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# **Counterfactual impact evaluation of a pilot program for the inclusion of migrant adolescents**

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# Presentation Outline

- Introduction
- The case study: the « Oltre i Muri » Project
- The target population
- Role of the evaluation in the project
- Discussion of the trial design
- Variables, indicators and tools
- Some very preliminary results
- Lessons and discussion

# Oltre i Muri: funder and partners



Progetto co-finanziato dall'Unione Europea



FONDO ASILO, MIGRAZIONE E INTEGRAZIONE (FAMI) 2014-2020

- Fond. Piazza dei Mestieri
- Fond. per la Scuola
- City of Turin
- CNR-Ircres
- Coop. Immaginazione e Lavoro
- CEPAJ Slea, vocational training centre - Lyon
- Second chance school - Chambery
- De Bouvoir school, Liege



# The Oltre i Muri Project **Target**

The evaluated project targets young migrants attending the lower secondary school and at risk of early school leaving:

- Migrants recently arrived in Italy,
- included in public lower-secondary schools...
- ... but not well integrated because they have low or no language skills in Italian and so facing risk of
  - Dropping out or low school performance
  - Bullying behaviour (→ ethnic polarisation)

# The Oltre i Muri Project **Approach**

Students alternate standard school classes with a path in a vocational training centre. Here they attend:

- work oriented laboratories (cooking, bartender, printing)
- classes of basic subjects (Italian, English and Math) based on inductive pedagogy

The project also includes activities for

- Teachers' empowerment
- International transferability of the model

# The project **Challenges I**

The massive foreign arrivals we are experimenting in Italy caused an emergency situation in compulsory schools, where a large number of young migrants with no Italian language skills is included in standard classes.

This causes problems of integration and of effective teaching, because the structure of the Italian school system is very rigid.

The Oltre I Muri Project **transfers** for the first time an approach, formerly experimented on bullies, on this new target.

# The project **Challenges**

Moreover the financing programme (FAMI) also imposed a transnational perspective. The model of intervention has to be reinforced through good practices' exchange.

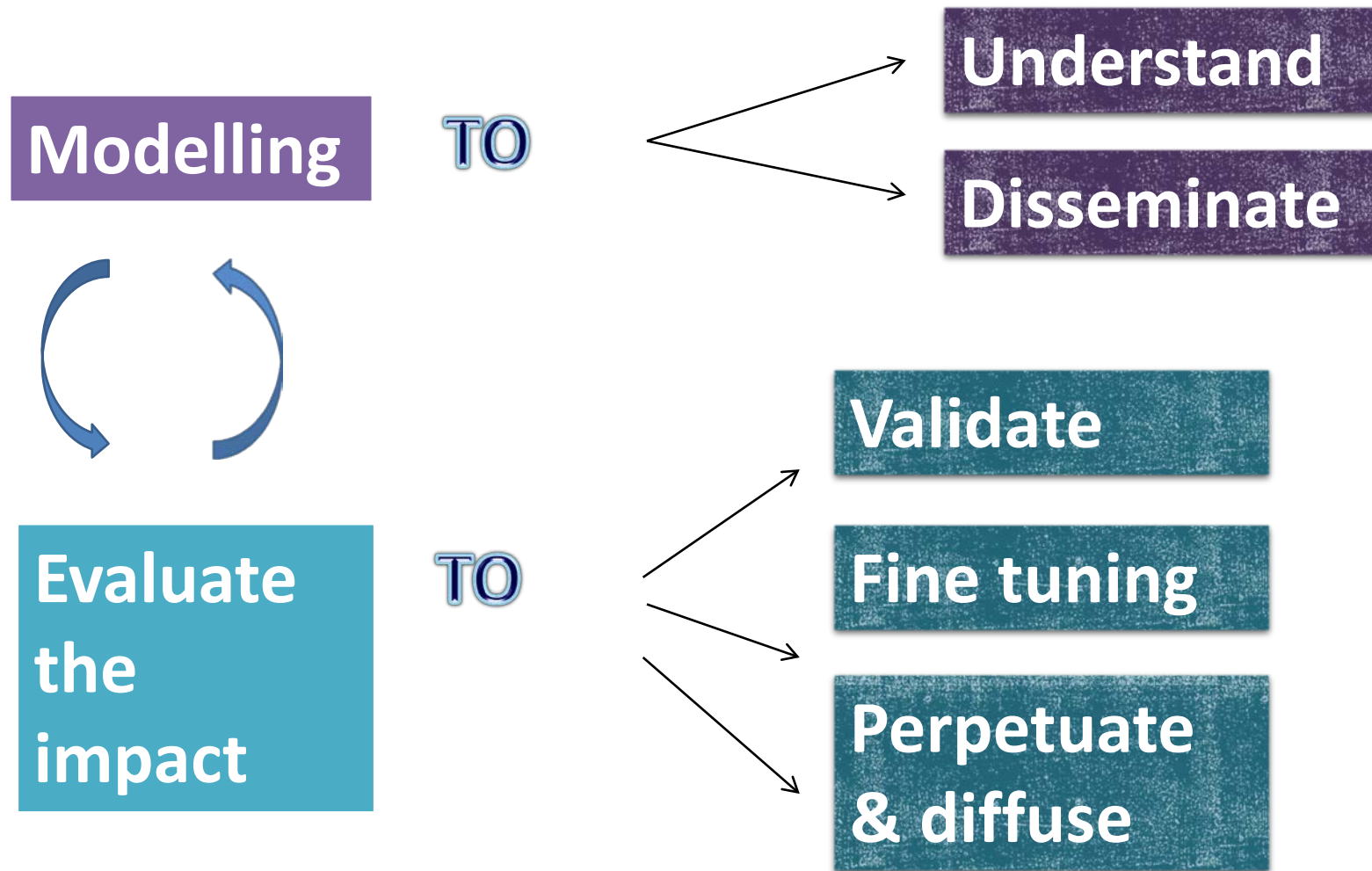
All this implied for the promoters a double challenge:

