

# NAFATH



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**mada**  
assistive technology center



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[info@mada.org.qa](mailto:info@mada.org.qa)

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# Working together towards digital inclusion Accessibility innovation in Qatar

Mada Assistive Technology Centre is a non-profit organization committed to connecting persons with disabilities to the world of Information and Communication Technology. Founded in 2010, to accommodate the UN convention on PWD, in recognition that technology is pervasive across a breadth of private and public sector activities and inherent in the Ministry of Transport and Communications strategy, and works to improve digital inclusion for persons with disabilities in the State of Qatar.

The Qatar National Vision 2030 serves as a clear roadmap to guide economic, human, social and environmental development in the State of Qatar. The growth of our country is dependent on all who live here, and therefore it is our responsibility to cater to all people effectively, support their ability to live independently, and derive equal opportunities when it comes to education, employment and independent living.

Persons with disabilities form an integral part of our society and have tremendous potential to contribute to the growth of the economy. Mada was created to help this community by leveraging on the capabilities of information and communications technology.

The organization strives to do more than just empower an individual; it endeavours to enrich the lives of PWD to the fullest, by addressing issues in the ecosystem to ensure that they have all the required technology to succeed. To deliver on its ambitions, Mada engages in strategic and operational partnerships with critical players in the PWD ecosystem.

#### Mada prioritises three key areas

**Education:** Educating both PWD and a variety of stakeholders about the ways in which ICT can be used to enhance life.

**Employment:** The inclusion of PWD into mainstream society through harnessing the

power of ICT to create employment and nurture entrepreneurship.

**Community:** Enabling independent living by encouraging the creation of an accessible community for PWD through the power ICT.

Mada also enables these areas through provision of advisory services and policy recommendations

We are committed to contribute to innovation and the development of new solutions for persons with disabilities, particularly by creating relevant Arabic Language Assistive Technologies, to better serve the increasing local and regional needs. Our outstanding relationship with with Assistive Technology important manufacturers and relevant worldwide private sector entities to develop innovative Assistive Technology solutions and services keeps Mada being strategically positioned at a crossroads. Our organization is also conducting relevant research studies to keep Mada and the whole region updated on the latest breakthroughs and international best practices.

Mada's newsletter is just another way of spreading important and relevant information about Assistive Technology. Our quarterly publication is an information platform and also a discovery tool: we want to bring together the huge domestic and regional appetite for Assistive Technology products and services with the latest technologies and trends in the whole world.

Like everything we do, we cherish and encourage your support and feedback, as readership's opinion is most valuable to us. This is how we can build a better environment which can best include people with disabilities and how we can all serve a better purpose. This newsletter is sent via e-mail and also available in print, as well as other accessible formats upon request.

Mada team.



Wandering Kids With Autism:

# Learn How To Transform Panic Into Help

Nothing can dent the beauty of raising a child, and modern families learn very fast how to transform risks and challenges into opportunities to better parenting. Dealing with autism is not a simple task for a parent, and one always hears or reads misleading articles about how an autistic child could easily get you trouble.

However, more and more scientific literature conveys a rather different message: all the problems that a child suffering from autism and her/his family have could easily be managed with better knowledge and a proper effort to let others know about your kid's condition.

One of these problems is wandering by children with autism, which always puts stress on families. Very important to know from the start: how to manage the 'guilt' phase. A 2012 US study showed that that autism-related wandering does not stem from inattentive parenting. And again, the same study revealed that half of all parents had received

no help or guidance at all on how to manage the situation and keep the children safe.

Below you'll find some useful pieces of advice to prevent wandering and what could easily become a wandering-related critical situation.

## 1. Know Your Environment: Secure Your Home

The first step in ensuring your child's safety is to improve prevention in your home. It may require professional help, like a good locksmith or a security company: they'll know what to do to prevent your children wandering away without you noticing. Such measures could include secure dead bolt locks that require keys on both sides, a home security alarm system, inexpensive battery-operated alarms on doors, placing hook and eye locks on all doors above your child's reach, fencing your yard, adhering printable STOP SIGNS to doors, windows and other exits etc.

## 2. A Tracking Device

We may live in the digital era, but when a child's safety is at stake it shouldn't sound so scary. The devices available now on the market are less intrusive than they used to be, and you could easily locate your child through radio frequency. Your kid wearing a GPS tracking device is also an option. Just make an effort and do some research, as there a lot of efficient options on the market which could prevent a tense situation.

Studies all over the world confirm that wandering by children with autism is common, dangerous and puts tremendous stress on families. An assistive technology solution that can help address this problem would be a GPS tracking device specifically design for this purpose. These would be a compact GPS tracking and SOS device ideal for people with special needs, like autism, dementia and others. These can be carried on the child as a keychain, around the neck, or in the pocket.

