



DigiDeaf Project

Report

Digital Accessibility
for Deaf people



CONTENT

- 1.Context
- 2.Project objectives
- 3.Participant characteristics
- 4.Workshop summary
- 5.Activities and results
- 6.Challenges
7. Recommendations



CONTEXT

Accessibility, in accordance with the provisions of the Convention on the Rights of Persons with Disabilities, is an aid for persons with disabilities to live independently and to participate fully in society in all aspects. This convention adopts the principle of inclusiveness, one of the general principles of the 3rd article and the 4th article that requires States to proactively promote accessibility within the framework of the design and development of new technologies, including information and communication technologies, and also works to make these technologies available to persons with disabilities.

The convention also contains other separate articles on accessibility, the 9th article, and in particular 21st article which is specifically devoted to freedom of expression and access to information, requiring States to promote effective access to new information and communication technologies and systems, including the Internet. Tunisia is among the countries obliged to guarantee this right by signing this convention on March 30, 2007 and ratifying it by Law No. 4 of 2008 of February 11, 2008. It also took the initiative to publish it in the Official Gazette of the Tunisian Republic by virtue of decree n° 2008-1754 dated 22 April 2008.

Tunisia is also a member of the 2030 Agenda for Sustainable Development, which commits to promoting accessibility. Among the 17 Sustainable Development Goals (SDGs) is Goal 9. c, which aims to "significantly increase access to ICT and strive to provide universal and affordable access to the Internet in least developed countries by 2020".

At the local level, Tunisia's new 2022 constitution gave people with disabilities great attention, allocating them to a separate article, article 54 "the State shall protect persons with disabilities from all discrimination. Every citizen with a disability has the right, according to the nature of his disability, to benefit from all measures that guarantee his full integration into society. The State shall take all necessary measures to achieve this."

This article enshrines the principle of inclusion of persons with disabilities in all fields, including the digital sphere, by taking the necessary facilitation measures.

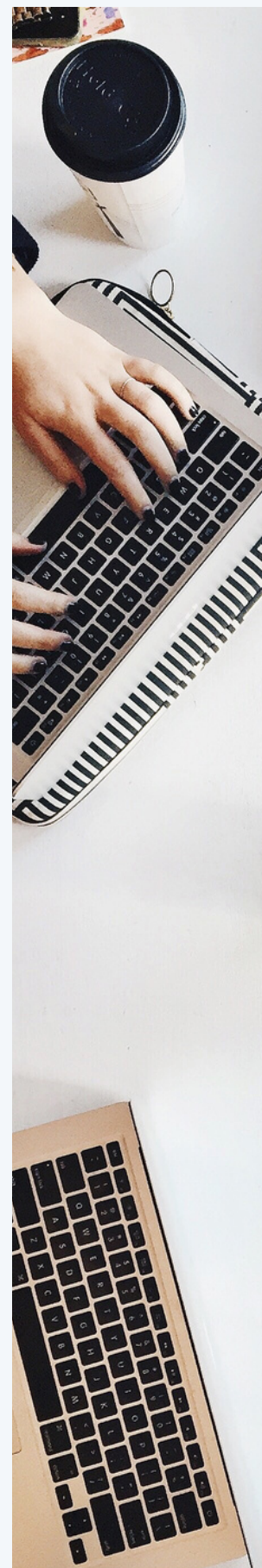
We also mention Ordinance No. 2006-1477 of 30 May 2006 on the adaptation of means of communication and information for persons with disabilities.

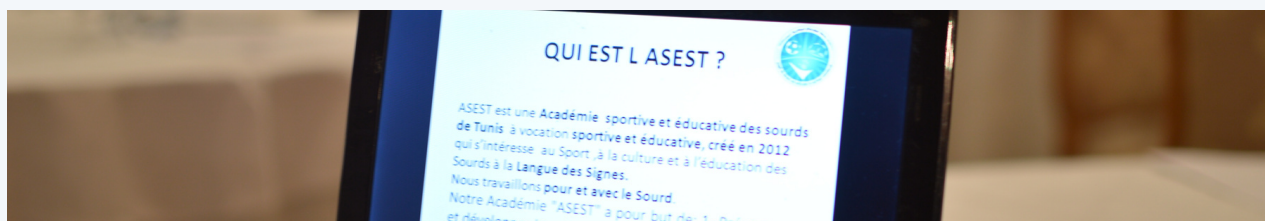
This legislation is one of the most important guarantees that the Tunisian State is committed to, by providing to persons with disabilities all their rights so that they can access the Internet in an effective manner.

