

## Down syndrome and co-education of students with down syndrome in general education school

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### Abstract

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The inclusion of children with Down Syndrome in primary school has, on the one hand, very positive effects on the children themselves, and on the other hand many difficulties in achieving it. Depending on the degree of mental retardation children with Down syndrome have, it is possible to develop both linguistic and social skills and integrate them more smoothly into society. In all the efforts being made to integrate these children into mainstream schools, the role of the state and the legislation around Special Education issues and the school environment that implements educational policies is important. The role of a special classroom teacher, in fact, is crucial in shaping a positive climate in the classroom and in designing an appropriate personalized curriculum that responds to the needs of each student. The inclusion of children with Down Syndrome in general education schools not only contributes to their development but also to their subsequent integration into society as it also changes society's attitudes towards people with disabilities.

**Keywords:** Down syndrome; special education schools; general education schools; inclusion.

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### 1. Introduction

Down Syndrome is a form of disability that is also one of the main causes of mental retardation. Children with Down Syndrome are mostly social but have problems with their language development and sometimes their behavior. Their education is, therefore, a matter of concern to society as it is heterogeneous and their mental state may be mild, moderate or severe. The inclusion of children with disabilities in the mainstream school, in addition, is an issue that the Pedagogy sector has been dealing with in recent years as more and more countries are trying to implement the idea of inclusion. In the case of children with Down Syndrome, there is evidence that inclusion benefits children in their developmental course as those with mild or moderate mental retardation are more likely to improve their writing, reading and socialization skills than the general in the special school. At the same time, it is worth noting that the inclusion of children with Down Syndrome in primary school has been reported to have positive results (Buckley et al. 2002) but still faces problems in its implementation, particularly in Greece. Lack of skilled staff, existing curricula and society's perception of disability hinder the integration of children with disabilities into general education (Panteliadou & Patsiodimou, 2000). Adequate changes and information on this issue are therefore

needed in order to facilitate the implementation of accession programs and to make children's learning more effective. These changes concern both the structures, the tools used, their staffing, as well as the perceptions of both those involved in the education process and society at large.

The present work deals with the education of children with Down Syndrome and more specifically on their integration into general education school. The work is divided into three parts, namely the introduction, the main part and the conclusions. The main part consists of three sub-modules, the first of which deals with Down Syndrome in more detail, with reference to the anatomical and mental characteristics of people with Down Syndrome and the behavior they have around them. The second subsection deals in general with the inclusion of children with disabilities and the problems that exist with regard to its implementation and what are often the reasons that impede it. The third sub-section deals more specifically with the inclusion of Down Syndrome children in general education school and what the classroom teacher who is called to teach these children and the need to have a positive climate in the classroom should take into account. Finally, the section concludes with an overview of what has been said at work but also some suggestions for improvement in the inclusion of children with disabilities in general education schools that would be good to apply in Greece.

## **2. Down Syndrome**

John Langdon Down was an English physician who attempted to describe Down's syndrome in a publication he made in 1866. This resulted in the syndrome being named after him (Polychronopoulou, 2001). The occurrence of the syndrome has been more common in the past as advances in medicine in recent decades have led to a decrease in the incidence of Down syndrome. However, beyond the controls that have been applied during pregnancy, the frequency in European countries remains high today as it relates to a significant proportion of births (Kaila et al. 1997). In essence, Down syndrome has some abnormalities during the pregnancy that can be detected during pregnancy with the necessary tests. These peculiarities are manifested in human life with specific features mainly of the face and body but also other weaknesses, such as hearing and vision impairments but also mental retardation and general learning difficulties (Sanders & Myers, 1998). Down syndrome is based, in essence, on a genetic chromosomal abnormality that is due to the cells of the individual as they possess the extra chromosome 21 which affects not only their physical but also their mental and psychological condition. Specifically, people with Down Syndrome tend to be obese, have shorter and thicker limbs and a shorter nose. In addition, they have a different oral cavity than other children as well as a larger tongue. On the other hand, it is certainly worth mentioning that they are usually more social than people with other syndromes. However, these particular features are not always the same in all cases and therefore there is heterogeneity (Stasinou, 2013).

Down syndrome has been found to be one of the main causes of mental retardation, the level of which varies with each child's case and can be classified as mild mental retardation with a 50-70 intelligence score, moderate 35-50, and heavy with an IQ of 20-35 (Stasinou, 2013). Individuals with mild to moderate intellectual disabilities, receiving appropriate educational intervention, are able to acquire academic skills, improve their behavior and adapt more easily to society. One of their peculiarities, as already mentioned, is their oral cavity, which exhibits differences, such as its larger tongue and its different shape, with the result that people with Down syndrome have delayed speech and often has problems in it (Chapman, 2006). However, the fact that they have difficulty in linguistically speaking does not mean that they have the same degree of difficulty in understanding what is said (Stasinou, 2013). In fact, when it comes to mild or moderate mental retardation, these

individuals are able through the appropriate educational program to acquire literacy and literacy skills and to develop their academic skills (Darias, 2002). In addition to the difficulties of people with Down syndrome, they often smile and exhibit a generally friendly attitude. That is, in other words, they are more social than people with other syndromes and tend to emulate the behaviors of others around them. There are also cases where they exhibit antisocial and problematic behavior, but with the right education it can be improved (Abramovitch et al., 1987). Children with Down Syndrome, after all, usually do not have self-esteem and this results in them feeling more secure and able to respond better when they follow a specific repetitive training program (Kavaliotis, 2010).