The main feature such devices are:

- Mini Sized.
- Real time tracking system using GPS or GSM.
- Simple SMS commands for tracking and registering Emergency Contacts
- Fall Detection for children.
- Geo-Fence alarm and over speed alarm capabilities.
- Movement alarm.
- SOS emergency Buddy Button.
- Stores three Emergency Contacts.
- Two-Way voice calls.
- Power saving mode.

Using such devices, parents can easily track their children in real-time through sending SMS commands or by calling the SIM number installed to the device.

To know more, please contact Mada Center

## 3. An ID Bracelet

Kids could wear medical ID bracelets with your name, address and other important data on them. Some offer the option to state that your child has autism and is non-verbal (if the case). A very clever way to replace that method is to apply a temporary tattoo with your contact information, knowing that your child is sometimes tempted to wander away from home.

## 4. Swimming Lessons

You'll never know what an autistic child could encounter when wandering without surveillance. Teaching her/him how to swim may save her life, and don't forget to teach them to swim with their clothes on, too. If you own a pool, be sure you fence it and remove all 'attractive' toys from it. Also, don't forget to inform your pool owners in the neighbourhood that your child has a tendency to wander.

## 5. Neighbours Alert

A good piece of advice is to pay a visit to your neighbours and provide them a photo of your kid. Think of your neighbourhood as a big family always help, at least you'll have some comfort knowing that someone will recognize her or him and alert you

## 6. First Responders Should Know... First!

A better response to a critical situation could come if you provide first responders with key information. An informational handout always comes useful in these kind of times. Be sure you have plenty of copies and you circulate them to family, neighbors, friends and co-workers, as well as first responders.

### What if she/he wanders at school?

Here are some useful tips coming from other caregivers' critical experience.

- Talk to the school's teachers. Make them aware of these past situations, as well as educate them on the autism wandering issue in general.
- Get a written statement or letter from the school's principal that the staff will always and immediately inform you of any wandering incident on or off the campus. If your child requires 1-on-1 supervision, be sure to make this extremely clear to school staff.
- Share your 'research' with the school staff to help them prepare if such an incident occurs: where has your child been found in the past? What are his or her fascinations or obsessions? Where would he/she most likely be drawn to near campus?
- Be heard and seen! Ask the staff about security measures used by the school and be sure that the security team knows about your child – not only how she or he looks, but how to calm her or him down, whether or not he or she responds well to touch, sound, etc.

Therefore, always keep in mind that information is critical. Combined with a better prevention plan, wandering incident could be dramatically reduced and controlled. Remember that you don't live in or on a cloud, and it's very important that all around you should always know about facts or changes in your kid's condition that could not only improve the environment she or he lives in, but could save the child's life.



Assistive Technology Innovation Program:  
**A Milestone For Qatar's Entrepreneurship**

Mada is bringing the domestic IT private sector entrepreneurship into a new dynamic by launching an Innovation Program from the Assistive Technology field, aiming to combine multiple sources of funding and raise the standard for the whole AT market in the Arab world. We see it as a national priority for the technology development in our region, and many markets around the world have shared this bold vision.

The Assistive Technology Center has a progressive and ambitious approach when targeting the market development: first, to set a new market standard through relating the domestic AT industry to the best practices around the world and second, to enhance the lives of PWD's in Qatar and the Arab world.

The most logical step to take right now is to link all the existing sources and stakeholders from the Assistive Technology market in Qatar. Therefore, we will provide a mechanism to ease the process of how the AT products and services reach the local market. Then, we will look beyond the borders and seek the support of potential local and international entrepreneurs interested in developing Assistive Technology solutions for the Arab market.

Where will the money come from? Mada sees a combination of funding programs, such as Competitions and Tournaments, Incubation Centers and Direct Awards.

### Competitions and Tournaments

First, we will target individuals and entities looking to develop a proof of concept for a potential idea relevant to Assistive Technology products/services. Then, Mada will introduce AT Award Segments within existing ICT related competitions and tournaments (e.g. Arab Mobile App Challenge, Microsoft Imagine Cup, and others), and fund the AT Segment related prize

### Incubation Centers

Such incubation centers are a business catalyst tool for our industry. They could not only attract funds but drive a lot of attention towards Assistive Technology, therefore we will first target individuals/entities who already have a proof of concept for a potential idea relevant to Assistive Technology products or services. Mada will introduce the AT Award Streams within existing Incubation Centers (ICT Qatar Incubation Center, Qatar Business Incubation Center, etc.) in Qatar to incubate entities with a potential idea relevant to Assistive Technology products/services. Then, we should provide funds to the Incubation Centers to support and incubate entities relevant to the AT Industry. It's a straightforward and efficient proof of concept.