- ✓ a shift in the field of action
- ✓ to work on international transferability



**MODEL definition  
and assessment**

# Evaluation as an operative instrument



# Counterfactual approach **Problems**

- **Quasi—experimental approach** (ex-post matching on observables):
  - In social inclusion policies (including training) non observable variables play a major role in explaining individual success
  - Objective and explicative variables are multidimensional
- **Experimental approach** (random trial):
  - Difficult implementation to be planned from the beginning
  - Opposition and unexpressed resistance by the operators
  - Possible bias in case of substitution of treated individuals

# The methodological choice

**We opted for the experimental approach because:**

- Large risk of bias (very weak individuals, facing many difficulties)
- No variables available for a convincing matching
- Small sample

**The impact will be estimated observing changes in the objective variables**

- Measurement at the beginning and at the end of the treatment

# Implementation issues I

## Timing

In its initial design the project should have lasted one school year, including a fair time to implement the random trial. Due to problems in the management of the programme by the Ministry, there was a 5-month delay in the kick-off.

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	...
School year																	
Scheduled timetable	K.O.	Trial design				Laboratories				Vacation time							
Actual timetable							K.O.	Trial design		Labs			Laboratories				

## Practical implications:

- ✓ Impossible to include in the trial last year students (= fewer candidates)
- ✓ It is more difficult to rely on school notes and other indicators for the evaluation (the project finishes in the middle of a school year)

# Implementation issues I

## Timing is fundamental

### Implications for the trial design:

- ✓ Preliminary implementation activities suffered an hard rush-up, because teaching activities may not be compressed.
- ✓ As a consequence, it was difficult to assemble in a short time a fair number of candidates, so reducing the homogeneity of the selected target (eg. Inclusion of CPIA students)
- ✓ and the enrolment and selection procedures had to rely heavily on the promoter, so the evaluator could not control all steps.
- ✓ Some activities that should occur in sequence, actually overlapped (eg. Initial tests during the first laboratory classes)

# Implementation issues II

## Agreement on the evaluation design

- The initial plan of the research team was to randomly assign to main and counterfactual groups all students recommended by schools.
- The unexpressed idea of the VET operators was to assign non-suitable students to the control group. In general, they refused to include whatever candidate and insisted on creating a well balanced treatment group.

The final solution, that was suitable for both, was to define at first a list of eligible students, then to assign them randomly to either treatment or control groups. This had the consequence of **reducing the sample size of both groups**, but ensured both reliability of the evaluation, and feasibility of the project.

# The sample

	Females		Males		Tot		Average age
		%		%		%	
<b>Non treated</b>	<b>2</b>	<b>11,1</b>	<b>16</b>	<b>88,9</b>	<b>18</b>	<b>100,0</b>	<b>15,7</b>
<b>Treated</b>	<b>3</b>	<b>21,4</b>	<b>11</b>	<b>78,6</b>	<b>14</b>	<b>100,0</b>	<b>15,1</b>
<b>Excluded (not eligible)</b>	3		5		8		
<b>Drop-out</b>			2		2		
<b>Non-random substitution</b>	1				1		
<b>Tot</b>	9		34		43		

# Objectives, variables, indicators I

***Social inclusion*** (direct objective)

**Soft (character) skills, measured by:**

- hetero-evaluation
- self-evaluation
- elementary indicators from the school registers  
(disciplinary notes, absences and late arrivals)



# Objectives, variables, indicators II

***Learning and school performance*** (indirect objective)  
**Base transversal skills (Italian, Math, English), measured by:**



- Specific tests given at the beginning and at the end of the project
- School notes in the three subjects

# Character skills **Hetero-evaluation**

We used a questionnaire validated in an Italian project aimed at the prevention of the school dropout and based on individual behaviour observed at school.