However, the reality doesn't reflect what has been endorsed and adhered to. Persons with disabilities in Tunisia today face many barriers, as a result of significant gaps in access to relevant information and technologies, due to the lack of accessible means such as sign language for the deaf or websites that facilitate reading content on the screen for the blind.

In addition, the illiteracy rate of persons with hearing disabilities reaches 94%, meaning that the only way for them to receive information is in sign language, which deepens the difficulties they face while using the Internet, which in return explains the increasing digital illiteracy rate among them.

People with hearing disabilities are the most vulnerable category and are very exposed to the dangers of the Internet, mainly because they are unable to read and understand content on the Internet while often using video calls through various applications to communicate in sign language; which remains the only way for them to communicate and transmit information.





This is what makes them the most susceptible to the Internet risks, and indeed this is what has been monitored at the **Sports and Educational Academy for the Deaf in Tunis, AEST**, where many deaf have been exposed to hacking their accounts and also to blackmail and electronic harassment. This is what made **Digital Citizenship** show special interest in them due to the difficulties that they are exposed to, and out of its belief that digital access and digital rights are for everyone without exception, regardless of their color, gender or disability.

Here came the idea of "DigiDeaf", a project that started in August 2022, to host a training workshop that brought together 20 deaf people at the Academy's headquarters to talk to them about digital rights and how to protect their personal data on the Internet, the discussion with the deaf people was fruitful, as all their ideas and opinions were documented to be the starting point for creating awareness videos in that regard. They were also provided with awareness sessions at the end of the training sessions.

Despite the success of the first training sessions, another training had to be held on the right to digital access, which is one of the basic rights that deaf people must enjoy in order to use the Internet in a safe manner. Therefore, a second training day for deaf people on the right to digital accessibility was held, which includes a larger number of deaf people and in-depth activities and dialogues.

PROJECT OBJECTIVES

Deaf people are aware of their digital rights and how to protect personal information online.

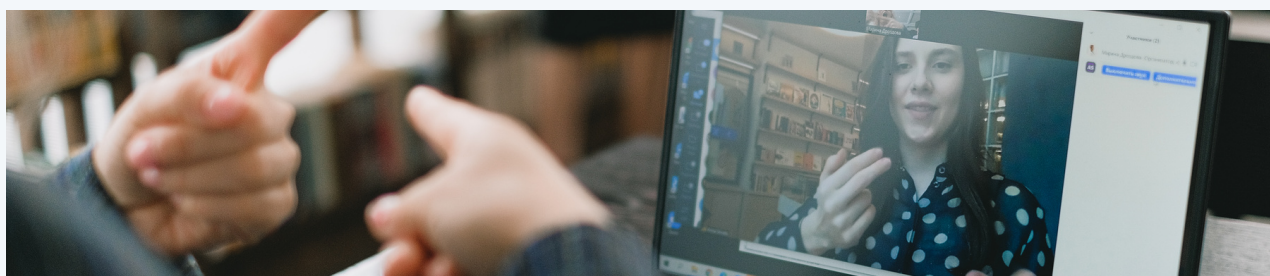
The project aims to provide deaf people with the most important information about all digital rights and duties, so that they can be active digital citizens just like any other citizens without disabilities. This project also aims to support their technical skills on how to protect their accounts and private information in the digital space.

2 awareness videos in sign language

These videos aim to educate the deaf people in a broader way about how to be active citizens on the Internet and about risks and safety online.

