

## Savantism and Multiple Intelligences: The Extraordinary Brain Syndrome

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A person with Savant syndrome is characterized as having a set of high-performance skills involving some cognitive areas related to logical reasoning, memory processing or creativity capacity. These skills can involve the ability to quickly solve numerical calculations, the ability of memorizing entire contents of books with ease (reading a great number of works of literatures in a short period) or even thoroughly developing great works of art, in an impressive way. In addition, some individuals manifest an exceptional talent in the musical area, and in rare instances, a Savant is able to distinguish smell or touch, in an unusual sensory discrimination.

The term *Savant* has a French origin and means "learned person." Possible causes of this syndrome are unknown, but some studies suggest that the development could be related to the formation of neural structures during prenatal brain development.

Savantism, in some cases, is related to Asperger's or Autism Syndrome, and for this reason, people with Savant Syndrome may have difficulty in social interactions and with communication. However, Savant Syndrome can also be acquired because of a serious brain injury.

The high skills of Savant syndrome can manifest in early childhood, even if the child does not attend school. However, stimulus and intense practice can be crucial components for the improvement of Savant skills.

In a practical way, people with Savant Syndrome manifest prodigious skills in some areas of human intelligence, such as in the following:

- **Musical intelligence:** Can develop the sound of a melody by playing the piano, just listening to someone playing for the first time, with no previous training or practice.
- **Mathematical Intelligence:** Developing mathematical calculations mentally, without the aid of calculators, quickly and accurately or even have the ability to calculate and tell the day of the week of any date in the year.
- **Kinesthetic/Tactile Intelligence:** Presents dexterity and agility in the assembly of complex mechanical parts for engines, motors and smart devices, such as building exquisitely detailed ships.
- **Spatial and Pictorial intelligences:** Known as, Savant artists, these individuals are able to develop three-dimensional drawings, exceptional sculptures and paintings with excellence. In addition, they might also demonstrate efficiency in memorizing maps and geographical routes.
- **Linguistic Intelligence:** Ability to understand, write and translate multiple languages quickly and accurately.

In the school environment, the educational curriculum must be adapted and applied based on the educational needs of Savant students. Thinking about this, Dr. Trevor Clark, PhD in autism at UNSW (The University of New South Wales) has developed an academic curriculum aimed at gifted students and with educational strategies for teaching students with autism.

According to the Savant curriculum, the educational program has to include:

- The advancement of the student to a higher grade than peers, in a rapid progression of educational content in a far shorter term.
- Enriching the curriculum with activities according to the learning experiences and high skills of the student.
- A mentoring program with a specialist responsible for guiding the student in his/her academic life and professional career.

It is very important that the educational Institution develop an Individual Educational Plan, taking into account the student's life history (experiences), the set of skills and interests of this student as well as the visual stimuli that motivate his/her learning process [1-4].

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