of poverty among households with persons with disabilities (Asian Development Foundation, 2016).

Moreover, Mongolia falls short of the legal environment that ensures people with disabilities access to public transportation (Ayush, 2003), roads (Juluundolgor, 2016), buildings, housing, public facilities (Gonchigbat, 2013), and that explicitly provide people with vision, hearing or speech disabilities access to information and communication with others. There is a necessity to significantly reduce and gradually eliminate the barriers faced by people with disabilities when accessing public transportation (Bat-Orgil, 2016), using public infrastructure (Stark et al, 2008), and using public means of communication.

Limited studies have been carried out in Mongolia on the environmental accessibility for people with disabilities (Asian Development Foundation, 2016). The research on "Equal accessibility to health care services for people with physical disability" conducted by (Munkhuchral et al, 2013) reports that hospitals have no designated parking area outside their buildings (100%), no paved roadways leading to the hospital building or roadways that are accessible by people with paralysis (56.2%) (Orgilbayar, 2009), no ramp access at the main entrance to the

hospital building (18.2%) or standard ramp that can be used by wheelchair users alone (69.1%) (Steinberg et al, 2006).

Objective

Therefore, the aim of this study is to assess environmental accessibility, with particular focus on public transportation and buildings for people with vision, hearing or speech disabilities in Mongolia.

METHOD

Study Sample

The study used random sampling for both public building and public transportation assessment.

- Out of 250 public and private organisations which mainly provide social services in Mongolia, 100 organisations were randomly selected for the public building assessment (Stark et al, 2008). These are divided into 7 categories, specifically:

   (i)   State administrative organisations, ministries and district municipal offices,

   (ii) Offices for labour, social welfare and protection, and social insurance,

   (iii) Health care organisations (Cupples et al, 2016),

   (iv) Educational institutions,

   (v)   Public transportation (Ganchimeg, 2013), culture and arts, entertainment service organisations,

   (vi) Public places for shopping, banking and financial services, and

   (vii) Public accommodations, resorts and sanctuaries, judiciary and law enforcement organisations.

- 100 passengers (with disabilities) of public buses, comprising 50 people with vision impairment and another 50 people with hearing and speech impairment, were selected randomly for the public transportation assessment.

Data Collection

The research was conducted by the team which also involved people with vision, hearing or speech disabilities and their support persons (Barnett et al, 2017). At the beginning of the study, team members were trained in methods to perform evaluation, and the research was collaboratively conducted with full compliance to the ethical norms and in accordance with approved methodology and methods (Grills et al, 2017). The barriers faced by people with vision, hearing or speech disabilities in relation to taking a public bus service for travel to a social service-providing organisation were identified and evaluated through standardised questionnaires. These were communicated to the people with hearing impairment with the help of a sign language interpreter and to the people with vision impairment with the help of accompanying support persons (Jakovljevic and Buckley, 2011).

Study Tool

A standardised internationally-used questionnaire consisting of 29 questions was used to assess the accessibility of public buildings (Gonchigbat, 2013). To determine quality and accessibility to public transportation, a standardised sheet consisting of 51 questions from the internationally accepted SERVQUAL, was used (Muthupandian and Vijayakumar, 2012). This model is commonly used for measurement of the discrepancies between actual performance and customer expectations.

Data Analysis

The questionnaire results were grouped into categories and descriptive statistics were obtained. Environmental accessibility scores between 100%-75% were categorised as "Very accessible or very good", 75%-50% was categorised as "accessible or good", 50%-25% was categorised as moderately accessible or average, and 25% or below was categorised as "inaccessible or bad" (Stark et al, 2008).

Quality and accessibility to public transportation were evaluated by a five-point scale, based on the gap between the actual performance and the customer expectation regarding usage of public transportation.

Ethical Considerations

The study methodology was approved by the Researchers' Council meeting of the School of Public Health, Mongolian National University of Medical Sciences

(MNUMS), on 26th June 2015 (meeting minutes #16) and ethical issues were discussed and approved by the Medical Ethics Committee of the MNUMS at its meeting held on 18th December 2015 (minutes #5/3/2015-05). The research team was given training on how to conduct assessment and provided with Consent Forms (to obtain approval related to ethical issues).