DigiDeaf App

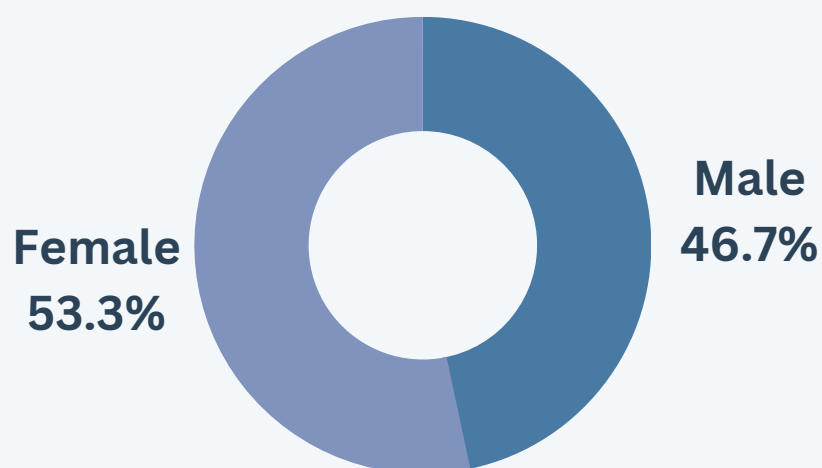
This project aims to create a special application for the deaf people, with educational awareness content through all easy access mechanisms.



PARTICIPANT CHARACTERISTICS

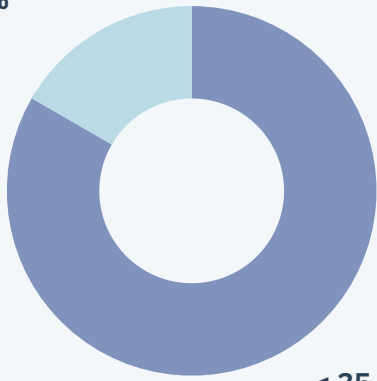
Gender:

During the participants selection, gender equal opportunities principle was taken into account, as it was tried to split the participants into 50 percent deaf men and 50 percent deaf women, but due to the absence of some participants, the number of participants changed into 16 women and 14 men. In addition to the organizing team : two sign language interpreters to provide the entire interpretation of the day, the moderator of the dialogues and activities, the coordinator and rapporteur of the training day, a representative of the Sports and Educational Academy for the Deaf, the developer of the DigiDeaf application, the Digital Expert, "Salamat" Program Coordinator and representatives of Digital Citizenship.



The percentage of deaf females and males participating in the training workshop

> 35 years old
16.7%



< 35 years old
83.3%

Participants' age group

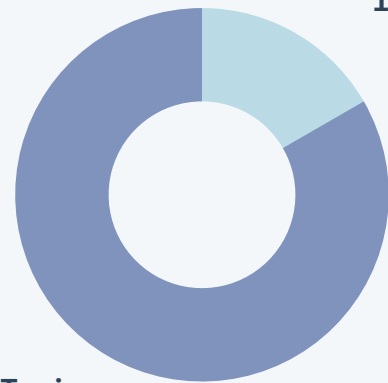
Age group:

The participants in this workshop are mainly youth, as the number of deaf people under the age of 35 was 25, while those over the age of 35 were only 5.

Region :

In this training workshop, only the deaf people living in the Greater Tunis were chosen, given that this a one-day workshop. However, due to the request of some deaf people and their interest in this topic, 5 deaf people were chosen from outside Greater Tunis: three deaf people from Nabeul, a deaf person from Bizerte and another one from Sfax.