Teachers submitting a student's candidature had to give a judgement on a long list of common behaviour observed in their students, concerning:

- Relationships with peers
- Relationships with adults
- Other school actions

# Character skills **Self-evaluation I**

**Challenge:**  
**Overcome the  
linguistic barrier**

Solution:  
Pictographic  
questionnaire

Solution:  
Refer to normal  
teen-ager  
situations

**Challenge:**  
**Avoid the risk of  
conveying a sense of  
value in the questions**

# Character skills **Self-evaluation II**

## Challenge:

**Adopt a comprehensive but structured approach that can be used for quantitative evaluation**

## Solution:

Refer to “the big five” as predictors for social inclusion (OCEAN):

- Openness,
- Conscientiousness,
- Extraversion,
- Agreeableness,
- Neuroticism

# Character skills **Self-evaluation III**

*In my free time I like to...*



Discover new things

Always	More often	Equally	More often	Always
so	so		so	so
++	+	=	+	++



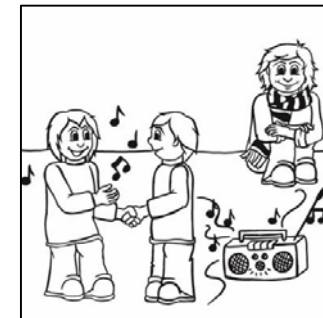
Rest

*When I see somebody having fun ...*



I join them

Always	More often	Equally	More often	Always
so	so		so	so
++	+	=	+	++



I don't join them

# Basic transversal skills I

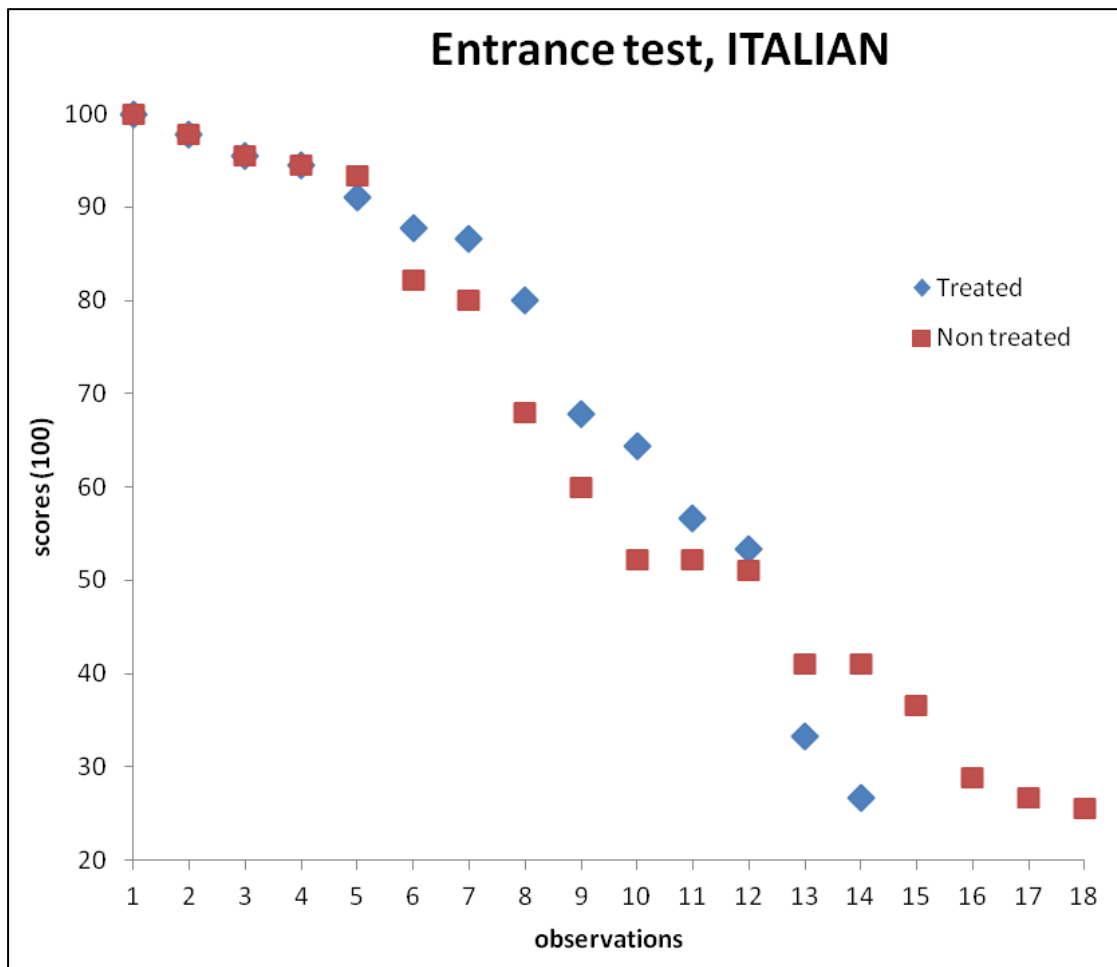
**Tests for Mathematics, English and Italian were specially designed for the project**