### Direct Awards

There are many existing prototypes belonging to already established entities. Mada will target those business entities first, analyzing their potential and relevancy to the Assistive Technology market. The way we see this avenue of funding is to provide money directly to potential established entities with relevant AT product/service concept, because we need to see these products catered towards the local and Arab market.



## Mada supports entrepreneurs with disabilities

For its part, the Mada Center has released a set of best practices in the area of supporting entrepreneurs with disabilities, which it aims will go a long way in improving the ability of people with disabilities to access relevant services provided by the government, incubation centers as well as development and commercial banks.

Throughout the world, the number of people with

disabilities that are employed is considerably lower than their able bodied peers. Furthermore, in most instances where people with disabilities are employed, they find themselves stuck in low skill jobs with minimal pay. Undoubtedly, this has an adverse impact on the financial independence of people with disabilities, which in turn impacts their quality of life.

Similarly, governments miss out on the potential productivity of an entire sector of society, and end up with extra strain on social welfare programs. Society in general is also impacted by the marginalization of people with disabilities from the world of employment because this exclusion creates an inequitable environment where people with disabilities are grossly marginalized from civil society.

In addition to creating inclusive workplaces, affording entrepreneurship opportunities to people with disabilities has tremendous social and economic impact. Unlike traditional employment, entrepreneurship has the ability to offer flexibility in working hours and the potential for greater financial reward.

As such, entrepreneurship programs must play a critical role in national strategies that aim to empower people with disabilities in a way that meets sustainable development goals.

In order for people with disabilities to be able to start their own businesses, all entrepreneurial services must be provided in a fully accessible manner. In addition to that, some specialized services need to be put in to place to ensure greater access and improve the ability of people with disabilities to overcome a number of obstacles that are specifically related to their disability.

A lack of accessible services along with the unavailability of specialized expertise will most likely deter people with disabilities from starting their own

businesses. However, when training, financial support and consultancy services are made available, people with disabilities are more likely to become successful entrepreneurs. Support can also come in the form of technology, ranging from pervasive business tools to a range of assistive technology tools that can improve the ability of people with disabilities to conduct business.

As such, it is important for entrepreneurial programs in the country to take into account the needs and abilities of people with disabilities. Only then, will these programs be accessible to all.

The entry of people with disabilities into the workforce as employees and entrepreneurs will provide the world with a new perspective on productivity. It will reaffirm the notion that people, regardless of ability, are able to overcome tremendous obstacles, when adequate support is made available. Through the provision of necessary support, people with disabilities will be empowered to start their own successful businesses. As such, people with disabilities will form a critical component of Qatar's economic and social growth. Therefore, investing in entrepreneurs with disabilities is important on so many levels, but will only be possible with fundamental changes to societal perceptions and attitudes.

Please visit Mada's website to read and download Mada's report on best practices on supporting entrepreneurs with disabilities.





# Assistive Technology in the Classroom

## What is Assistive Technology?

It is a tool To support individuals to achieve their potential...

The ultimate goal is to Access all areas AT can be anything from a simple device, such as a magnifying glass, to a complex device, such as a computerized communication system.

## Potential Barriers to Learning

There can be barriers to learning for children in the classroom, particularly to those who may have some level of disability, that the use of Assistive

Technology can help overcome or eliminate.

Children with learning disabilities may have difficulties with acquisition of reading, writing, math's skills.

Children with Physical disability may have difficulties with physically holding a writing tool and accessing the curriculum.

Children with Hearing Impairment may miss out on learning opportunities by not hearing details of discussions in a busy classroom

Children with Visual Impairment may not be able to access learning material written in small text in books or on a board in the front of the class

## Assistive Technology in the Classroom 10 Top Tips for Teachers

### Developing Literacy Skills

For early learners Clicker 5 is a specifically designed software that helps students develop literacy skills. It is a powerful and easy-to-use word processor which enables development of activities which allow the student to write with whole words, phrases or pictures.

### Enabling Computer Access

For children who have a physical difficulty accessing the computer with a standard keyboard and mouse, appropriate adapted equipment can be used. A roller ball mouse allows mouse control with finger movements and without the need to move the mouse big keys keyboard provides clearer larger targets, with colour coding to help learning.

### Enhancing vision

Desktop magnifiers allow students to enlarge the font of written material as well as change the color and contrast to allow for greater ease of reading. These devices can also be used to view material written or drawn on a board at the front of the class to ensure that the person can view all of the teaching material in a manner suited to their visual needs.

### Enabling Communication

Augmentative and Alternative Communication devices allow a person who is non-verbal to express their thoughts and ideas and show their learning in the classroom setting to a more active level.

