

NEUROSCIENCE FOR CHILDREN EDUCATION 0-3



neuronita

V2.9
July 2018

ALIGNED WITH EUROPE 2020

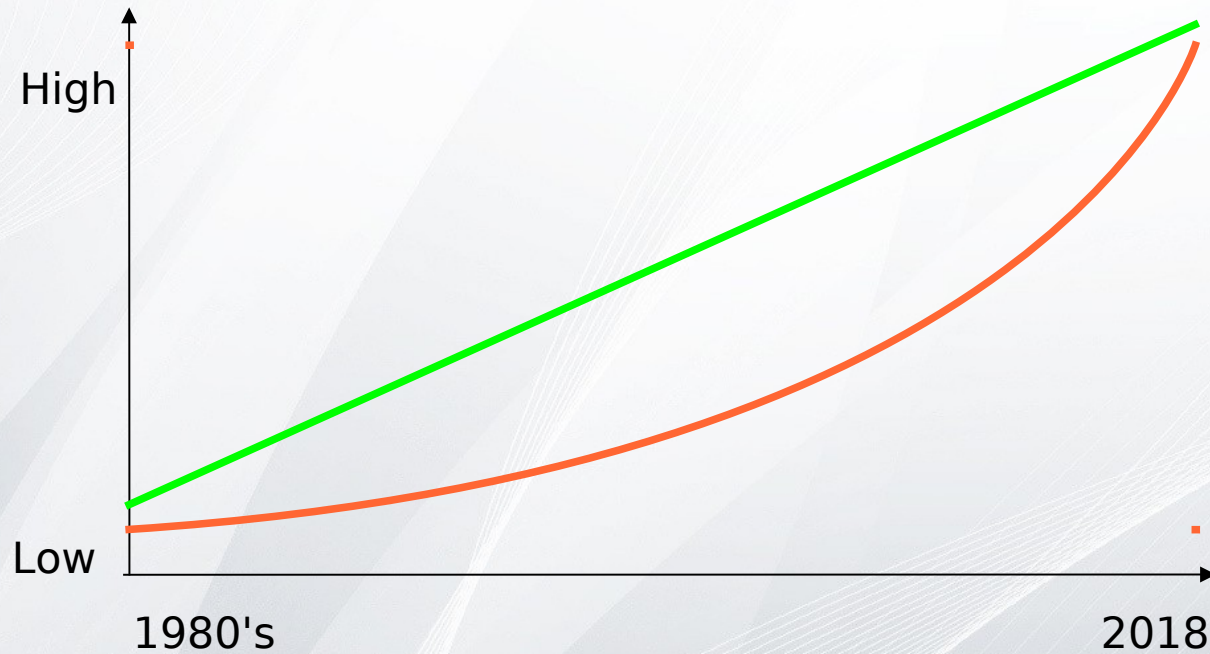
*“Early childhood education and childcare **tend to receive less attention** than any other level of education and training...”*

*“**Promote appropriate programs** from the point of view of development, so that the acquisition of cognitive and noncognitive training is encouraged...”*

Council conclusions on early childhood education and childcare.
Official Journal of the European Union, 2011

WHY NOW?

- Scientific advances reach maturity



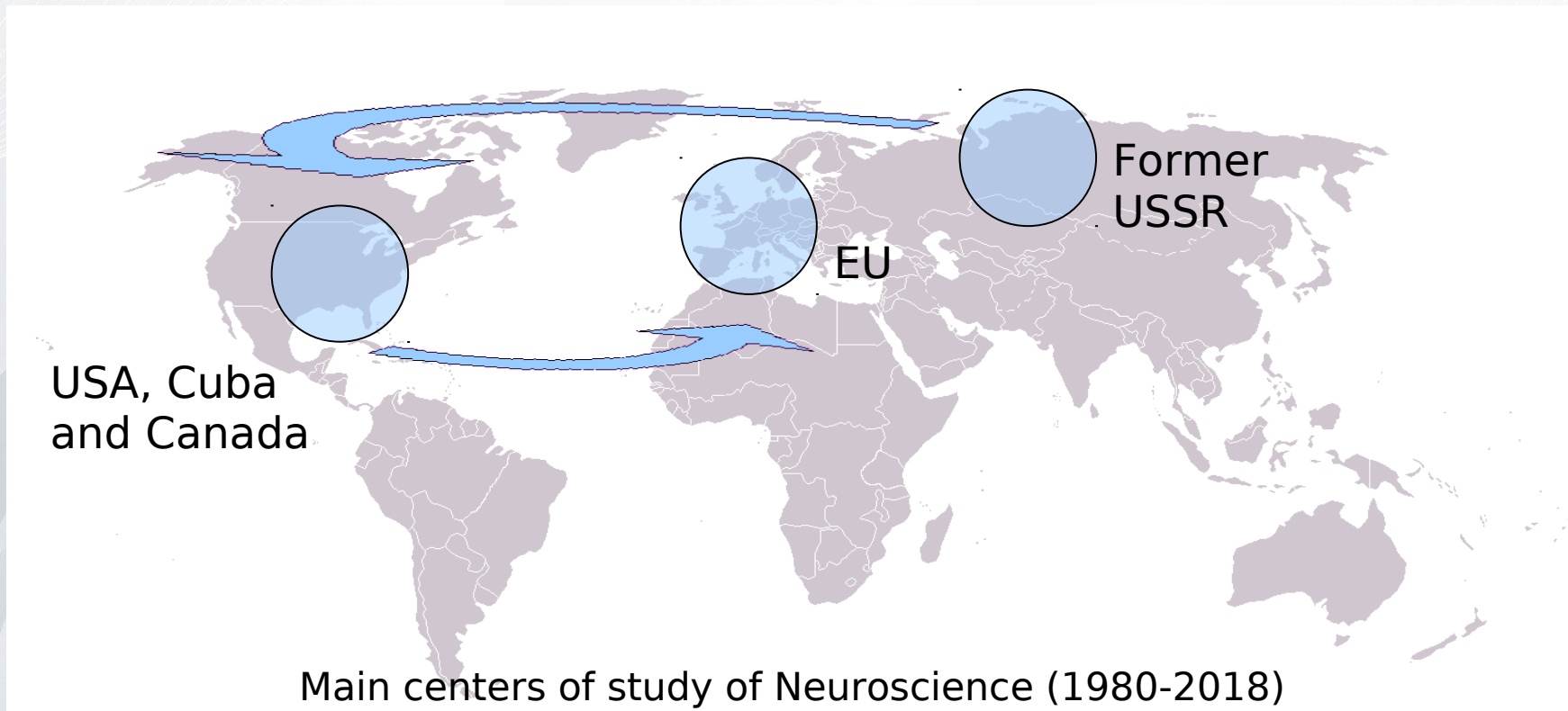
Scientific advances in Neuroscience for Education