- The accent is on learning rather than on school performance
- For Math: mainly graphic, reduced use of Italian words
- For English: test mainly based on comprehension of English terms and not on their translation in Italian

# Basic transversal skills II

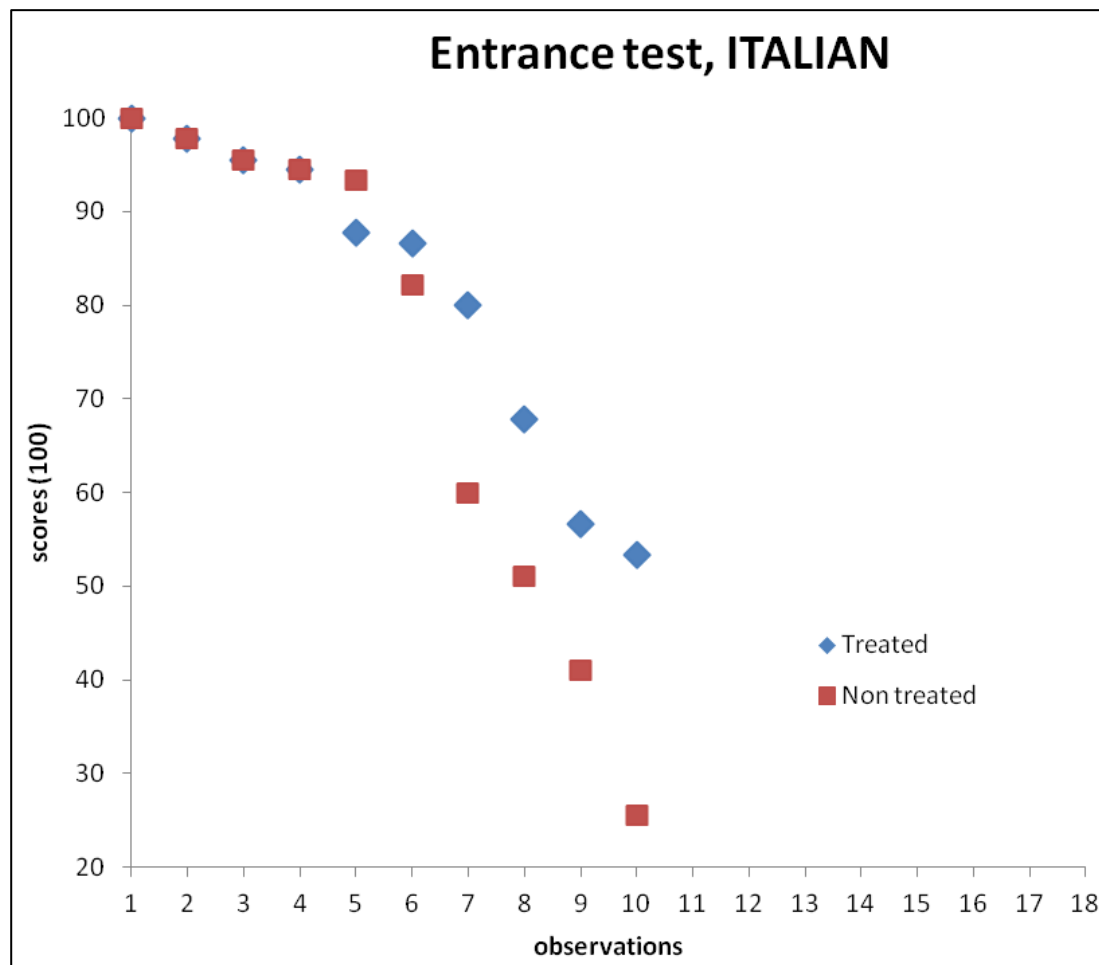
- The Italian and English tests were designed to assess the level of understanding in a communication context (calibrated on the A1 - pre A2 level of the Common European Framework of Reference for Languages)
- The questionnaires were composed of seven exercises and each one contained a different number of items with different weights, in order to create a skill scale (progressive assessment)