RESULTS

Public Building Assessment

Overall results of this study show that public building assessment for people with vision, hearing and speech disabilities is insufficient in Mongolia. Average score for pubic building accessibility for people with vision impairment was 42.81% while it was 31.71% for people with hearing and speech impairment; these are categorised as moderately accessible.

The assessment of public transportation, culture and arts, and entertainment service organisation buildings showed they were "accessible" for both people with vision impairment (61%) and people with hearing and speech impairments (53%). It was concluded that educational institutions were "inaccessible", with the lowest score of 11.8% for people with hearing and speech impairments.

Table 1: Comparison of Average Assessment Scores for Environmental Accessibility to the Buildings of Organisations providing Social Services to People with Vision, Hearing and Speech Disabilities

Service Sectors	Accessibility for People with Vision Impairment	Accessibility for People with Hearing and Speech Impairment
State administrative organisations, ministries and district municipal offices	45.3%	36.3%
Offices for labour, social welfare and protection, and social insurance	38.3%	26.7%
Health care organisations	38.9%	31.1%
Educational institutions	30.9%	11.8%

Public transportation, culture and arts, entertainment service organisations	61.0%	53.0%
Public places for shopping, banking and financial services	43.0%	30.0%
Public accommodations, resorts and sanctuaries, judiciary and law enforcement organisations	42.3%	33.1%
Average	**42.81%**	**31.71%**

Table 2 shows more detailed results by 5 categories for people with vision disability.

Average assessment score for public buildings' accessibility shows that only the indicator

"Have large signs with good lighting" was evaluated as "very accessible", with an average assessment score of 77.0%.

The indicators "Have guidance handles for people with seeing disability in corridors", with a score of 50.0 %, and "Have welcoming guide ready to help the customers at entrance", with a score of 52.0 %, have been evaluated as "moderately accessible".

For bathroom accessibility, the indicator "Placed mirrors 20cm from the wall next to", with a score of 32.0%, and for external environment accessibility the indicator "Planned parking space near the building for people with disability ≥3m 50cm", with a score of 40.0 %, were evaluated as "accessible". All other indicators were evaluated as "inaccessible", with a score below 25%.

Out of a total of 18 indicators, only 1 indicator was assessed as "very accessible or very good", 3 were "accessible or good", 2 were "moderately accessible or average", and 12 were "inaccessible or bad".

Table 2: Average Assessment Score for Public Buildings' Environment Accessibility for People with Vision Disability, by Assessment Indicators

Evaluation	(%) Yes	(%) No
Entrance Accessibility		
If the floors are on one level without any defects	41.0	59.0
Have guidance handles for people with seeing disability in corridors	50.0	50.0
Have tactile boards with 90cm width before and after stairways and elevators	8.0	92.0
Have floor numbers with Braille along the stairways handle	8.0	92.0
All the elevator buttons have Braille notes on them	22.0	78.0
Internal Environment Accessibility		
Have elevator ready when needed to get service from second floor	21.0	79.0
Elevator announces floor number and displays on monitor 1-2 seconds before reaching the floor	20.0	80.0
Bathroom Accessibility		
Have floor tactile marks before every bathroom sink and lavatory pans	6.0	94.0
Have emergency call gadgets in bathrooms	7.0	93.0
Placed mirrors 20cm from the wall next to	32.0	68.0
Information Accessibility		
Have information board of services provided by organisation, annotations for directions, bathrooms and emergency exits	11.0	89.0
Have welcoming guide ready to help the customers at entrance	52.0	48.0
Have clear room address and good lighting in rooms	77.0	23.0
Have light and sound alert emergency system for emergency situations specially for people with disabilities	18.0	82.0
Have specific SOS emergency plan to countermeasure sudden situations for people with disabilities	6.0	94.0

External Environment Accessibility		
Have flat or allowed elevation platform to be accessed by elders and people with disabilities	15.0	85.0
Planned parking space near the building for people with disabilities ≥3m 50cm	40.0	60.0
Have guiding signs to the building from the nearest public bus stop for people with disabilities	18.0	82.0

Table 3 shows similar results for people with hearing and speech disability.