### Facilitate Increased Quality Written Work

Software which can support a student in writing and reading can be used. This can include a reader i.e. a text to speech utility and a writer which predicts words when typed. A wide range of visual tools are included to colour, highlight and focus on text as it is spoken by the computer as well as phonetic spell checking. Examples include localized Mada Reader / Writer and AT bar in Arabic as well as ClaroRead and Read Write Gold.

### Help Students Organise Their Thoughts and Plan Assignments

Mind mapping software helps students to get their thoughts down on paper and organize them in a manner which enable them to plan and structure assignments and essays. It also helps with generating new ideas.

### Dictate Assignments

Students can use speech recognition software such as Dragon which transfers spoken word to text negating the need for writing or typing where this is a difficulty.

## Enhance Hearing

An FM device allows sound to be transmitted from a microphone, used by the teacher, to a receiver, used by the listener, which can be directly linked to a hearing aid. The use of FM device in the classroom allows the student to hear the teacher more clearly despite ambient noise in the classroom.

## Electronic Worksheets

Electronic worksheets written to international accessibility standards ensure equal access to all students. These cut down on the amount of writing students have to do and clearly display materials.

## Enhance Learning in Mathematics

Talking calculators with voice synthesizers that read out the numbers, symbols and problem provide additional auditory feedback to the student to support development of mathematic skills. General technology in the classroom can benefit students with and without disabilities Computers, calculators, projectors, smart boards, tape recorders, software, and handheld devices are examples of general technology increasingly used in classrooms.

Research shows that technology aids in enhancing content and skill acquisition by students with a wide range of learning styles.

Even if you do not have a designated student with special needs in your classroom, use technology supports, as they may help students with "invisible" learning disabilities who have not received formal diagnoses.

## A Students' Assistive Technology Needs Evolve Over Time

As a student's schoolwork gets more advanced, their technology needs may change or increase. New technology may become available that will better meet the needs of the student.

Mada can help to support teachers and students by assessment for, recommendation and provision of appropriate Assistive Technology for the student. "Technology has great potential in providing access for all learners. Through the use of a variety of assistive technologies, students with disabilities can have the ability to access the general curriculum. When assistive technology is appropriately integrated into the regular classroom, students are provided with multiple means to complete their work"



## Amna's story A case study

Amna is a bright 13-year old girl in her fourth grade at school. She has muscular dystrophy and is resident in a long-term ventilator care unit. She receives daily support from the therapy services, including occupational therapy, and the medical services of the doctors and nurses. At school she benefits from someone who helps her take notes

in class and she also receives extra tuition to help improve her reading and writing skills.

Amna is a very social girl. She has taught herself to speak multiple languages so she can easily communicate with all the staff in the care unit. Amna uses a powered wheelchair and is very mobile using it, often popping in and out of rooms to say hello and see what's going on.

Amna was seen by a Mada AT Specialist and provided with a group of tablet apps to help her develop her Arabic and English literacy skills. She loves playing word and spelling games and hopes to improve her reading and writing so she no longer needs the extra support at school. When her head is not stuck in word puzzles Amna loves to listen to songs using the YouTube app.

Recently Amna has needed help from others to hold and interact with the tablet screen, and in 2016 was referred for support from Mada to consider options to improve her access. Amna and the occupational therapist were able to describe the activities she enjoyed doing the most, and the limitations she was then experiencing. Mada worked with Amna and her team to consider a wide range of possible solutions.

The chosen solution was simple from a technical point of view. The addition of a Bluetooth Module compatible with her powered wheelchair would allow Amna to use the wheelchair Joystick to control the tablet. However, since the tablet does not support mouse input we had to convince Amna to switch to Android. Once she saw how many word puzzles and other activities are available in the Android store she was easily persuaded! We worked with a Seating and Positioning Specialist to install and configure a Bluetooth Module in Amna's chair and linked it wirelessly to a Samsung Android tablet. This tablet was then mounted to the Wheelchair using a Universal Mounting Arm. Several changes needed to be made to the tablet to make sure that Amna could access it using the Joystick.

As with all technical provisions, Amna received the equipment as a trial to determine its suitability for her and for her environment. Amna's occupational therapist reports that she now uses the Android tablet for more than word puzzles and videos. She regularly uses Skype to contact her family and has several email buddies (including the doctors) that she keeps in touch with. Because the tablet has a SIM-card holder she can also make standard telephone calls and send and receive WhatsApp messages. The only problem is that she has downloaded so many word puzzles and other apps that she's finding it difficult to locate them when she needs them – but we've taught her a couple of tricks!

