

PHOTOS

BETA

Taking my own photographs



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Pedagogical guide for people with autism and/or
intellectual disability



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■ Who is the PHOTOS application for?

PHOTOS has been created for use by people with autism spectrum disorders and/or intellectual disability. PHOTOS is intended for those people who for different reasons cannot use traditional cameras for taking photographs or who may be able to use them but find it easier to use this application as part of AZAHAR. As this application is easy to use, it may be very useful for people who in addition to autism, suffer from some kind of intellectual disability. People with other intellectual disabilities, cerebral palsy, the elderly or other groups of people with special needs may also benefit from using this application.

In this manual we focus on people with autism and/or intellectual disabilities. However, it should be remembered that PHOTOS may be useful for other people.

In this guide we use the term “user” to refer to the person with special needs for whom the application is intended. Similarly, the term “tutor” refers to the professionals, family members or friends who undertake the role of preparing PHOTOS for use by the person with special needs. There is a Manual called “Guide to the Tutor Application” which explains the setup process. This Manual can be downloaded from the Azahar project website.

■ What is the PHOTOS application?

The PHOTOS application is used to take photographs using a mobile telephone. It offers the person with autism and/or intellectual disability the opportunity to take photographs of things or people around him/her, all in a simple and accessible way.

PHOTOS can be used to take photographs and also to look at the photos taken. The easiest and simplest option is to press the camera icon on the main screen and take a photograph, which is then saved automatically. It is also possible to set up a shortcut to the photo album, to look at photographs taken or other pictures which the user likes and have been added by the tutor. A more complex option consists of using the camera icon to enter the application and from there choose between taking a photo or viewing an album. The tutor can choose from these and other options, as indicated in this guide.

■ Autism Spectrum Disorders:

Autism Spectrum Disorders (ASD) is a relatively recent term used to describe people with a series of characteristics in common. These characteristics are known as the “triad of impairments” [1]. These people are affected in their ability to [2]:

1. Communicate verbally and non-verbally.
2. Interpret the behavior of others and build relationships.
3. Think and behave in a flexible manner, for example, to adapt their behavior to specific situations.

People with Autism Spectrum Disorders can be extremely different in terms of their abilities and their strong and weak points. Asperger’s Syndrome, High-Functioning Autism, Classic Autism and Kanner’s Syndrome are considered to be sub-groups of Autism Spectrum Disorders [4].

Children with a wide range of abilities may have an Autism Spectrum Disorder, and this may occur in conjunction with other disorders (for example, sensory disability, intellectual disabilities, Down’s Syndrome, ADHD – Attention Deficit Hyperactivity Disorder – or language difficulties).

■ Images for people with autism

A large proportion of people with autism are visual thinkers. This means that they think in images, even in the case of things which, a priori, do not involve visual processes. Temple Grandin, a woman with autism, wrote [5] "*I think in pictures. Words are like a second language to me.*" People with autism "*find it difficult to learn things which they can't conceive in pictures.*" This author even affirms that many autistic people think in photographically precise images. Photographs are the most evident and understandable visual elements available to people who have difficulty abstracting meaning and who are not yet accustomed to the use of pictograms or other more abstract images. For this reason, many professionals and families use photographs in their educational activities in order to help the person with autism to understand his/her surroundings.

■ Photographs for a person with autism

In modern times, in particular since the advent of digital cameras and camera phones, we have become used to taking photographs on a daily basis. The fact that anyone can take a photograph is evident and is the order of the day. However, many people with autism and/or other special needs do not have their own cameras or find it difficult to operate them. PHOTOS is especially designed to help these people to take their own photographs.

There are many possible reasons for taking photographs, ranging from enjoying one's free time looking through a photo album to using them for communication purposes, meaning that the person can find photos for daily use in order to communicate their thoughts, desires, and needs. Consequently, providing a person with autism with the opportunity to take photograph responds to different purposes. The following is a list of some of these purposes. PHOTOS can be used to help people with autism:

- Browse the photo album during free time in order to relax, recalling experiences or people, or purely for entertainment.
- Show photographs to others, for example to share pictures of their loved ones, places they have visited, things they have done, communicating their needs, etc.
- Use photos for other Azahar applications. Some examples of this are: adding the user's photo to the "Personal Guide" application which is used to communicate information about his/herself, or as part of the TIC-TAC application, adding a

photograph of the person with autism while waiting for something, for use with the timer to indicate how much time is left.