Only the indicator "Have large signs with good lighting in rooms" has been evaluated as "very accessible", with average assessment score of 77.0%.

From information accessibility, the indicator "Have flowing advertisements of organisation's service", with a score of 71.0 %, and from bathroom accessibility the indicator "Have bathroom signs separately", with a score of 59.0%, have been assessed as "accessible or good".

From external environment accessibility, "Planned parking space near the building for people with disability ≥3m 50cm" has been assessed as "moderately accessible", with the score of 40.0%.

All the others are evaluated as "inaccessible or bad", with a score below 25%.

Out of a total of 12 indicators, only 1 indicator was assessed as "very accessible or very good", 2 were "accessible or good", 1 was "moderately accessible or average", and 8 were "inaccessible or bad".

Table 3: Average Assessment Score for Public Buildings' Environment Accessibility for People with Hearing and Speech Disability, by Assessment Indicators

Evaluation	(%) Yes	(%) No
Bathroom Accessibility		
Have bathroom signs separately	59.0	41.0
Have emergency call system in bathroom	7.0	93.0
Information Accessibility		
Have flowing advertisements of organisation's service	71.0	29.0

Have sign language display	4.0	96.0
Have sign language interpretation of organisation's website	2.0	98.0
Have light and sound alert emergency system for emergency situations specially for people with disabilities	18.0	82.0
Have specific SOS emergency plan to countermeasure sudden situations for people with disabilities	6.0	94.0
Internal Environment Accessibility		
Have clear room address and good lighting in rooms	77.0	23.0
Have elevator ready when needed to get service from second floor	21.0	79.0
Elevator announces floor number and displays on monitor 1-2 seconds before reaching the floor	20.0	80.0
External Environment Accessibility		
Planned parking space near the building for people with disabilities ≥3m 50cm	40.0	60.0
Have guiding signs to the building from the nearest public bus stop for people with disabilities	18.0	82.0

Table 4 shows average assessment score for public buildings' environment accessibility for people with vision disability, by type of public organisation and categories. For people with vision disability, average assessment score of entrance accessibility ranged from 57.7% - 80.0% and has been evaluated as "good". Establishments' internal environment accessibility, including tactile way, hand-rail along the corridors, tactile marks before and after the stairways, floor numbers with Braille markings on stairway hand-rail, Braille markings on elevator buttons, announcer when going in/out from elevator, scored from 19% - 46% and were evaluated as "moderately accessible".

The internal environment accessibility has been evaluated as "inaccessible or bad", with 19.1%-19.4% for the buildings of social welfare, insurance, and security organisations as well as schools and kindergartens from educational organisations. Moreover, for the other 71 organisations, internal environment accessibility was evaluated as "moderately accessible or average", scoring 32.1%-46.0%.

Assessment checked whether establishments' bathrooms have Braille notations on bathroom doors, whether the floor is tactile in front of sinks and lavatory pans, and for the presence of emergency call system and hand-rails along the

wall. Results showed that bathroom accessibility of public entertainment and media organisations was "moderately accessible", with a score of 40.0%.

Other 6 categories of 90 establishments' bathroom accessibility were "inaccessible or bad", with scores of 10.0% -17.3%.

In addition, the following points were considered for this assessment: whether service information is spread using voice messages, whether there are text messages with Braille notations, and whether they have information boards and guides to help people with disability. Information accessibility was rated as "moderately accessible", with scores of 32.7% -50.8%. The other 20% was evaluated as "good", with scores of 53.7% -62.0%.

Assessment has evaluated whether establishments' external environment has planned parking space for people with disabilities, whether there is a guiding path to the building entrance from the parking lot, and a guiding path from the nearest public bus stop to the building entrance. External environment accessibility was found to be "accessible or good" for 60%. The other 40% was evaluated as "moderately accessible".

For people with seeing disability, the external environment accessibility of public organisations was found to be "accessible or good" for public transportation, media, entertainment and culture, while for the other 6 categories it was "moderately accessible or average". Overall, the external environment accessibility of public organisations was found to be "moderately accessible" for people with seeing disability.

