# Validation of SCAT from CTY in Catalan and Spanish Language from Primary to High Schoolers

**M.D. CLINICAL PSYCHOLOGY**
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# S.C.A.T Serie-III

- The School and College Abilities Test (SCAT) Series III represents a revision of the initial SCAT Series II, originally normalized and standardized in 1966 and reviewed in 1970. These Tests were further developed in 1980 by the Educational Testing Service and now belong to CTY-John Hopkins University

- The SCAT-series III measures **VERBAL** and **QUANTITATIVE ABILITIES** of students in grades 3-12 in **TWO FORMS** (X and Y) with **THREE LEVELS OF DIFICULTY** in 20 minutes each part (50 questions).

- The SCAT is divided in **TWO DIFFERENT SECTIONS**:

- Part I, **verbal**, uses verbal analogy items to measure the student's understanding of words (CTY previous researches).

- Break.

- Part II is **quantitative** and tests a student's understanding of fundamental number operations through quantitative comparison items.

S.C.A.T measures the **ACCUMULATION** of **LEARNING** rather that achievement in above-grade-level test

# RESEARCH AND IDENTIFICATION PROCESS

**MAIN GOAL:**

- *IDENTIFICATION OF THE EXCEPTIONALS TALENT FROM SPANISH AND CATALAN STUDENTS (2nd GRADE TO 10th Grade).*

- *SCAT-SERIE-III. VALIDATION IN CATALAN AND SPANISH LANGUAGE*

**RESEARCH FRAME:**

Testing 3 grades above level is a systematic manner to identify the intellectual potential of the students.

It allows to discover the intellectual differences that occurs between the ablest students (often concealed when conventional test which usually have poor discriminative ability for them, are used..

- ○ **PLACE**: FUNDACIO PRIVADA JAVIER BERCHÉ (Barcelona, Valencia, Basc Country and Canari Island).

- ○ **YEAR of TALENT SEARCH**: Mar.2018 – Dic.2018.

- ○ **COLABORATION** CONTRACT WITH THE JOHN HOPKINS'S UNIVERSITY.

- ○ **DEPARTMENT ADMINISTRATION:** Neuropediatric and psychological Dep.
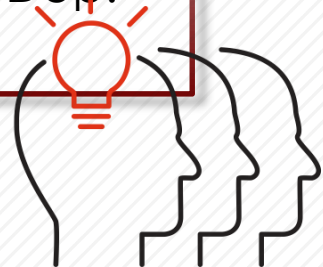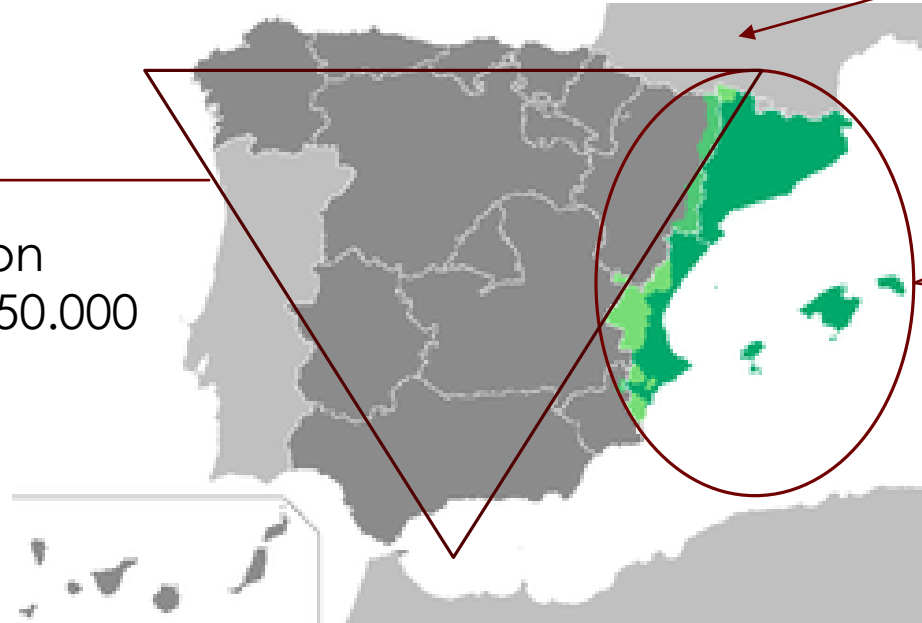
# IMPACT AND GEOGRAPHY

**SPAIN**
Population: 46.7million
Gifted Students: x>350.000
**CANARI ISLANDS**
**LATAM**
**USA**

**CATALUNYA**
Population: 7.6 million
Gifted Students: x>35.000
**VALENCIA**
Population: 4.664 million
Gifted Students: x>32.000