# Some results from the entrance tests II



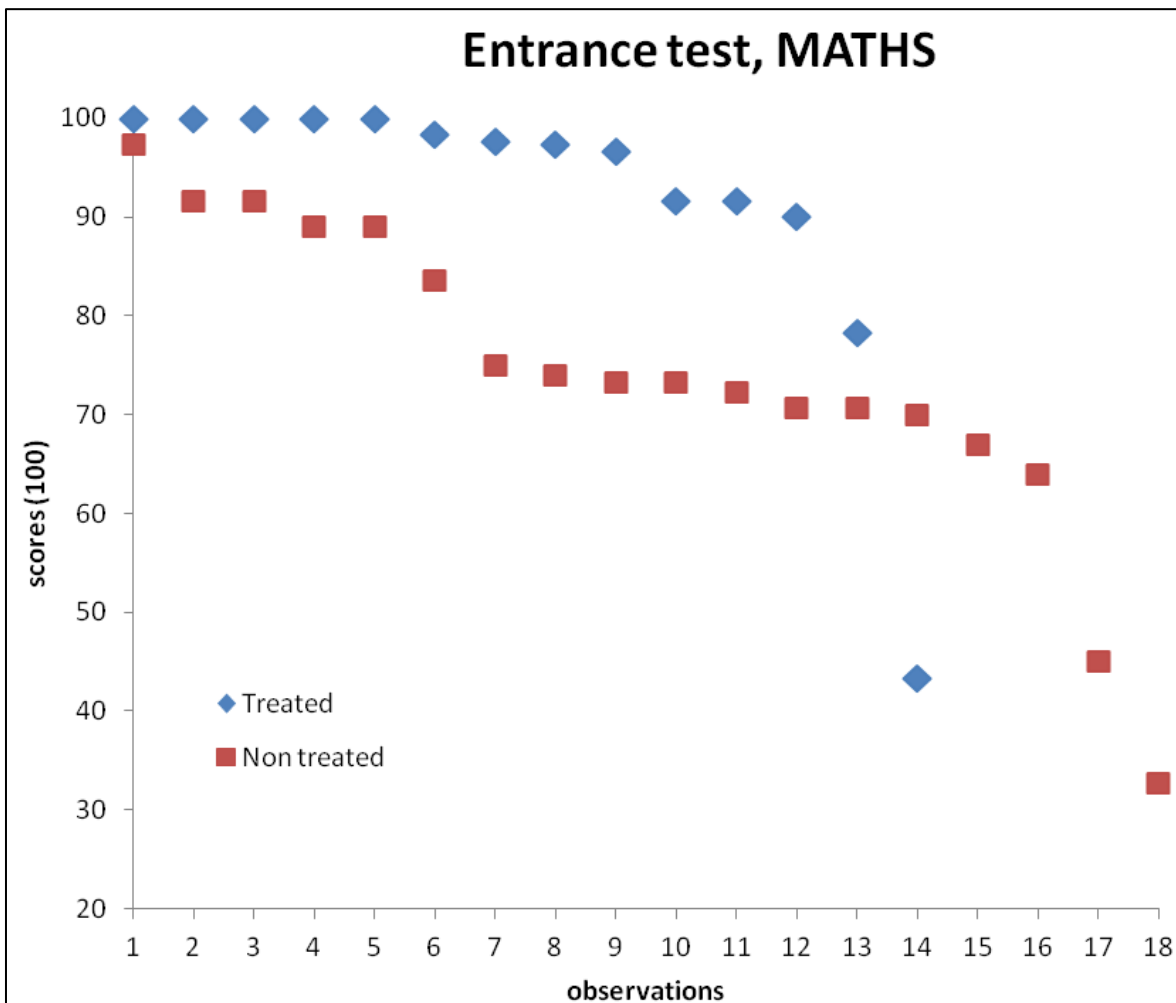
	ITALIAN TEST	
	Main	Control
Obs.	14	18
Average	74,0	62,6
Std. dev.	24,1	26,7
Max	100	100
Min	26,7	25,6
obs >=60	10	9
obs <40	2	4
obs >=80	8	7
Avg.>=60	86,6	85,7
T-test	0,608	