Table 4: Average Assessment Score for Public Buildings' Environment Accessibility for People with Vision Disability, by type of Public Organisation and Categories

Category	Number	(%) Accessibility					
		Entr-ance	Internal environ-ment	Bath-room	Infor-mation	External environ-ment	Overall average
Public administration organisations	19	71.1	32.1	13.2	53.7	53.2	45.3
Social welfare, insurance and security organisations	18	58.3	19.4	15.0	44.4	50.0	38.3
Healthcare organisations and branches	19	64.7	33.2	9.5	48.4	39.5	38.9
Education organisations and branches	11	63.6	19.1	17.3	32.7	18.2	30.9
Public transportation, entertainment, media organisations	10	80.0	46.0	40.0	62.0	60.0	61.0
Public market, bank and financial organisations	10	65.0	37.0	13.0	46.0	54.0	43.0
Health resort, court and police organisations	13	57.7	40.0	10.0	50.8	57.7	42.3

Results for public buildings' environment accessibility for people with hearing and speech disability show that out of 100 organisations in 7 categories, 80% were evaluated as "inaccessible or bad" for information accessibility, with scores of 14.5% –21.1%. The other 20% were "moderately accessible or average", with scores of 27.7% -38.0%.

Based on the assessment, the main problem for people with hearing and speech disability is to receive information. Consequently, special service and further improvements are needed for this. External environment accessibility was "moderately accessible" with 31.7%, which showed that people with hearing disability could not fully avail of public social service.

Table 5: Average Assessment Score for Public Buildings' Environment Accessibility for People with Hearing and Speech Disability, by type of Public Organisation and Categories

Category	Number	(%) Accessibility				
		Bath-room	Infor-mation	Internal Enviro-nment	External Enviro-nment	Overall Average
Public administration organisations	19	47.4	21.1	45.8	28.9	36.3
Social welfare, insurance and security organisations	18	36.1	15.6	20.0	25.0	26.7
Healthcare organisations and branches	19	47.4	14.7	33.2	21.1	31.1
Education organisations and branches	11	9.1	14.5	13.6	9.1	11.8
Public transportation, entertainment, media organisations	10	65.0	38.0	58.0	45.0	53.0
Public market, bank and financial organisations	10	10.0	16.0	48.0	40.0	30.0
Citizen residential, health resort, court and police organisations	13	0.0	27.7	52.3	42.3	33.1

Public Transportation Assessment

Table 6 summarises the results of evaluation of accessibility to public transportation for people with vision, hearing and speech disabilities. The quality and accessibility to public transportation for people with vision, hearing

and speech disabilities were evaluated based on the assessment provided by the people with disabilities as well as the discrepancies between actual performance and customer expectations identified through groups of indicators/factors, namely reliability, understanding of customers, safety, responsiveness, physical environment, and comfort.

The average total discrepancy between actual performance and customer expectations is higher (-2.90) for people with hearing and speech impairments. If the 6 indicators are inspected separately, the discrepancy between actual performance and customer expectations for the "physical environment" is the highest for all people with disabilities (-2.75--3.10). Since the current performance of "physical environment" and "responsiveness" is the lowest for people with hearing and speech impairments, the discrepancy remains the highest (-3.09). However, for people with vision impairment, because the current performance of "physical environment" is the lowest, the discrepancy is the highest (-2.75). The fact that the discrepancy between the standard requirements for public transport - bus stops, pedestrian roads and crossings - and the actual performance is the highest for people with disabilities, leads to a conclusion that the accessibility to public transportation and the surrounding areas is extremely insufficient for people with disabilities.