Mada will continue to support Amna to see that this solution truly meets her needs in the care unit and at school. Mada is providing support to the school to ensure that she can access her lesson materials on the tablet, and to make her as independent as possible in class. Mada are also working with the care unit to consider linking her tablet to an environmental control system that would give Amna access to the television and lights in her room.



# Mada spreads Assistive Technology through localizing international Software



ne of the critical missions Mada is embarked on is to help more and more Arabic speaking people with disabilities getting access to the software solutions they need so much. Our vision that Assistive Technology should be accessed on a larger scale, especially when it comes to people in Qatar and the Arab region.

Mada has teams that are researching in-depth new ways to adapt international software specifically designed for People with Disabilities to the domestic requirements of language and ease of use. Briefly, here are the main software packages that Mada was working on and is continuously developing with its creators, international AT organizations and companies.

## Clicker 5 – Reading Is Essential

Clicker 5 was designed to help struggling readers, writers and English language learners to access support tools they need at school, work or home. The program eases the process for individuals with dyslexia, learning difficulties, speech or language impairments, physical disabilities, low vision, autistic learners, and Down's syndrome. The program consists in a word processor and a grid containing letters, words or phrases to help children to write sentences without typing them. Additionally, it allows the user to hear before writing and even highlights the text as it's spoken. Furthermore, it allows users to write with pictures and animate their writings. Also, the program provides free learning resources and let the user create his or her own sets of grids, links them, and have full-screen grids. Clicker 5 supports voice

recording, MP3 sounds and MPEG videos. The software is flexible enough to go much further than this and its accessibility options, including switch access, allows motivating activities to be made almost on-the-fly.

## Mada Reader Writer

This product contains two applications - Reader and Writer - providing support in Arabic for these two essential learning activities. Reader is a handy little program for reading text aloud. One can select text from any program, whether some piece of news in a web browser, a report in Word or an email. The text is displayed in the Reader window, and then spoken aloud automatically or after clicking the Play button. When writing any sort of document, Writer helps typing more efficiently. It monitors the text one writes, and uses prediction to suggest words along the typing. The software can be personalized with multiple options.

## ATBar – For Those Who Want or Need a Change

ATBar is a free tool and allows changing the look and feel of webpages. One can increase and decrease font sizes, have text read aloud, use colored overlays, readability and a dictionary to aid reading. Spell check forms and word prediction when writing are also available. It is a simple tool usable for the most popular browsers. It can help those with low vision, dyslexia, other reading difficulties as well as those who may wish to just reduce the glare or effort reading black text on bright white backgrounds.

## QuickRes

As its name stands for, QuickRes swiftly changes monitor resolution to low, medium or the default and back by a click of the mouse. It is one of the most useful technical tool for PWDs using computers on a regular basis, as various applications require different font sizes or use pictures or graphics which need to be seen entirely.

## Washer – So That Everybody Can See

Some software applications tend to correct color for the varying types of color blindness by adjusting specific components. However, these solutions are basically considering that the user has a standard form of color vision deficiency. Washer simply renders all the colors in a specific window to a grey scale format, thus catering for a high proportion of color deficiencies. The software itself is very simple to use. Once started, it will display anything within its main window in shades of grey, and can be dragged around the screen to select different areas.

## Sonar – Precision Is an Important Tool

The software provides an expanded ring around the mouse pointer for users having difficulties locating the pointer. Unlike the Windows XP version, this package places a permanent ring around the pointer. The user has the option to change the color of the Sonar ring. It's also very easily accessible, having commands over the Windows menu, providing identification anywhere.

## Vu-Bar

A truly unique piece of software, Vu-Bar provides an on-screen, slotted ruler. This is especially useful to dyslexic people, when the user skips lines or drops from one line to the next. This version allows the user to select the bar width, 25%, 50%, 75% or 100% of screen width and set the slot height to the required font size. This version has an extra option to lock the bar onto the mouse pointer for movement, as well as improved keyboard movement options.

## Mouseketeer

The Mouseketeer is ideal for people who can use the mouse but cannot use its button. This software allows the selection of the type of mouse clicks (left, right, double click, drag and drop). For any function is sufficient to place the cursor for a few seconds on the icon for the desired function and then putting on the target.

RapidSet – Skipping Steps Is Needed Sometimes

Mada is thinking of People with Disabilities and

their computer journeys, when not everything is set or arranged for their special usage. That's why we supported RapidSet to reach the local market: it allows quick and easy changing of the background and font colors, without having to go through the Screen Properties dialogs.