Governments interest in applying Neuroscience in Education

CENTERS OF STUDY OF NEUROSCIENCE

- Neuronita brings to the EU the legacy of the previous centers... We have participated in all three!



ESTABLISHED FACTS

- In early life, certain neuronal connections that can no longer be created later are created
- All children have that potential if they are adequately stimulated
- The advantage acquired persists throughout the lifetime



PREVENTION OF SCHOOL FAILURE

- Prevention begins with a solid foundation in the preschool stage
- Acquired intellectual development determines the successive stages of learning
- Mistake to think that Neuroscience only serves to correct dysfunctions



WHAT IS NEUROSCIENCE?

- Studying how the brain stores information and the relationship to our behavior
- Understanding what we can do to maximize neuronal development:
 - Neuronutrition: how we have to feed the children
 - Neurobiology: maximum activity hours, rest periods
 - Neuropsychology: relationships of affection, control of emotions
 - Neuroeducation: what techniques to use to educate them

WHAT CAN WE IMPROVE?

- There are no early stimulation programs at home, coupled with low schooling in first three years of life: 10%, 30%, 50%
- The World Association of Early Childhood Educators (WAECE) alerts that:
 - Educational programs are incomplete
 - In some cases, technically deficient
- They recommend incorporating Neuroscience activities to complete programs

ACTIONS WITH OBJECTS ARE THE KEY

- They are important from birth
- From 1 to 3 years, they are the directive activity of development ahead of other subjects:
 - Knowledge of the natural and social world, music, art, motor actions, math, etc.
- Not actuating objects, no development or very poor
- At home and in schools the child is put into contact with objects, but ...



...at random, not organized as a system

WHAT IS NEURONITA?

- Organized system of activities which maximizes intellectual development
- Activities perfected over 30 years in more than 2,000 schools in 5 countries
- Subsequent monitoring of the methodology with satisfactory results

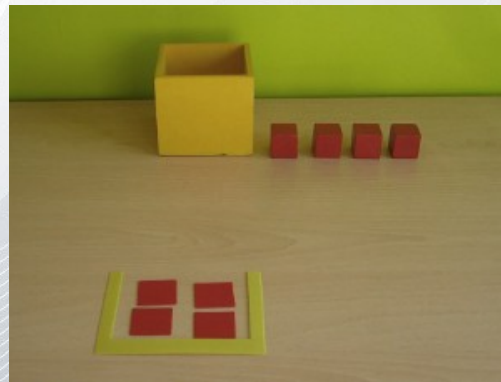


Real photo of
the beginning
of Neuronita in
the 80s



GENERALIZATION BY SUBSTITUTES

- Remove the most of the sensory component to focus on the intellectual process
 - Sustitution #1: physical objects are substituted by 2D plastic pieces on the table
 - Sustitution #2: physical objects are substituted by 3D images on the tablets