Table 6: Average Assessment Scores for Quality and Accessibility to Public Transportation for People with Vision, Hearing and Speech Disabilities

Indicators	Person with Hearing and Speech Impairments					Person with Vision Impairment				
	Present performance	Standard deviation	Expectation	Standard deviation	Discrepancy	Present performance	Standard deviation	Expectation	Standard deviation	Discrepancy
Reliability	1.88	0.23	4.53	0.22	-2.65	2.17	0.20	4.65	0.14	-2.48
Understanding of customers	1.79	0.34	4.67	0.27	-2.88	2.19	0.32	4.62	0.28	-2.43
Safety	2.12	0.24	4.75	0.19	-2.64	2.31	0.07	4.63	0.16	-2.33
Responsiveness	1.74	0.23	4.84	0.19	-3.09	2.05	0.08	4.63	0.15	-2.58
Physical environment	1.75	0.31	4.85	0.21	-3.10	1.88	0.18	4.62	0.11	-2.75
Comfort	1.85	0.18	4.87	0.12	-3.02	2.20	0.24	4.77	0.24	-2.57
Total Average	1.86		4.75		-2.90	2.13		4.65		-2.52

DISCUSSION and CONCLUSION

A key finding of this assessment shows that public buildings are moderately accessible for people with vision, hearing and speech disabilities in Mongolia. However, it is important to mention that the accessibility of only public transportation and of the buildings of culture and arts and entertainment service organisations was assessed as "accessible" for people with vision impairment and people with hearing and speech impairments. It was concluded that educational institutions were "inaccessible".

Out of all the assessment indicators, two-thirds of the indicators were assessed as "inaccessible" or bad for people with vision, hearing and speech impairments.

For public transportation assessment, the discrepancy between actual performance and customer expectations is the highest across all indicators for people with hearing and speech impairments. The discrepancy between actual performance and customer expectations for the physical environment is highest for all people with disabilities.

The research findings indicate a strong need to pay closer attention to the current environmental unfriendliness and inaccessibility faced by people with vision, hearing and speech disabilities in relation to their access to the main social service provider organisations, including the ministries, district municipal offices, social insurance offices, labour and social welfare offices, educational institutions and health care organisations. Systematic actions for improvement at the policy-making level should be considered, based on recommendations from the research and evaluation work. Tasks should be assigned to relevant offices and agencies, and solutions should be introduced in collaboration with non-governmental organisations.

Limitations

This survey tried to assess the environmental accessibility for people with vision, hearing and speech disabilities in Mongolia, for the first time. Although the goals were achieved, there are some limitations. First, the study covered only Ulaanbaatar due to constraints of time and financial resources. Second, only passengers who use public buses were surveyed for the assessment of public transportation. In the future, the quality and accessibility of other forms of public transport, such as trolleybus, trains and airplanes, need to be studied. Lastly, the assessment focussed only people with vision, hearing and speech disabilities.

Assessment for other forms of disability, such as mobility disabilities, should be conducted.

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APPENDIX

Assessment Score for Public Buildings' Environment Accessibility for People with Vision Disability, by Assessment Indicators

Evaluation	(%) Yes	(%) No
Entrance Accessibility		
If the floors are on one level without any defects		
Have guidance handles for people with seeing disability in corridors		
Have tactile board with 90cm width before and after stairways and elevators		
Have floor numbers along the stairways handle with Braille		
All the elevator buttons have Braille notes on them		
Internal Environment Accessibility		
Have elevator ready when needed to get service from second floor		
Elevator announces floor number and displays on monitor 1-2 seconds before reaching the floor		
Bathroom Accessibility		
Have floor tactile marks before every bathroom sink and lavatory pans		
Have emergency call gadgets in bathrooms		
Placed mirrors 20cm from the wall next to		
Information Accessibility		
Have information board of services provided by organisation, annotations for directions, bathrooms and emergency exits		
Have welcoming guide ready to help the customers at entrance		
Have clear room address and good lighting in rooms		
Have light and sound alert emergency system for emergency situations specially for people with disabilities		
Have specific SOS emergency plan to countermeasure sudden situations for people with disabilities		
External Environment Accessibility		
Have flat or allowed elevation platform to be accessed by elders and people with disabilities		
Planned parking space near the building for people with disabilities ≥3m 50cm		
Have guiding signs to the building from the nearest public bus stop for people with disabilities		

Assessment Score for Public Buildings' Environment Accessibility for People with hearing and Speech Disability, by Assessment Indicators