■ What is the PHOTOS application?

The PHOTOS application is very easy for anyone to use and understand. In a simple way, PHOTOS allows the following actions to be completed, ordered from lesser to greater complexity for the user:

- taking a photograph by accessing the application from a single camera image or pictogram on the Azahar main screen.
- looking at photographs by accessing the photo album from a single image or pictogram on the Azahar main screen.
- accessing PHOTOS, and then either taking a photograph or looking at existing photographs.
- choosing whether or not to save the new photograph. This is an optional alternative, which if used, allows the user to remove the photos he/she has just taken and which he/she doesn't want to keep for any reason. If this option is not chosen, the photos are automatically saved and added to the Photo Album.

As with other Azahar applications, in order to configure PHOTOS, the tutor must bear in mind the level of understanding and operative skills of the user. In this way, if the user has not learnt to handle categories or understand a sequence of several steps, it is not appropriate to start out offering the possibility of choosing between taking a photograph or looking at the album. In these cases it is more appropriate to use an shortcut image for direct access to the camera or photo album from the main menu, thus removing the initial step of entering a certain application category.

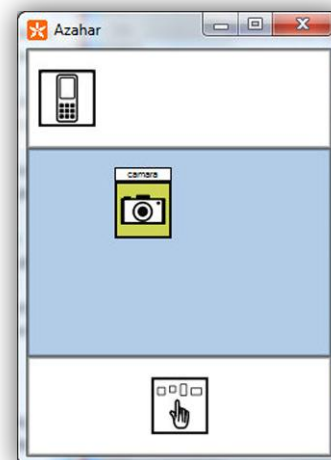
All Azahar applications are highly customizable, but PHOTOS in particular has the advantage of being easily adapted to the user, as there are not as many customized options as in the other applications.

- **Taking photographs**

The tutor needs to choose the pictogram or image to represent the action of taking a photograph. Remember that the application has its own recommended image for this purpose.

From the user's point of view, this application can be set up with one or two steps: the simplest option is choosing to take photographs directly from the main screen, while a more complex option is to access to a camera image from the main screen and then choose to take a photograph once the application is open. In this case, the "taking photographs" action can be accompanied with a photo album.

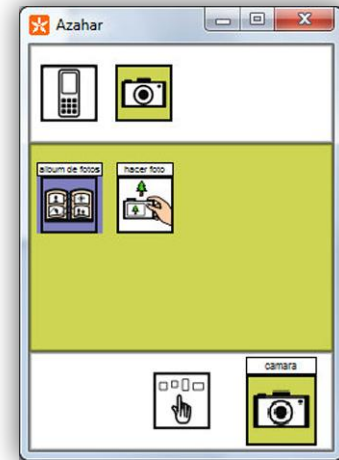
When the user accesses the camera, he/she will see what they want to take a picture of on the screen, and will only have to touch any part of the screen for the picture to be taken. One advantage of the PHOTOS application is that, unlike cameras on other kinds of mobile devices, there are no additional buttons available when taking a photo, making it impossible to access other screens by mistake. The extra buttons could easily confuse the user. For this reason, PHOTOS is clear of additional icons when in mobile camera mode.



- **Consulting the photo album**

The tutor needs to choose the pictogram or image to represent the action of consulting the photo album.

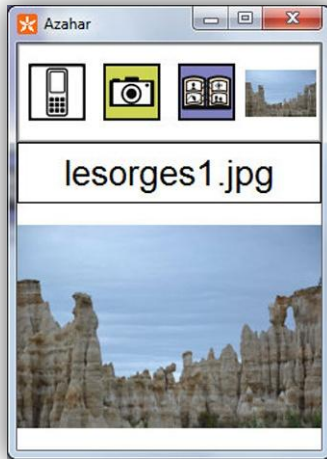
From the user's point of view, accessing the photo album can be set up with one or two steps: the simplest option is to access the album directly from the main screen, while a more complex option is to access the application from the main screen and then choose to consult the album once the application is open.



- **Saving or discarding a photograph**

The tutor can choose whether the device is to ask the user whether or not he/she wants to save the photograph he/she has taken. If this option is activated, when the user takes a photo, the device will immediately ask if he/she wants to save the photo, with the two options "yes" and "no". If the tutor chooses not to activate this option for the user, the photograph taken will be saved automatically.