# Entrance tests – no CPIA pupils II



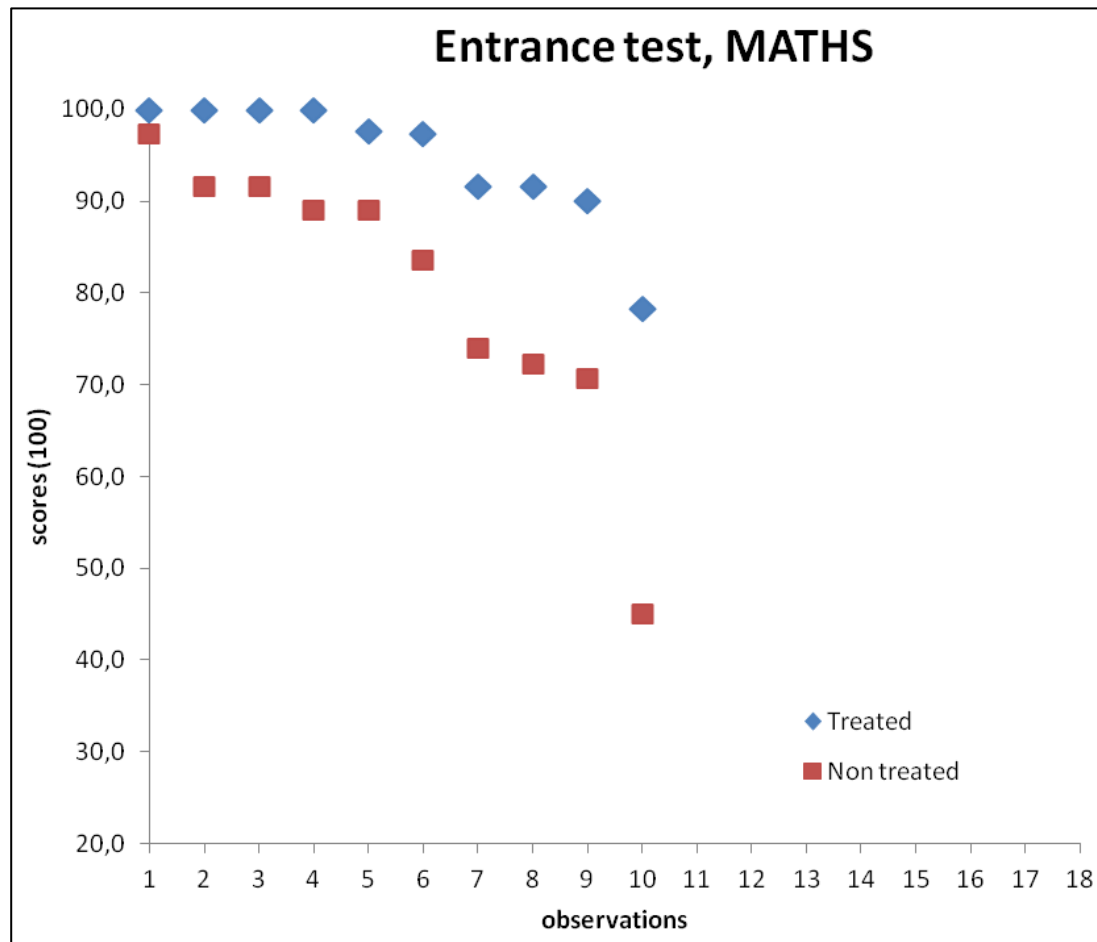
	ITALIAN TEST	
	Main	Control
Obs.	10	10
Average	82,0	74,1
Std. dev.	17,1	27,3
Max	100	100
Min	53,4	25,6
obs >=60	8	7
obs <40	0	1
obs >=80	7	6
Avg.>=60	88,8	89,0
T-test	0,424	

# Some results from the entrance tests III



	MATHS TEST	
	Main	Control
Obs.	14	18
Average	91,8	73,9
Std. dev.	15,2	16,2
Max	100	97,3
Min	43,3	32,7
obs >=60	13	16
obs <40	0	1
obs >=80	12	6
Avg.>=60	95,5	78,3
T-test	0,019**	

# Entrance tests – no CPIA pupils III



	MATHS TEST	
	Main	Control
Obs.	10	10
Average	94,7	80,4
Std. dev.	7,0	15,5
Max	100	97,3
Min	78,3	45,0
obs >=60	10	9
obs <40	0	0
obs >=80	9	6
Avg.>=60	94,7	84,4
T-test	0,102	