## T-Bar – Help Reducing the Sensitivity

Many people with Scotopic Sensitivity will find this application useful. T-Bar is a colored bar which one can either drag around the screen or lock to the mouse. It can have ruled lines or not, up to user's preferences. The color can be chosen from the pre-defined options, then tweaked by altering the red, green or blue sliders to get the perfect color, the transparency level can be adjusted, again, to suit the individual. All the settings are saved between sessions, so there is no need to readjust the next time will be used.

## KwikLoupe – When Bigger Is Better

Most users have problems with screen objects and font sizes. KwikLoupe is a simple to use screen magnifier. Magnification ranges from 2x to 64x with a quickly accessible locating option to position the viewing window. The tool magnifies the area around the mouse pointer. All settings can be found at the bottom of the application window. It's also good for instant magnification when reading items rather than typing.

## Edgeless

Like the original version, this application causes the mouse pointer to wrap around the screen instead of stopping at the edges. It can be configured to start at Windows startup if required. With this new version, the user can choose to wrap on all sides, just horizontal or just vertical. To maintain portability, this option must be set for each session. This version is also capable of supporting up to 2 monitors.

Mada is continuously investing a lot of resources and effort into developing and adapting useful software solutions for People with Disabilities in Qatar and the whole Arab Region. One of our core values is to understand the special needs and put Assistive Technologies to their good use. As contributor to a technological world, Qatar is making significant steps to share the benefits of Assistive Technology to as many users need it, enhancing the cultural progress and the concept of inclusive society.

If you would like to know more about or use any of the above AT please visit mada's website

[www.mada.org.qa](http://www.mada.org.qa)

Tip Of The Day:

# Smart Ways To Make Your Document Accessible



## 1 Language



### The Most Important Of Them All

We can't stress more the importance of language in a document in order to make it accessible. You have to use proper language type specification in all pages and content. It is recommended that we use, possibility given, separate documents for English and Arabic content.

Then, about the clarity. The clearer the language, the clearer the message. Reduce your phrases to the 'length of necessity'.

### Pay Attention To It

A more accessible document means, most of the times, have the proper amount of 'space' in it. Use proper document structure and STYLES at all times; Headings, Lists and Paragraphs. Don't be afraid to use linkable "Table of Contents". Remember that table structure is used only for tabular data; table header and captions. Use a simple table structure, and specify column header information.

## 3 Content, Layout and Design

### What You See Is What You Get!

OK, maybe it's not a work of art, but we're talking about usefulness here. Make sure that you minimize space between content and left align all content. Check if layout and content are consistent with the message you want to convey.

Avoid at all costs to use text boxes in (Word) as they are not accessible.

## 4

## Text



Rules are simple, but you have to follow: for the English text; use open typeface such as Arial, minimum size 12 pts. Calibri is now another good, common option as a font, reconized by all platforms. For the Arabic Text; use Arabic "Naskh" Type; Arial font, minimum to 14 pts. Don't forget to use th e Right to Left attribute for reading Arabic text.

Another useful convention is to avoid stylized fonts such as strike through and drop shadows. Italic style with bold text may be used, and you should use an underline style appropriately for hyperlinks only.

### The Power Of 1... Words

Given the fact that you want to get an accessible document in the end, you have to provide text alternatives for all meaningful non-text content; images, graphics, and charts. You may use pictures just for illustration purposes – you won't need description for those. If images are used as links, describe the link destination as well.

Avoid using text in images as the sole method of conveying important information. If you must use an image with text in it, repeat that text in the document. In alt text, briefly describe the image and mention the existence of the text and its intent.

## 5

## Image and Graphics



Rule of thumb: document must be accessible and usable to all assistive technology users. Nothing clearer than that. Word for Windows provides an Accessibility Checker for identifying and repairing accessibility issues. The checker's Inspection Results classifies accessibility issues into three categories:

**Errors** content that makes a document very difficult or impossible for people with disabilities to access.

**Warnings** content that in most—but not all—cases makes the document difficult for people with disabilities to access.

**Tips** content that people with disabilities can access, but that might be better organized or presented. The software will further help you in fixing these issues and make the document accessible.

## 6

## Check The Document's Consistency



# 7 Hyperlinks



Hyperlinks in Word documents allow users to visit web pages, navigate to Word Headings and Bookmarks, and open email links. Hyperlinks are usually created in Word by pasting the complete URL of a web page into a document and hitting Space, Enter, or some other key. Word automatically creates a link, and uses the URL as the display text. Because the URL text may not make sense to a user, we recommend editing Word's default link text.

### Follow these principles to create accessible links:

- Use descriptive link text that does not rely on context from the surrounding text.
- Keep the amount of text in the link to a minimum.
- Use underlined text with a color that stands out from the surrounding text.

Important to remember: screen reader users may skim a document by navigating from link to link. Avoid ambiguous link text that is difficult to understand out of context (e.g., «click here»). Provide meaningful descriptive link phrases on all hyperlinks and avoid using repetitive link phrases that link to different sources.