- **Hiding photographs**



The tutor can opt for hiding photographs from the user, for example to prevent the user from showing private images to others, or because the user has a tendency to look at the same photo over and over again. This can be done via the Tutor application, preventing photographs from being viewed from the album. However, although this photos cannot be viewed using the application, they are saved in the Tutor application Picture Album, under 'Photo Album'. This allows the tutor to access all photographs for future use, or add them to the PHOTO application once more.

■ Pedagogical Recommendations

The PHOTOS application, as you can see from this guide, does not require a high level of skill from the user, as the procedure for taking a photograph does not require anything more than the ability to understand that a photo can be taken using the device and that it represents a real life image.

As it is an immediate action, i.e. the user sees what he/she wants to photograph, presses the screen and the photo is ready, no prior skills need to be developed as may be the case for other Azahar applications, where the user undergoes a learning process.

However, we do have some pedagogical recommendations which may facilitate the use of the PHOTOS application for the user.

- **Understanding photography.**

In order to check whether the user understands that he/she has taken a photograph, we can first take a picture of him/her and then view the photo together. It is advisable to check that the person is understanding what photography is, i.e. that he/she knows that it is the representation of something real. In order to do this, describe the photo in detail and then describe the process followed in order to take it. For example, after taking a photo of the person's favorite backpack, say 'this is the photo of your favorite backpack', holding the bag next to the photograph, and pointing out the details of the bag just as they are in the photo. If the backpack has a particular drawing on it, you could say 'look, in the photo you can see thedrawing, just like it is on your bag'. We can complete this process with a number of different photographs.

The person can then take his/her own photograph and view it in the photo album. Nevertheless, it all depends on the needs of the individual user; remember that *a priori* we can opt for the photo album to appear under AZAHAR but not the camera, or vice versa. Even so, the option of taking a photo and then seeing the result is of particular interest.

- **Encouraging the person to use PHOTOS**

One possible technique is to start with the photo album. It is important to remember that people with autism tend to be strongly attracted to photographs, and it may be an interesting process for the tutor to take photographs of the things the user likes the most, such as his/her favorite film, or close friends or relatives. These photographs will then be saved in the photo album, which can be shown to the person. Seeing all these things and people that he/she likes the most compiled together is likely to motivate the user to take more photographs for him/herself and view the album. We can then teach the person how to use the camera function.

In order to encourage the person to use the camera, we can invite him/her to continue making a collection of the things or people dearest to him/her. This is a good way of motivating the user.

● **Communication using photographs**

The photographs taken by the person with autism can be useful for communicating feelings, needs, desires or thoughts. In order to do this, the ideal thing is for the photos taken to be added to the HELLO application, which is especially designed for this purpose. For example, having photographed the things he/she likes, these images can be added to HELLO, for the person to be able to use them to communicate the need or desire for a certain object to those around him/her. This is an example of how the user can communicate a need via the HELLO application, using a photograph which he/she has actually taken.

Photographs can be very useful for the PERSONAL GUIDE application, which is specifically designed for the person to communicate things about him/herself to others. For example, the photos the person takes of his/her favorite things can be added to this application in order to give information to others about the things that are important in his/her life.

Let us think that the fact that it the person who takes the photos him/herself for adding to other applications has a clear personal involvement.

■ Download and Installation

We advise installing the AZAHAR programme on the device's external memory card to prevent problems with storage capacity. This means that in the PHOTOS application, like in other areas of Azahar, a significant number of photographs or images can be stored. However, we must remember that the greater the resolution of the photos, the more memory space they will take up, and therefore there will be less storage space available. In the case of the computer-based version of this application, this is of less importance, although it is also advisable to check available storage space.

We have done our utmost to simplify the installation and preparation process for this tool. However, we are aware that for some professionals or family members who have less experience with modern technology, this process may seem complicated. In these cases it is highly recommended to obtain support from a friend or relative who is more familiar with the use of computers and other technological devices.

Detailed steps for installation can be found at: <http://www.proyectoazahar.org>

● **References**

[1] Frost, L; Bondy, A (2002) The Picture Exchange Communication System (PECS) – Second Edition. Pyramid Educational Products Inc.

[2] Orange Foundation, eEspaña Report 2009. <http://www.fundacionorange.es/>

[3] Wing, L. & Gould, J. (1979), "Severe Impairments of Social Interaction and Associated Abnormalities in Children: Epidemiology and Classification", *Journal of Autism and Developmental Disorders*, 9, pp. 11-29.

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