### **3. Inclusion of children with special needs in the general classroom**

The term co-education describes the attempt to teach children with special needs to those without. This, of course, requires various and varied changes in order for the education system to be capable of adapting to and responding to emerging needs in order for the climate to be suitable for such coexistence (Zoniou-Sideris, 2000). In order to achieve inclusion, that is to say, it is necessary to create the right conditions in the school environment in order to be able to respond to the different needs of each child and to create a positive climate in the classroom so that they are all equal and non-discriminatory. The head of the school unit and the other teachers play an important role in this effort. In essence, the principal is the one who organizes and directs the values and applications that are pursued in the school environment and works in support of both the efforts that teachers make and the relationships that are created in the school environment between children, teachers and parents. At the same time, the teachers themselves contribute to the effort of inclusive education by creating an appropriate climate for both children and influencing parents and the social environment in general with their attitudes and efforts. They are also called upon to apply appropriate educational practices and strategies within the classroom and to solve potential problems that may arise (Stasinou, 2013).

In theory, inclusive education is an ideal solution, but in reality it has many difficulties. One of the most important is the lack of proper education and training of teachers to respond to this effort especially when there are many children in the classroom. In addition to the lack of adequate teacher training, in Greece there are problems due both to the legislation on inclusion itself and to the negative attitudes of society itself and to teachers already working in general schools (Zoniou-Sideris, 2000). Adding to these obstacles are the practical issues that make it difficult to implement inclusive education in Greece as there are no proper structures needed and due to a lack of financial resources there are no adequate tools and technology. In addition, the lack of appropriate staff and the lack of information to society make it increasingly difficult for any co-education effort (Vlachou et al. 2004). In a study (Panteliadu & Lampropoulou, 1997), in fact, which was done and related to the views of teachers in Greece, it is concluded that on the one hand teachers state that they are positive towards students with disabilities, on the other hand, not everyone agrees on integrating their students into the general school. This demonstrates the need to change both the attitudes of teachers themselves and the perceptions of inclusion in society at large.

### **4. Co-education of students with Down in the general school**

In Greece, there is insufficient research into the inclusion of children with Down Syndrome in general schools and in general inclusion in its implementation faces many problems. These problems

are, in essence, due to both the state and the well-established perceptions in society of integrating people with disabilities into general (mainstream) education. Beyond the education sector, the inclusion of Down Syndrome children in the general school also contributes to changing the perception of the whole society towards these individuals. In other words, inclusion promotes the inclusion of the child not only in the general classroom but also in society as a whole, thereby changing people's perceptions and attitudes (Thomas, 1997). However, a 2002 study (Buckley et al., 2002) studied Down syndrome children with Down Syndrome who attended special school and children with general syndrome. In both cases there has been a marked improvement in their behavior and socialization and in their speech, which demonstrates that children with Down Syndrome can develop with the appropriate educational program. It is worth noting, however, that according to the research, communication of children with Down Syndrome who were attending general school showed a significant improvement than those attending special education, and in general the progress of children in general school was greater in all areas (speech, language, communication, socialization) from the progress of the children in the specialist.

Children with Down Syndrome, as already reported, do not all have the same difficulties and do not all have the same degree of mental retardation (Stasinis, 2013). For this reason, it is necessary for the teacher to work with other scientists such as psychologists and speech therapists to create an appropriate personalized program that will meet the needs of each child according to the degree of difficulty presented (Karvounis, 2007). In this way the teacher will be able to better organize his teaching and adapt his curriculum to help the child with Down Syndrome by integrating it with the general classroom (Tomlinson, 2004). The teacher's program will of course depend on many factors, such as the age and class of the child with Down Syndrome. Specifically, when the child's age and class are young, then the teacher aims at the child's behavior, that is, to be able to self-serve and develop his or her social skills. On the other hand, in older age and class, and if the child has shown the appropriate development, the personalized program aims to provide the child with the basis for his or her subsequent academic or professional career (Stasinis, 2013).

## **5. Conclusion**

Down Syndrome is one of the main causes of mental retardation. Although medicine has evolved, children with this syndrome are still born. The peculiarities of people with Down Syndrome are not only anatomical but also related to their academic abilities. Problems in linguistic expression and sometimes their behavior are usually present. Therefore, pedagogy is of great importance in relation to the education of these children and children with disabilities in general. In recent years, accession policy in education has been widespread mainly in foreign countries. In Greece, there are still serious obstacles stemming from the legislation itself and the perception still present in society that children with disabilities should only attend special schools. But the inclusion, as was also shown by research into the inclusion of Down Syndrome children in general schools, has had positive results. They were noted to have made significant progress both in their socialization as well as in writing and reading. This demonstrates that children with Down syndrome who have mild or moderate mental retardation can develop and acquire academic skills. It has been found, moreover, that people with intellectual disabilities are now more interested in their academic pursuits than their peers who are not particular (Hua et al., 2015).

Therefore, in order for these children to be integrated into general schools, changes must be made to both the curriculum and the attitude of the school environment towards diversity. In essence, there should be an appropriate climate conducive to inclusion and the school being able to respond to the individual needs of each student. The classroom teacher must be well trained and able to cope with the potential difficulties that may arise during the lesson. It is also he / she who has to create a positive climate in the classroom so that there is cooperation and understanding. The parent-school relationship plays an important role throughout the effort, as there must be constant communication, trust and information. Finally, the state can, besides amending the legislation, provide the appropriate equipment and form the necessary structures that can support accession policy. It should also support the continuous training and information of teachers and parents in order to make children's education more effective.

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