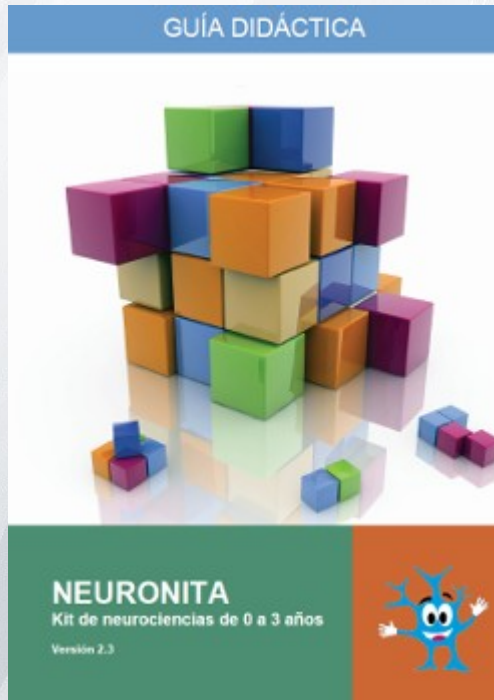
INCORPORATE A NEUROSCIENCE CLASS

- We provide a specific kit for each course of the preschool stage including:
 - Educational guide for the teachers or the parents
 - Activity sheets
 - Specifications of the objects that are needed
 - Case with 2D plastic pieces
 - App for tablets
- We recommend dedication of 1 hour/weekly
- Evaluation along with the other school subjects

In the first year of life the 2D plastic pieces and the app for tablets are not used because the child has not yet acquired the required motor skills

EDUCATIONAL GUIDE & ACTIVITY SHEETS

- Elaborated by pedagogues and psychologists
- Avoiding technicalities so that they can be applied in schools and at home



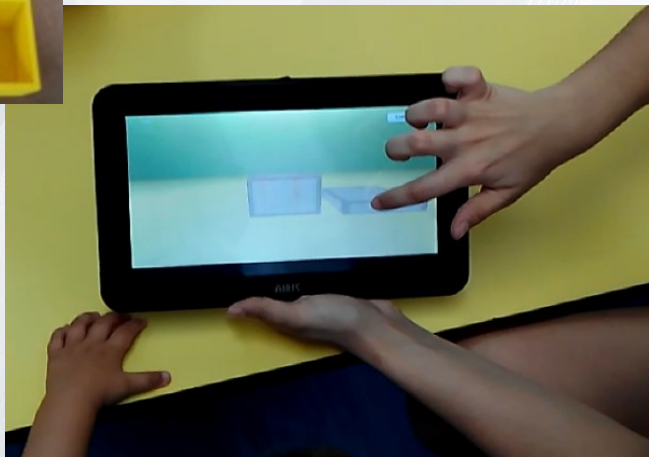
OBJECTS BRIEFCASE

- We explain how to prepare the objects that are needed during the course
- You can buy conveniently through our website any missing objects



APP FOR TABLETS

- Great realism that allows the child to link physical task with computerized task
- Compatible with most tablets on the market including iPad and Android



FIRST YEAR ACTIVITIES

- Quarter I. Simple actions with objects (10 tasks)
 - Child performs them as a simple motor act
 - They are solved by the **process of manipulation**
- Quarter II. Repetition (10 tasks)
 - Consolidation or initiation in the case of children who join the course started
- Quarter III. Repetition (10 tasks)
 - Consolidation or initiation in the case of children who join the course started

Quarterly planning is indicative and educators must adapt to the pace of development of each child

SECOND YEAR ACTIVITIES

- Quarter I. Simple actions with objects (10 tasks)
 - As in First Year but incorporating the substitutes and the tablet
- Quarter II. Correlation/construction actions (10 tasks)
 - Considering characteristics of an object to interact with other
 - They are solved by the **process of perception**
- Quarter III. Initiation to actions with instruments (5 tasks)
 - Using an object to perform an action on another
 - They are solved by the **process of thinking**

Quarterly planning is indicative and educators must adapt to the pace of development of each child

THIRD YEAR ACTIVITIES

- Quarter I. Actions with instruments (10 tasks)
 - As in Second Year but they have to assemble instruments
- Quarter II. Sensory actions (5 tasks)
 - Color, shape and size of objects become important
 - They are solved by the **process of perception**
- Quarter III. Complex instrumental actions (5 tasks)
 - Using levers, gears and pulleys
 - They are solved by the **process of thinking**

Quarterly planning is indicative and educators must adapt to the pace of development of each child

WHY INCLUDE TABLETS?

- Development of thought follows a cycle:
 - Mastering basic objects
 - Generalization by substitutes
- Wide range of objects without extra cost or space
- With tablets, simpler and cheaper than before with computers... They require no maintenance!
- Preparing the child for digital competencies better and earlier

SYSTEM OPERATING IN THE CLOUD

- Avoids incidents related to loss of data
- Allows contrasting evolution of your children against other countries' averages



(*) Availability scheduled for the 2019-20 school year

OUR SCIENTIFIC BASIS

- Young team led by F. Martinez Mendoza, recognized for his 30 years of research
- Scholar of Piaget, Vygotsky, Bruner's legacy
- 25+ books about neuroscience and child development
- Frequent speaker at major international conferences



SUMMARY OF BENEFITS

Greater intellectual development

Prevention of school failure

Preparation for digital competencies

Extra contribution in psychomotor development

Thank you!

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