Visual contrast should not be used just to convey a meaning, prompt an action or response. Web Content Accessibility Guidelines (WCAG) 2.0 recommend a minimum ratio of 3:1 for large text and 4.5:1 for other text and images. For example, avoid light gray text on a white background. Please be sure that color is not the only mean of conveying information.

To find instances of color-coding, visually scan your document. People who are blind, have low vision, or are colorblind might miss out on the meaning conveyed by particular colors.

# 8 Color should be used appropriately



Form fields must be properly labeled to make the document fully accessible. Use the most up-to-date versions of software to create a PDF. Newer software versions include more up-to-date accessibility features. However, make sure that your electronic document is also usable in older versions. Forms fields must read in a logical reading order (Tab Order).

The first step in creating an accessible PDF from Microsoft Word is to ensure that the original Word document is accessible. Starting with an accessible Word document, a goal when exporting to PDF is to do so in a way that preserves the accessibility features of the Word document, including heading structure, alternate text for images, and markup that explicitly identifies lists, tables, document language, and other content that is important for accessibility.

Do not print to PDF. This method of creating a PDF does not preserve the document's accessibility features. The correct method of exporting to PDF depends on which version of Microsoft Office you're using.

# 9 Forms – Word and PDF



# 10 PDF Accessibility



It is well-known that when people talk about «accessible» PDF files, they are usually referring to «tagged» PDF files, even though there is more to an accessible PDF than tags. PDF tags provide a hidden structured, textual representation of the PDF content that is presented to screen readers. They exist for accessibility purposes only and have no visible effect on the PDF file.

HTML tags and PDF tags often use similar tag names and organization structures, but they really are quite different. If you are comfortable with HTML, you will probably have an easier time creating and editing tagged PDF files.

Then, avoid Scan to PDF or Scan to Image is available, because the final output is not accessible. Source files should be used for content edits and accessible before saving as PDF. Word Styles and Document Structure will convert to accessible, usable PDF Tags.

As usual, Mada is welcoming your tips and personal experience in creating accessible documents and make all the Assistive Technology principles spread throughout the tech and business community. Please be sure that you regularly check our website and newsletter for daily updates!



## Focus on Arabic AT Localization in Qatar: Clicker 5 Arabic

One of the first challenges faced by Mada to provide an optimal AT service was the lack of existing assistive technology solutions in Arabic. This challenge had a major affect within the education sector as solutions for individual with reading and writing were almost non-existent in Arabic. As a result Mada had encountered a large number of students and individuals in Qatar who were not able to benefit from assistive technologies.

Mada embarked on a journey to address this challenge. Mada decided initiate its first localization project by making Clicker 5 available in Arabic. Clicker 5 is an assistive technology

software primarily designed for individuals with Autism, Down Syndrome, and other related reading and writing difficulties. The program allows to create customizable exercises related to alphabet identification, sentence structuring, and other essential educational exercises through the use of a multimedia and text-to-speech technology.

In order to develop an effective localized Arabic AT solution to meet the needs of PWDs in Qatar, the localization process had to consider steps beyond literal translation of the software. Mada identified the different features of the English Clicker 5 to be localized for Arabic users considering local cultural and language contexts.

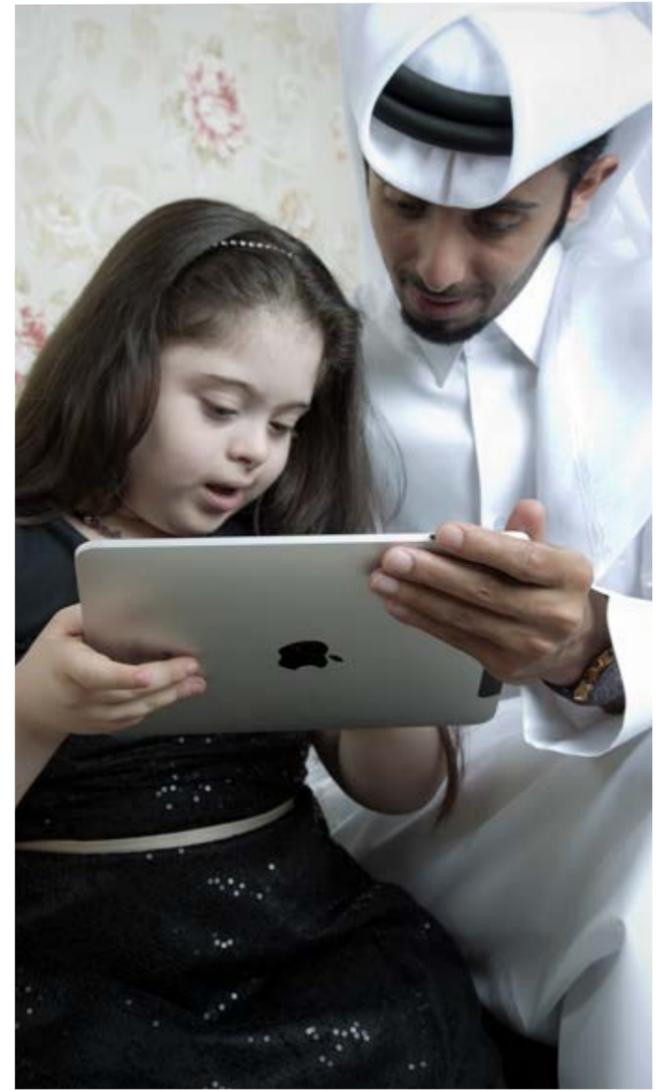
Mada consequently requested a proposal from Crick Software (Developers of Clicker 5) to develop a localized version of Arabic Clicker 5. As part of the collaborative partnership Crick Software would provide the resources required for the technical development and Mada would contribute by providing the skills to be able to localize the various resources for Arabic use.

