

**‘Specialization in ICTs and Special Education: Psychopedagogy of Integration’  
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**THE MATHEMATICAL ABILITY OF HIGH FUNCTIONING AUTISM AND  
ASPERGER’S DISORDER – A CASE STUDY OF A STUDENT WITH  
AUTISM AT THE PRIMARY SCHOOL**

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THESIS**

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## **Abstract**

This work is a bibliographic review and refers to the mathematical thinking of people with Asperger disorder and people with High Functional Autism. In the following paper the relationship between autism and mathematics, and the relationship between mathematical competence and Asperger disorder is investigated. The first chapter explains the basic definitions of autism and Asperger disorder and lists the diagnostic criteria of both DSM-V and DSM-IV. The second chapter highlights the distinction of Asperger disorder in the autism spectrum and how this can be distinguished from other disorders, and the difference between Asperger's and High Functioning Autism, which is still being explored based on the pre-existing literature. In the third chapter, the field of mathematics is studied as a separate language, and in the fourth a comparative study is attempted of mathematical talent with autism. Chapters 5 through 7 investigate whether high mathematical performance is consistent with Asperger's and High Functioning Autism. In the 8th and 9<sup>th</sup> chapters, cases of individuals with Asperger's are presented who have been mathematical geniuses, and in the 10<sup>th</sup>, the question is ascertained whether Asperger's have standard mathematical performance. In the 11th and 12th the Savant and PPD-NOS are reported on. The 13th defines giftedness and dual excellence / peculiarity, and the 14th refers to the academic course of students with Asperger's. The questions that are asked and will be answered through the bibliographic study are as follows: a) is autism associated with high mathematical performance, b) are Asperger's individuals showing typical mathematical performance, low mathematical performance or giftedness, and c) is there a difference in mathematical thinking between people with Asperger's and people with High Functioning Autism?

## **Key words**

**Autism, mathematical ability, Asperger syndrome, High-Functioning Autism, mathematics Savant**

**Σ.Α :** Σύνδρομο Asperger

**ΔΦΑ:** Διαταραχή Φάσματος Αυτισμού

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