Other states
16.7%



From Greater Tunis
83.3%

Participants' areas of residence





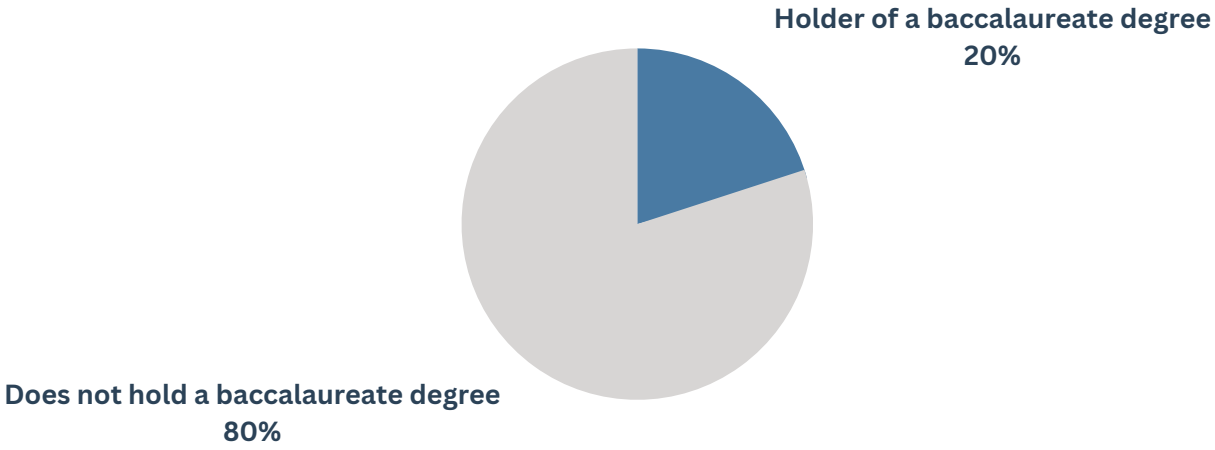
Academic level:

In the participants group that was chosen, only six of them have a baccalaureate degree and continued their higher education, the remaining 24 do not have a high school diploma and are unable to read and write.

This choice was intentional, because most deaf people who are exposed to account hacking and violation of their digital rights are the uneducated ones and those unable to write and read.

Likewise, for the six deaf people with a baccalaureate degree, their choice was intentional, in order to discover how they interact with the issue of digital access and whether they have any knowledge of it.

This choice was also a helpful factor in the activities that require writing and reading, as deaf people who were able to write were distributed equally among all groups.



participants' educational level

WORKSHOP SUMMARY

The workshop "Digital Accessibility for the Deaf" is a one-day workshop. After getting to know each other and introducing the working team members, the project and its objectives were presented so that the participants could understand the general framework and to form expectations about what they will go through during the workshop.

It was important to set the work rules in order to be successful and to avoid any accident that could disrupt the workflow.

This was followed by an activity that aimed to find out the extent to which deaf people use the Internet and in what manner, by presenting a set of situations and counting how many deaf participant agree or disagree. A second activity also aimed to understand more the deaf's perceptions of the digital space in Tunisia, and it was by choosing a picture that expressed their opinion on the Internet.

The second part of the training began with a group activity, then a summary on digital rights and digital safety. A dictionary of digital terms in sign language was also presented, then the "DigiDeaf" app was presented and the suggestions of the deaf attendees were collected.

The third part of the workshop focused more on providing information about the digital access concept and the legislative aspect that guarantees this right after assigning the deaf participants to work in groups.

The fourth and final part was a summary of all the information exchanged by the deaf participants and the trainers. It allowed the experts to answer their questions.

ACTIVITIES AND RESULTS

Activity/ Energizer N° 1 : Information Circle



This activity is an opening activity where all the participants are placed in a circle and read to them a set of information. Anyone who agrees must move forward. All but one deaf person turned out to have accounts on social networking sites "Facebook, Messenger, and WhatsApp". These applications represent an important element in their lives; they are their unique means of communication in sign language via video calls.

It was also found that none of them had an administrative service from the official digital sites allocated by the government. Of course, this is because all these websites are not accessible to persons with disabilities, especially those with hearing disabilities, who need explanatory videos that explain the content of the site and how to use it.

Only 4 deaf people use a strong password for their accounts: more than 8 words and containing letters, numbers and signs. They are the same ones who agreed to the fact that they are familiar with the legislation and laws that guarantee their right to digital access. These four deaf participants are holders of the baccalaureate degree and are pursuing their university studies, which explains why they are familiar with the laws unlike the rest of the uneducated deaf people. Ten of them also admitted that their Facebook accounts had been hacked and could not recover it.

None of the participants was aware of the applications and modern technologies that facilitate their access to the digital space, as they were confused when the information was mentioned and did not know that these tools exist.