# Some results on **Hetero-evaluation I**

**Spearman rank correlation analysis** reveals significant correlations

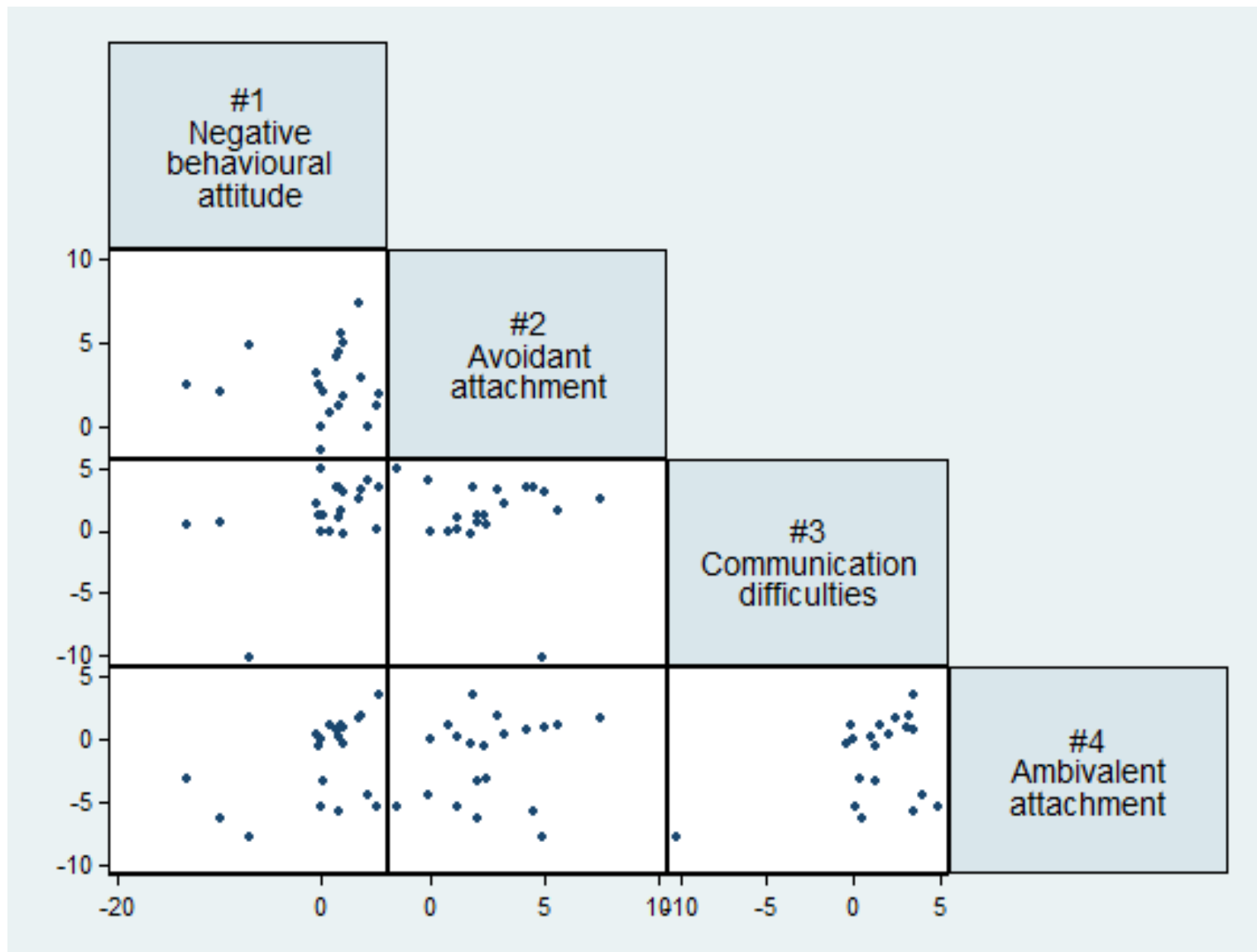
- negative attitudes towards both peers (schoolmates) and adults (teachers) are truly connected and related in turn to negative attitude towards school activity in general (e.g., scarce rule respect, no participation, no classwork, no homework)
- students having logic-mathematical problems generally show lack of communication abilities, as well as lack of interest and low rule respect
- timid pupils manifest anxiety and difficulties in handling school failures
- low self-esteem pupils do not generally ask for schoolmates' help, and are frequently distracted
- low family involvement in sons' scholastic activity is not significantly related to any negative attitude, apart from inadequate care for scholastic materials