# MEASUREMENT PROPERTIES OF S.C.A.T

# GENDER AND LEVEL TESTED +3 grades (n=284)

| | Students | % |
|---|---|---|
| **TOTAL GRADES** | **284** | |
| MALE | 205 | 72,18% |
| FEMALE | 79 | 27,82% |

48%-Spanish
52%-Catalan

| | Students | % |
|---|---|---|
| **ELEMENTARY** | **37** | |
| MALE | 25 | 67,57% |
| FEMALE | 12 | 32,43% |

| | Students | % |
|---|---|---|
| **INTERMEDIATE** | **70** | |
| MALE | 50 | 71,43% |
| FEMALE | 20 | 28,57% |

| | Students | % |
|---|---|---|
| **ADVANCED** | **177** | |
| MALE | 130 | 73,45% |
| FEMALE | 47 | 26,55% |

- 30% were tested individually in X or Y form randomly.
- 70% were tested groupwise.
- Difficulty to Identify Gifted Female data.
- S.C.A.T administration in paper (pc administration in USA).

# SEASON AND LEVEL TESTED

| | Students | % |
|---|---|---|
| **TOTAL GRADES** | **284** | |
| SPRING | 65 | 22,89% |
| FALL | 219 | 77,11% |

| | Students | % |
|---|---|---|
| **ELEMENTARY** | **37** | |
| SPRING | 9 | 24,32% |
| FALL | 28 | 75,68% |

| | Students | % |
|---|---|---|
| **INTERMEDIATE** | **70** | |
| SPRING | 16 | 22,86% |
| FALL | 54 | 77,14% |

| | Students | % |
|---|---|---|
| **ADVANCED** | **177** | |
| SPRING | 40 | 22,60% |
| FALL | 137 | 77,40% |

- "Talent Research" from March to December (2018) in Barcelona, Valencia, Las Palmas and San Sebastian (Spain).

- Difficulty to find Gifted Female's data.

- No significant identifications in the primary schools.

# LEVEL SCORES ANALYSE- ELEMENTARY

**GIFTEDNESS SCORES**
PC 70%-79% = no need to accelerate a grade.
PC 80%-89% = need of curricular enrichment.
PC 90%-99% = possibility to accelerate

|  | VERBAL | % |
|---|---|---|
| ELEMENTARY | 37 | |
| DIRECT 35/50: | 10 | 27,03% |
| PERCENTILE =>70 | 3 | 8,11% |

|  | QUANTITATIVE | % |
|---|---|---|
| ELEMENTARY | 37 | |
| DIRECT 35/50: | 16 | 43,24% |
| PERCENTILE =>70 | 7 | 18,92% |

- Students (2nd and 3rd primary school = 7 to 9 years old).
- Talents no developed yet (Stanley research).
- 3 students can be identified as a verbal exceptional talented children (PC =/> 70%).
- 7 students can be identified as a mathematical exceptional talented children (PC =/> 70%).
- Potential Neuron Cells starts to specialized (maturated) to stimulate the mathematical/technical brain areas.
- Mathematic talent can be easily developed earlier than verbal.

# LEVEL SCORES ANALYSE-INTERMEDIATE

**GIFTEDNESS SCORES**
PC 70%-79% = no need to accelerate a grade.
PC 80%-89% = need of curricular enrichment.
PC 90%-99% = mandatory to accelerate.

|  | VERBAL | % |
|---|---|---|
| INTERMEDIATE | 70 |  |
| DIRECT 35/50: | 6 | 8,57% |
| PERCENTILE =>70 | 10 | 14,29% |

|  | QUANTITATIVE | % |
|---|---|---|
| INTERMEDIATE | 70 |  |
| DIRECT 35/50: | 18 | 25,71% |
| PERCENTILE =>70 | 16 | 22,86% |

o Students (4rt-5th grade-primary school = 9-10 years old).

o 10 students can be identified as a verbal exceptional talented children (PC =/> 70%).

o 16 students can be identified as a mathematical exceptional talented children (PC =/> 70%).

o Mathematic talent is developed → higher results and easily to express in a quantitative data.