Activity/ Energizer N° 2 : Metaphor Cards

After the deaf participants completed the first activity, in which they only expressed their agreement or disagreement without any explications. The second activity had to be more in-depth to make the deaf express their opinions by using a set of cards that contain various pictures from life. Pictures were placed in and deaf participants were assigned to choose one that expresses their perception of digital space and what it meant to them. At first the task was not clear to them, and it took more time than expected to explain to them the activity and its purpose. An example was done so that they understand the meaning of the activity.

Most of the expressions were similar, as the majority of the deaf participants chose pictures with roads, light in the dark, roses, babies... They explained their choices that the Internet for them is the hope and the future that they aspire for in their lives, as it represents their exit from the illiteracy zone. More than half of the participants believe that the Internet is a source of information that will improve their lives and make them equal to hearing people. As one of the participants, Amira Naimi, 25 years old , said:

“I chose the image of a child because it represents the future. This is what I think of the Internet . It is the tool that will allow me to communicate and learn...”

While the rest of the participants had different points of view, as they chose abstract pictures, a map, music... and they expressed their lack of understanding of the digital space, as Malek Sfar, 21 years old, said:

"I chose music because I can't listen to it, I would like to hear it and enjoy it like the hearing people, but unfortunately this is something impossible, the same with the Internet, I think it is impossible to understand it and enjoy my rights in it, it is very complicated."

Supporting Malek's opinion, Ramzi, 35 years old, added:

"For me, I chose giraffe picture, I think his presence has no meaning in life, just like myself in the digital space, useless! I cannot learn from it or benefit others because I do not understand it."

What we concluded from this activity is that, despite the different opinions about the digital space, it indicates one thing: currently the situation of deaf people with the digital space is not good and they face many difficulties. The majority of them, who had an ostensibly positive opinion, used words to indicate their desire to improve their situation in the future, which indicates that they are not satisfied with the current situation that must change.





Activity N° 3: Focus Group

The next focus group was a safe and free space for deaf participants to express their opinions regarding the digital space, as they were not restricted by any instructions. This made them recall the problems they face while using the Internet. Dorsaf, 38 years old, stated:

“The biggest problem I encounter on the Internet is that I have an old Facebook account that I could not retrieve, rather it was hacked and my name and pictures were used in it. ”

Saber, 22 years old, who works in a bakery shop, added:

“I use Facebook a lot. It is part of my successful business. When I make a cake, I photograph it and upload it to my Facebook page to attract more customers. But there are those who steal my photos and post it in their pages as it is theirs. I feel sad because I don't know how to deal with this.”

While Malek added: ***“I am a computer sciences student, and this is the third year in which I failed, because there are no signs synonymous with the technical words related to computer and the digital world. I do not understand the content of the lesson.”***

All the difficulties faced by the deaf people come from one source, which is digital illiteracy, which in turn results in their inability to access information related to this subject. Therefore, translating any content that would educate the deaf in this field is necessary so they can overcome the barriers.

The statements of the deaf participants were all very important, which made the trainer listen and follow up on them so that he could answer them through the next presentation about digital rights and safety.

The first session: a summary of digital rights and safety

The first training session for the deaf participants is a summary given by the trainer on safety and digital rights. This session is a set of solutions to the difficulties posed by the deaf participants in the previous activity. At first, the trainer introduced the concept of digital safety. He then offered a set of tips in this regard: the use of strong passwords, update security software, beware of suspicious email & chat, use of secure Wi-Fi networks, keep backups, beware of malware, two-way authentication. All the tips were clear to them except the last one and seemed complex and incomprehensible, so we concluded that it was necessary to do a practical session for all these tips.

As for digital rights, the trainer mentioned examples of these rights such as: the right to access digital content, the right to participate in digital content, the right to education, the right to privacy, the right to access digital government services, and the right to access digital medical services. Many deaf people commented on these rights, as Ismahan, 41 years old, said :

"I have to use video calls to communicate with my friends and family, because I don't know how to write and read messages, but they always take a picture of me when I call them, and this bothers me, is there any way to prevent taking screenshots during video calls?"