Mada began by translating the resources to Arabic such that they are suitable for the Qatari population. Simultaneously, based on our feedback, the artist from Crick Software designed culture appropriate graphics for the Arabic Crick Picture Library to effectively serve the local users in Qatar. This allowed Crick Software to develop an initial Clicker 5 Arabic version for in-house testing and feedback.

Throughout the course of localizing clicker 5, we came across several interesting challenges. One of them being the variations in colloquial Arabic across the region. The Clicker Picture Library only shows the associated graphics to the word if the spelt correctly. Considerable amount of time was invested to match each graphic with its associated text word.

After a period of user testing and multiple revisions of the software, Arabic Clicker 5 was formally launched. The entire localization program for Arabic Clicker 5 lasted for 11 months. Since its launch, Mada has trained a number of special education teachers, therapist, and related professionals to use Clicker 5 Arabic and create customized educational exercises. Additionally, a number of new repository resources for the Clicker 5 Arabic Library has been created by these trained professionals.

The Clicker 5 Arabic has been widely distributed among public schools in Qatar with a positive feedback from professionals and users. The success of this localization project has provided better understanding of the need for Arabic AT solutions and the potential impact of the availability of such products within the region. The overall result of the localizing Clicker 5 in Arabic was a very successful and has been well received throughout the region.



Mada center encourages to e-mail any newly developed grids or other Clicker Resources to [clicker@mada.org.qa](mailto:clicker@mada.org.qa)

Further details of the benefits for students using the Clicker range of products is available from <http://www.cricksoft.com/uk/home.aspx>

For details on the Mada Center and its services, please visit <http://www.mada.org.qa>

For further information contact Mada Assistive Technology Center, 7th Floor, Al Nasr Tower B, Al Corniche Road, West Bay, Doha, Qatar. P.O. Box 24230. Tel.: +974 44594050, e-mail: [info@mada.org.qa](mailto:info@mada.org.qa)

# Gulf Region Education Assistive Technology Conference ( GREAT 2017 )



The Gulf Region Education Assistive Technology Conference (GREAT-2017) is a first of its kind conference, dedicated to focusing on education practices in Inclusive Computer

Technology (ICT) and Assistive Technology (AT) in the Gulf region.

The conference, hosted by Mada assistive technology center under the patronage of the Ministry of Transport and Communications. Held in partnership with the Assistive Technology Industry Association, will feature renowned industry experts who will use this platform to educate and exchange information on best practices and current trends in the field of ICT and AT.

The conference will take place in Doha, Qatar from April 23-26, 2017 and is structured in two phases – the first phase (Apr 23-24) is the pre-conference stage, which includes intensive all-day master classes for participants pertaining to various AT topics. The second phase (Apr 25-26) of the conference will involve an opening ceremony, panel discussions and 60 – 90 minute educational workshops for participants.

## Who should attend GREAT?

The aim of GREAT is to provide a knowledge-share forum by bringing together teachers, academicians and professionals to promote initiative technologies, best practices, implementation strategies, research and education in AT in schools.

## This conference will be useful for:

- Mainstream Education Teachers
- Special Education teachers
- School Administrators
- Speech Therapists
- Occupational Therapists
- Physical Therapists
- Parents of children with special needs
- Providers of AT products
- Medical Professionals who work with PwDs
- Academicians in Higher Education in AT
- Policy Makers

To know more, visit GREAT website  
[www.great.mada.org.qa](http://www.great.mada.org.qa)

