



Supporting Dyslexic Students through ICT Tools in Foreign Language Learning

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Abstract

In Italy Dyslexia is considered as a part of a wider frame of learning disorders affecting Italian population (DSA). In this definition Dyslexia, Dyscalculia, Dysgraphia and Dysorthography are included. The percentage of students affected by these disorders is estimated around the 5 per cent of the whole school population in the compulsory grades of school, primary, low secondary and high secondary, although the data in our possession belonging to the last National survey related to school year 2015/2016 states a lower percentage due to lack of official DSA certification. Dyslexia is a real problem, which affects the acquisition of reading and writing of many individuals and whose effects may be worsened by an inadequate education at school. If not recognised in time and not provided with effective support at all school levels, students with dyslexia will probably face academic failure affecting their self-esteem, and will therefore fall into anxiety, lack of motivation, and disengagement with school. Moreover, the acquisition of oral and written skills in foreign language can be really challenging and frustrating for students affected by reading and writing disorders. That is why it is extremely important for teachers and trainers to understand the nature of dyslexia, its manifestations and consequences and to be aware of the ways they could help and support students to overcome their difficulties. The most common practices in order to cope with dyslexic students in their learning process are extra time, adapting written skills to oral skills and using maps and diagrams. In years of experience with certified and not certified dyslexic students, in my school context, the use of ICT based tools, such as audios, videos, computer based word programs for writing, learning games, multimedia quizzes and maps have proved to be effective both in terms of acquisition of competences than in the improvement of self-esteem and motivation in learning.

Keywords: *ICT Based Language Teaching and Learning Approaches, Studies in Second Language Acquisition;*

1. Introduction

In Italy Dyslexia is considered as a part of a wider frame of learning disorders affecting Italian population (DSA), covering in this definition Dyslexia, Dyscalculia, Dysgraphia and Dysorthography. The percentage of students affected by these disorders is increasing rapidly in these last years due to a growing attention towards this disturb, an high percentage of diagnosis made in adult age that urges the evidence of the need of an early recognition in order to cope with it and support the individual along his lifeline. The percentage is estimated around the 5 per cent of the whole school population in the compulsory grades of school, primary, low secondary and high secondary, but it is not a faithful data as certification is still in progress for many cases. The effects of the lack of diagnosis and of support for these kind of disorders provoke an early abandon of school for students and a lack of educational provisions for adults compromising also their future job opportunities. This is the reason why it is nowadays strategically important to focus the attention of teachers, parents and educators on reading and writing disorders and to investigate their real reasons and how they can affect school success. Although in some countries there is a stronger literature on dyslexic individuals, no single country in Europe has reached yet the right solution or methodology and so a constant research by the stakeholders related is in progress. Our school, *Istituto Comprensivo Laura Lanza Baronessa di Carini*, located in Sicily, Italy, has a long experience in this field, which has been strongly implemented in the last two school years. In particular dyslexic students face strong troubles with second language learning and so this is the reason why, following different paths, after observing them in their daily school routine, I decided to apply methodologies based on digital tools to cope with difficulties as, in my years of experience, they have been proved to be more successful in most cases of learning disadvantages.



2. Our project

As our school applied in 2017 in an Erasmus KA201 Project "DysTRANS Supporting Dyslexic Individual In Transition from Primary to Lower Secondary School "(2017-1-TR01-KA201-046274), coordinated by the Educational Inspectorate of Istanbul, the path to follow was a series of interventions on students who were certified as dyslexic, or supposed to be and in train of certification, by a team of teachers involved in the project. First step promoted by the international partnership was an analysis on the needs to be aware of the starting point; several issues came out in particular for children in transition from primary to low secondary school or equal grades in European educational system. The results showed moreover a strong need of training for both parents and teachers, of psychological support for children as in most cases the fear of failure and a sense of being different from the others caused isolation, conflict in relationships and lack of school success. In the long term, these could also affect their future adult life. In the light of this outcome, I decided, together with a team of teachers of our school, to design a supportive educational plan for disadvantaged students with particular regard to dyslexic ones attending our school. The project was called *Filling the Gap* and its main aim was exactly to fill the gap between students with reading and writing disorders and their schoolmates. This action of support was carried on in small groups out of their classes in some hours of their timetable in a closer approach with their teachers, mostly in the media lab.