They also added that the reason they did not know these rights was that there was no relevant content interpreted in sign language that would make it easier for them to understand.





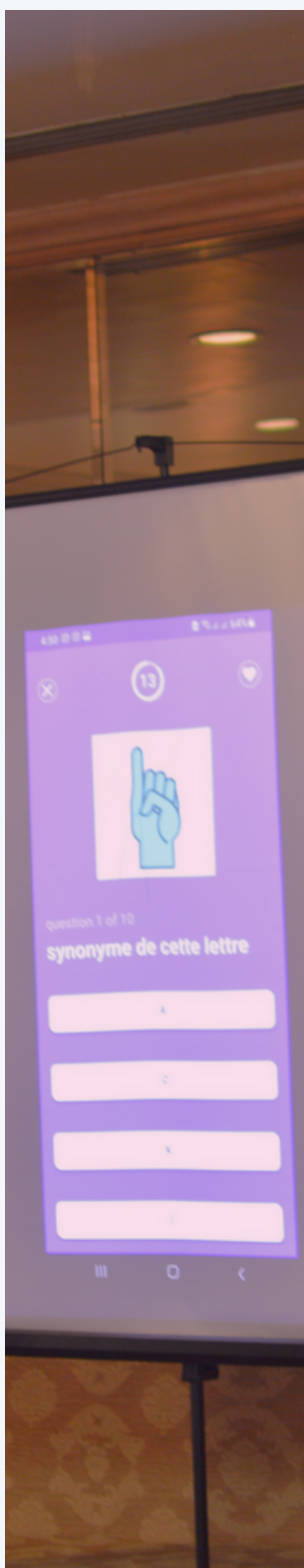
The second session: Presentation of the digital terms dictionary in sign language

The dictionary of digital terms in Sign Language is produced within the "Salamat" program that brought together many participating Arab countries, such as Iraq, Libya, and Morocco... Leila Mnekbi, trainer and coordinator of the "Salamat" project in Tunisia, presented this dictionary and the terms in it so that we can get the opinions of the deaf participants about it, and their opinions were as follows:

- The necessity of including a translation in the Tunisian sign language, because the signs that are presented are not understood by them since it is a unified Arabic sign language.
- Explanatory pictures must be added to each video, because deaf participants are unable to read.
- It is obligatory to translate the digital terms into three languages; Arabic, French and English, because the majority of deaf people are able to read Latin letters more than Arabic letters.
- The videos should be organized according to ease, i.e. easy terms are at the beginning of the dictionary and difficult terms are at the end.

The dictionary link was shared with all the participants so that they can view it on their own, and so that they can report any incomprehensible or misplaced translated terms, either by contacting the workshop coordinator or the two translators who provided the translation throughout the day and transferred it to the Salamat team in order to change and develop the dictionary.

The third session: Presenting "DigiDeaf" application



Since the beginning of the project, Digital Citizenship has been interested in creating an effective app that contains everything the deaf need. The application is in the process of implementation, but it was presented to the deaf so that they can share their opinions about it and be part of its creation. The participants showed great interest in this application, as they emphasized that the content should be clear and easy to understand, and it should contain pictures as much as possible. Also, among the proposals that they put forward after completing and launching this application, a video should be made in sign language that explains all the content of the application, and this video will be a tutorial for how to use the application. All of them agreed to make this application more targeted to deaf children, because in their opinion, educating the new generation is a must because they are a priority in this valuable project.

They did not specify the desired content as much as they focused on how to present the content of this application, and here we conclude the importance of access to information in the digital space for them. The value of the application for them is equivalent to how easy and understandable the content is.

Some deaf participants have exchanged their facebook accounts with the app developer so they can reach out to him, to follow up and provide assistance as he create content.

Activity/ Energizer N° 4 : About digital access

In the fourth activity, the deaf were divided into four groups, and they were assigned an exercise, which is to search for all the information related to access to the digital space. The division was not arbitrary, but we deliberately placed in each group a deaf with a baccalaureate degree who can read and write and with an accompanying sign language interpreter. Both the facilitator and the workshop coordinator also accompanied the deaf to explain more and facilitate the task for them.

