

From AAC to Literacy and Digital Literacy

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Abstract

This fact sheet presents the experience of a young augmentative and alternative communication (AAC) user, Gregory, in developing literacy and digital literacy skills through the use of his AAC system. Notwithstanding the various policy, practical and other barriers, his need for further communication and increase of independence was finally acknowledged. Hence, through a long but successful process of assessment, education and family support, he developed very good ICT-AT skills, that enabled him not only to effectively communicate but also to access information, learning and competence.

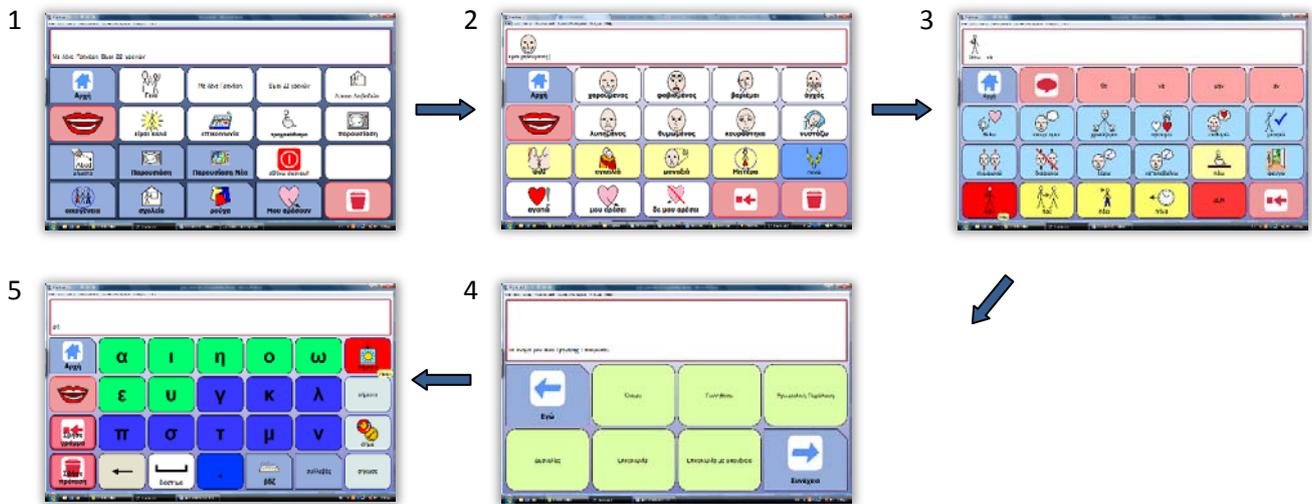
Background

The educational system in Cyprus is highly centralized. In 1999 integration in the mainstream schools was legitimized, and formal procedures of identification, assessment and provision of special education and support were established. Policy regarding the use of technology in the education of children with disabilities came during the last decade, and it was placed under of the existing special education legislative provisions (Mavrou, 2011). This is the setting in which the education of Gregory, today 27 years old, who lives with his family in a small city in Cyprus, took place. He was diagnosed with cerebral palsy (spastic quadriplegia), non-verbal, with no additional sensory or intellectual disabilities. In both primary and secondary education he attended a special education unit in the mainstream school. Until the age of 16 his educators could not define neither his intellectual nor his cognitive abilities. At the age of 16, Gregory was referred for assistive technology assessment, requesting for “a laptop computer”, as the concept of AT was not really well known in the system yet. Nevertheless, the assessment focused on AAC. Till then, his only way of communication was his eye movement, for YES/NO. After long-term assessment processes and some in-effective trials with various the team (user, family, AT specialist, physiotherapist and school technology teacher) focused on the use of eye gaze technologies for AAC.

Activity Report

Excited by the effectiveness of eye control system (MyTobii) and the AAC software (The Grid 2), supported with Wigit symbols, Gregory aimed at changing his life and personal goals completely. With the support of his family and his technology teacher, he was able to develop excellent digital skills in very short time and to become a very effective user of his AAC device for both communication and access. Hence, led by Gregory himself, the team focused on developing a user-centred communication system that would not only provide alternative communication but also support digital skills. During his school life Gregory was always fascinated by technology and he was frustrated for not being able to attend computer classes, as educators thought that this was impossible for a physically disabled learner. As he very quickly got familiar with eye-gaze as an access method, the team developed the first communication grids containing short phrases for everyday needs and basic social interaction, which were represented both in symbols and written text (pict. 1). In a very short time, Gregory requested to move to independent phrases and words in order to form his own sentences by reading the symbols (pict. 2). As he proved to be a very fast eye-gazer, word prediction seemed to be the next step. However, at that time word prediction in Greek was not an option, since the prediction feature in Greek was not yet supported by the localized software. Hence the team had to develop customized prediction cells which in reality were numerous sequences of interconnected grids (pict. 3). This was first implemented in verb forms and tenses for the sake of saving time to the user. Nevertheless, it proved to serve one more very important purpose: reading (literacy) skills. As this pattern of “customized prediction” was actually the repetition of words in different forms, supported by symbols with indicators Gregory started making connections between Wigit symbols, letters (as graphemes) and the sound of these (as phonemes). As a result, he soon requested to move on to cells

with known words without symbols and finally to the use of an onscreen keyboard. Soon the prediction feature in Greek was further developed and Gregory is now able to compose his utterances independently, and use a variety grid sets for communication.



At the same time, the use of symbols as well as the navigation through his communication system provided a very good experience in accessing other computer applications through his device, and acquiring a better understanding of the digital world. As a result starting from access to Windows Media Player and listening to music, Gregory is today using email, social media, skype and the internet on a daily basis!



Conclusions

At the very beginning Gregory's case seemed one of those unsuccessful stories of barriers and difficulties in the AT implementation – policy and practice. His first attempt with AT – a laptop and a switch accessible software was easily abandoned and misused. The laptop was rarely used for AAC and teachers preferred to use it for showing educational movies to Gregory. The use of the switch was frustrating and ineffective, and proved to increase athetotic involuntary movement. In addition, the school did not provide much support, since none of the staff was ever sent to attend any of the informative or training sessions organized. Nevertheless, the final success of this story lies at the collaboration of Hence, through the use of symbol supported text he was gradually able to develop literacy skills as well as digital literacy, including the use of internet, social media and Skype.

You can watch Gregory talking about himself here <https://www.youtube.com/watch?v= tiAfBqVKsk>

References

Mavrou, K. (2011). Assistive Technology as an Emerging Policy and Practice: Processes, Challenges and Future Directions. *Technology and Disability*, 23(1), 41-52.

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