3. Digital tools to cope with dyslexia – our case study

The teachers' team, in particular, focused its attention on two students certified as affected by Special Learning Disorders (DSA) approaching the last year of low secondary school with a final National exam, for whom a course based on interactive digital approaches was planned. The two students were different in their story of recognition of the disorder and its certification. One was diagnosed during his years in primary school and followed a path for dyslexic students since early years, while the other one was lately diagnosed in the second year of low secondary school after a school failure. In particular, this last one was diagnosed erroneously as hyperactive although he manifested strong limits in performing writing and reading tasks and maintaining the attention within the class context. The educational plan was based on digital tools as, after years of experience with learning issues among disadvantaged students in our school, digital resources had been very useful in increasing motivation and attention with a strong return on learning attitudes. The use of audios, videos, and software to create maps and diagrams, writing software, interactive games, multimedia quizzes made learning contents and vocabulary comprehension easier and effective in terms of acquisition of competences. Another basic assumption of the plan was to create lessons out of the class within their curricular timetable, in a more comfortable context, often the media room, or a special class, supported by a teacher in definitely small groups, 4 or 5 students. The room was equipped with laptops, computers, large tables to sit together and have also moments of discussion. Moreover, they were allowed the use of their smartphone for educational activities (googling contents, using translator for second language acquisition, and calculators). The team proposed tasks, which were similar to the curricular ones, yet simplified and coping with their feelings and emotions to reduce sense of discomfort with their peers and to increase motivation and self-esteem. In this way, better relationships within their classes, back from this path, were promoted.

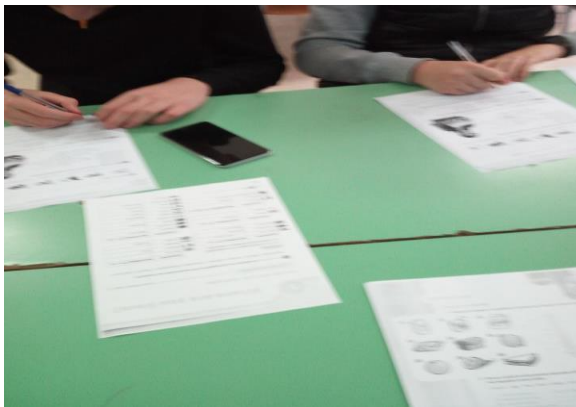


Figure 1. Students using maps and diagrams working in small groups



The digital tools were very useful in this kind of activities as writing is one of the most difficult performance they had to face; their faulty orthography also could affect the expression of their thoughts in the accomplishment of a task and their reading really disconnected from the meaning, wrong recognition of phonemes could cause misunderstanding and lack of learning; digital documents and digital writing software helped them to cope with it as the main issue was caused also by the presence of different graphemes. In this case, they acquired the competence to recognize and decode the typographic font and to apply it through the digital tool. Moreover online multiple choice quizzes could help to fix contents and meanings, In particular as most of the difficulties were the lack of attention, the tiresomeness of school activities and the lack also of cooperation with the rest of the classmates who were definitely faster to accomplish the tasks, A lot of these tools were levelling the range of performance of the students ad so this increased attention and motivation, with the aid of writing software and the possibility to enlarge letters and to correct through the orthographic spell checker. Online quizzes such as *Kahoot*, an interactive platform, with close answers, matching exercises and fill in the gap texts, supported by large fonts and block letters, videos on main curricular contents, reduced their apprehension for writing and comprehending. In particular the text to speech tool, audio reading the written text, helped them with reading tasks.



Figure 2. Students using filling the gap online quiz helped by the screen

The students were also leaded to online comprehension tests on English as a second language, both oral and written, in order to gain the right experience to attend the National Skills Tests (INVALSI), which were compulsory to access national exams for low secondary school diploma. These tests on Mother tongue, Math and English skills, for the first year in Italy were administrated in a Computer Based Test modality and the confidence acquired in this *Special* path with digital tools guaranteed a high percentage of success in their performance.



Conclusions

In this particular case, digital tools are really a strong support for students, they support dyslexic individuals as writing and reading are made easier and orthographic support is really needed. This, of course, is a good starting point for DSA students who can improve but not solve their basic disadvantages, in order to promote success and inclusion, as main aim of any form of Education is to be **Inclusive**.

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