# LEVEL SCORES ANALYSE- ADVANCED

## GIFTEDNESS SCORES
PC 70%-79% = no need to accelerate a grade.
PC 80%-89% = need of curricular enrichment.
PC 90%-99% = mandatory to accelerate.

| | VERBAL | % |
|---|---|---|
| ADVANCED | 177 | |
| DIRECT 35/50: | 53 | 29,94% |
| PERCENTILE =>70 | 24 | 13,56% |

| | QUANTITATIVE | % |
|---|---|---|
| ADVANCED | 177 | |
| DIRECT 35/50: | 94 | 53,11% |
| PERCENTILE =>70 | 41 | 23,16% |

- Students (6th grade- high-schoolers = more that 10 years old).
- 24 students can be identified as a verbal exceptional talented children (PC =/> 70%).
- 41 students can be identified as a mathematical exceptional talented children (PC =/> 70%).
- Quantitative Skills and abilities are still developed in a higher standard that verbal skills and abilities.

# DESCRIPTIVE STATISTICS OF THE COHORT OF STUDENTS

| | VERBAL |
| --- | --- |
| | Direct Score |
| **ELEMENTARY N** | **37** |
| Mean | 30.38 |
| Median | 30 |
| Mode | 30 |
| Standard deviation | 6 |
| Variance | 36.02 |
| Asymmetry | -0.08 |
| Kurtosis | -0.45 |

| | QUANTITATIVE |
| --- | --- |
| | Direct Score |
| **ELEMENTARY N** | **37** |
| Mean | 32.22 |
| Median | 32 |
| Mode | 26 |
| Standard deviation | 7.49 |
| Variance | 56.17 |
| Asymmetry | -0.24 |
| Kurtosis | -0.57 |

| | VERBAL |
| --- | --- |
| | Direct Score |
| **INTERMEDIATE N** | **70** |
| Mean | 29.70 |
| Median | 30 |
| Mode | 32 |
| Standard deviation | 6.23 |
| Variance | 38.79 |
| Asymmetry | -0.32 |
| Kurtosis | 0.03 |

| | QUANTITATIVE |
| --- | --- |
| | Direct Score |
| **INTERMEDIATE N** | **70** |
| Mean | 31.40 |
| Median | 31 |
| Mode | 33 |
| Standard deviation | 5.95 |
| Variance | 35.34 |
| Asymmetry | 0.04 |
| Kurtosis | -0.4 |

| | VERBAL |
| --- | --- |
| | Direct Score |
| **ADVANCED N** | **177** |
| Mean | 30.84 |
| Median | 31 |
| Mode | 30 |
| Standard deviation | 6.52 |
| Variance | 42.47 |
| Asymmetry | 0.15 |
| Kurtosis | 0.83 |

| | QUANTITATIVE |
| --- | --- |
| | Direct Score |
| **ADVANCED N** | **177** |
| Mean | 34.63 |
| Median | 36 |
| Mode | 38 |
| Standard deviation | 7.34 |
| Variance | 53.95 |
| Asymmetry | -0.36 |
| Kurtosis | -0.62 |

- The results for the cohort have been analyzed in its most useful descriptive statistics for verbal and quantitative test out-of-level (+3 grades).
- Need to expand the sample in Intermediate and Advanced Level
- Difficulty to understand the results in Elementary Level due to the sample is very small and not representative.
- The Same results in S.Desviation as Javier Touron (2003)

# ITEM ANALYSIS RESPOND

- Item 100 in Form X-Intermediate (90% of the students in both gender and both languages couldn't respond the question).

- Item 92 in Form X – advanced (99% of the students in both gender and both languages couldn't respond the question).

- Item 96 in Form Y-Advanced (98% of the students in both gender and both languages couldn't respond the question).

- For these 3 questions require a revision in the translation and content in Spanish and Catalan.

- The reasoning that is required to answer these questions is not contemplated in the official optative programs of the Spanish system.

**TRASNLATION DEPARTMENT:**
English to Spanish: Javier Tourón (2003). Navarra University.
English to Catalan =Montserrat Rivera (2009). Fundación Privada Javier Berché.

# CONCUSION

- The **Talent Search (**developed by Dr.Stanley) has resulted as a **effective procedure to identification** of the intellectual high abilities of the students.

- "Above-level" measurement is effective to discriminate between students with different abilities.

- It allows to know not only the students with talent or not, but to estimate the degree of it.

- The date provides the consistency to sustain the idea to create educational adjustment for these students challenging their education process and development.

- It is a quick reliable tool to work with (vs WISC-V or K-BIT).

# CONCLUSION

○ According to our results (Duran and Berché, 2019)and the results of Dr.Stanley with SCAT-Serie-III (Symposium in Barcelona 1991) we can conclude that the SCAT in Catalan and Spanish is a Reliable Tool to use it during the identification process with Spanish and Catalan population.

# THANK YOU SO MUCH

# MUCHAS GRACIAS

# MOLTES GRÀCIES

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