The exchange of ideas between the different deaf, illiterate and educated, those with profound or mild hearing disabilities, and those who master sign language and those who do not, created high interaction and fruitful dialogues, which made all participants excited to present their work. The following resulted:

The first group expressed digital access as it is; viewing all news on the Internet in sign language, all applications translated in sign language, creating applications in which deaf communicate with sign language interpreters to help them in the use of websites.

The second group talked about providing inclusive technology for people with disabilities



creating a special space for the deaf in all websites that contain sign language, providing subtitles in all videos for the ones who are unable to understand sign language.

The third group's most prominent ideas were that in Tunisia, digital access for the deaf is not available and they do not enjoy this right. Digital access is supposed to enable them to access all information on the Internet, and it also helps deaf children to learn online through sign language.

Finally, the fourth group, which expressed digital access as represented in the presence of sign language translation in YouTube videos, as well as films and series on websites must be translated in sign language and subtitles. They also expressed the need for sign language translation on the official administrative services websites to extract documents.

The fourth session: Introducing digital access



After the brainstorming that was held around the concept of digital access, it was necessary to hold a training session to add information and share more ideas about facilitating tools. The trainer introduced some of the most important legislation and laws that guarantee people with disabilities their right to digital access, such as the International Convention on the Rights of Persons with Disabilities, which is on an international level. At the local level, Law No. 83 of 2005 related to the protection and promotion of the rights of persons with disabilities. Law No. 23 of 2018 related to the regulation of electronic media and protection of personal data, Law No. 58 of 2018 related to digital signature and digital month.

The majority of the deaf declared that they are not aware of these legislations and it is the first time they are exposed to them. The same applies to the facilitation tools, as many applications presented by the trainer were unknown to them, as they were not familiar with the successful foreign experiences in digital accessibility. Even when an application that converts signs into speech was presented to them, they did not believe it. Maher, 37, said:

“It is impossible for an application like this to be created in Tunisia. It is impossible. How can a phone understand what I am saying in sign language and convert it into speech?”

Despite the willingness of deaf to use the Internet in an effective manner, they seemed to be hopeless and disbelieving that change could happen and the situation of the deaf could improve through facilitative tools and applications made specifically for them.

CHALLENGES

The workshop was successful , and it was not permeated by many challenges other than the technical ones, as there was a harmony between the deaf and the motivation also to participate, as many of them expressed at the coffee breaks about the importance of this topic, which no one has never shown interest in it.

Among the challenges we faced in this workshop:

- The time constraints for each activity or training session, as it was found that it takes more time for the deaf to understand the information, as the translator repeats the idea over and over again using examples until the information is clear to all the deaf.
- The presence of a deaf participant with a profound hearing impairment, who does not know how to communicate in sign language, which made it difficult for him to receive information, as it required to face the trainer so that he could read on his lips.
- Due to the fact that the day was cloudy, there was no natural lighting, which made us use the lighting of the hall lanterns, which caused annoyance for some deaf participants. The natural lighting directed to the interpreter is important for the deaf to focus.
- Some deaf participants arrived 45 minutes late, which made everyone wait for them and delayed all sessions, to finish the workshop late.



RECOMMENDATIONS

The recommendations that we came up with:

- Digital access for the deaf is through; images, (Tunisian) sign language and subtitles. These are three important elements that must be available in any website, especially websites with administrative government services, to which all citizens are supposed to have equal access.
- Concentrate more on educating deaf children and work on creating effective educational applications for them.
- Incentivize government institutions to include sign language translation on their websites, for example creating an explanatory video in sign language on how to use the Tunisian Post application.
- Not being limited to theoretical trainings, but rather training deaf in a practical way on how to protect their accounts in the digital space.
- Work on creating more awareness videos about digital rights and safety in sign language.
- Deaf people must be involved in giving this type of training, i.e. creating leaders with disabilities who are empowered in the digital field.





Contact us



<https://dco-tn.org>



contact@dco-tn.org