Evaluation	(%) Yes	(%) No
Bathroom Accessibility		
Have bathroom signs separately		
Have emergency call system in bathroom		
Information Accessibility		
Have flowing advertisements of organisation's service		
Have sign language display		
Have sign language interpretation of organisation's website		
Have light and sound alert emergency system for emergency situations specially for people with disabilities		
Have specific SOS emergency plan to countermeasure sudden situations for people with disabilities		
Internal Environment Accessibility		
Have clear room address and good lighting in rooms		
Have elevator ready when needed to get service from second floor		
Elevator announces floor number and displays on monitor 1-2 seconds before reaching the floor		
External Environment Accessibility		
Planned parking space near the building for people with disabilities ≥3m 50cm		
Have guiding signs to the building from the nearest public bus stop for people with disabilities		

Questionnaire Table for Assessing the Service Quality and Accessibility for Public Transportation

No		Overall Performance		Big capacity/size bus		
				Current performance	Expectations	Gap
1.	Assurance	Does the public transport orally inform passengers about the complete stop of transportation?				
		Does the public transport orally inform the name of current and next stations to the people with visual impairment?				
		Does the public transport inform the name of current and next stations through an electronic sign board to the people with hearing impairment?				
		Is 1.5-3m distance reserved between the edge of road and the bus station?				
		Is the warning knob placed on the edge of the switch pedestal on the bus and wagon level change?				
		Are there special places equipped with protective belts in the public transportation?				
		Are the ramps and doors of the public transportations accessible without any barriers for people with wheelchairs?				
2.	Empathy	Responsiveness to the complaints and requests of the passengers with disabilities who are travelling by public transportation				
		The kindness and friendliness of the public transport service workers to passengers with disabilities				
		Workability of service workers in line with the desire of passengers who are travelling in public transportation				

		Is the training being provided on how to deliver services for people with disabilities?			
		Have SOS services been implemented and tailored in line with the specific needs of persons with disabilities?			
		Is the assistive service being delivered when it is required for passengers with disabilities?			
		Is the service being delivered to the passengers with wheelchairs by the conductors, drivers, and supervisors who are working in the public transportation?			
		Is the working timetable of the public transportation flexible to passengers with disabilities?			
3.	Reliability	Travel time maintainability for public transportation?			
		Reliability and quality standards of public transportation services?			
		Information availability on getting the route and timetable of the public transportation?			
		Does the public transportation have the boards that contain the route map for bus stations as marked?			
		Is the public transportation equipped with a warning signal which is able to announce information about upcoming stations?			
		Is the public transport equipped with the electronic sign board which is able to deliver information about upcoming stations?			
4.	Respon-siveness	Attitude and communications of public transportation workers to the passengers			
		Transparency of public transportation service providers			

		Accountability of public transportation service providers			
		Skill set of public transportation service workers			
		Skill set and service delivery capability of public transportation service workers to passengers with disabilities			
5.	Tangible	Accessibility and clarity of information being displayed on public transportation stations			
		Are the public transportation stations equipped with information boards?			
		Are the information boards equipped with lights?			
		Is the information board accessible to the passengers with visual and hearing impairments?			
		Are the public transportation stations equipped with Braille and audio equipment for passengers with visual impairment?			
		Compatibility of public transportation stations' surrounding environment to the passengers' needs?			
		Entrance accessibility to public transportation stations for delivering of "Get in & Get off" the bus services to passengers with disabilities			
		Ensuring the entrance accessibility to the public transportations for people with disabilities by enabling the same level between bus and road edges			
		Is the ramp accessibility being provided for people with disability to enter the public transportations?			
		Is the guide road being provided for passengers with visual impairment?			
		Is the pedestrian ramp and signal being provided near the public transportation stations?			

		Are there any other entrance barriers to the pedestrian and near the bus stations for people with disabilities?			
		Are the public transportations equipped with the accessible tools and techniques?			
		Do the public transportations use ramps?			
		Are the public transportations equipped with knobs in front of seats for the people with disabilities to communicate with drivers?			
6.	Comfortable	Are the public transportations equipped with special chairs for passengers with disabilities?			
		Are the chairs equipped with the special signs being used for passengers with disabilities and elder people?			
		Comfort of public transportations for travel			
		Whether the public transport service driver is driving the bus safely and comfortably?			
		Adaptation of passengers with public transport travel times			
		What is the current condition of overloading of passengers in public transportations?			