# Some results on Hetero-evaluation II

**Polychoric principal component analysis** (Kolenikov and Angeles, 2009) reveals 4 fundamental components

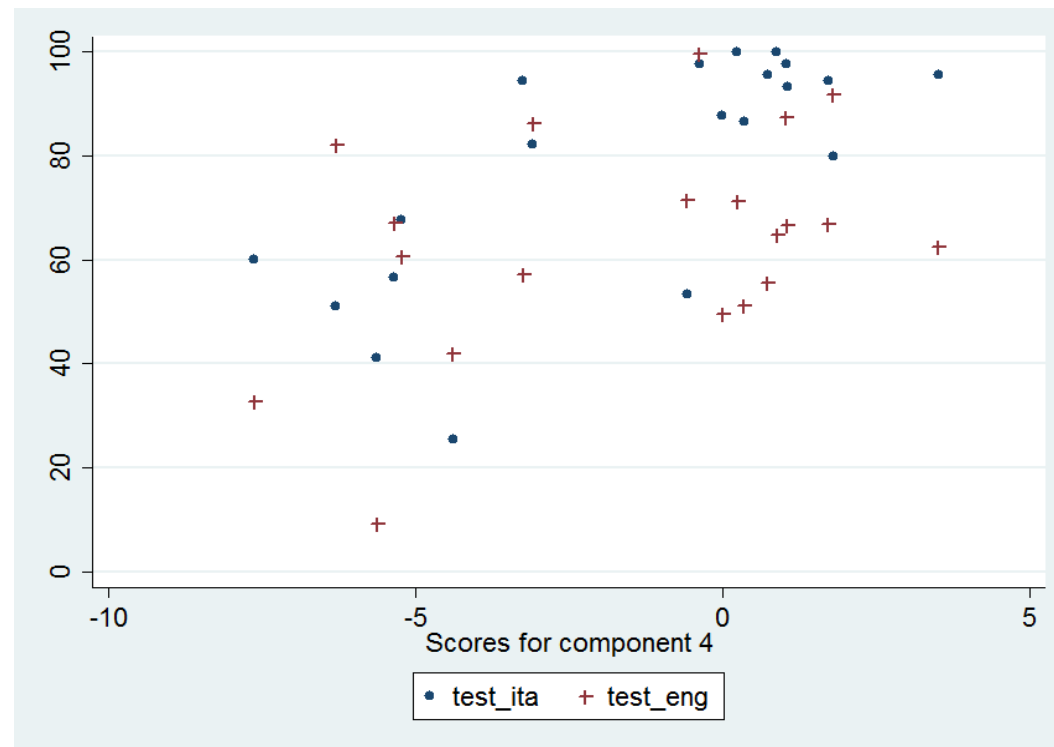
Polychoric rotated component and interpretation (psycho-behavioural profile)	Total explained variance (%)	Correlations			
		#1	#2	#3	#4
# 1: Negative behavioural attitude	22,8	1,000			
# 2: Avoidant attachment	16,6	-0,012	1,000		
# 3: Communication difficulties	11,2	0,467**	-0,161	1,000	
# 4: Ambivalent attachment	10,4	0,476**	0,220	0,381*	1,000

# Some results on Hetero-evaluation III



# Some results: entrance tests & heteroevaluation

Polychoric rotated component and interpretation	Entrance tests correlations		
	Italian	English	Mathematics
# 1: Negative behavioural attitude	0,171	-0,121	0,046
# 2: Avoidant attachment	0,250	-0,191	0,069
# 3: Communication difficulties	0,003	0,093	-0,232
# 4: Ambivalent attachment	0,735***	0,404*	0,296



# Some lessons - Tests

- Migrant students are a very heterogeneous group. Some of them are fairly skilled, but it is difficult to detect their skills for the linguistic barrier and the low social inclusion. **The tests have to include a much wider range of levels.** And you may not rely on teachers judgement.
- Great influence of the **environment** where the student takes the test. We agreed a common procedure, and common instructions to be read before the test, but the results were so different!
- Commitment problems. **Tests should be taken before the selection in the two groups.** For practical reasons this proved impossible and caused enormous problems of motivation in the students of the control group.

# Some lessons **Design of the trial I**

## **Social innovators need non conventional evaluation**

- When working on social innovation projects you generally address very innovative and advanced experiences, while the target population is fairly unknown (no statistics).
- A great preliminary work is needed to specially design the evaluation instruments. Address both time and budget for that.

## **A trial for the random trial**

- Very difficult to calibrate correctly the instruments for the variable measurement.
- Need for a pre-test.

# Some lessons **Design of the trial II**

## **Correct timing is fundamental**

- This is often true (eg. Working on innovation with firms suffering from a business cycle), but it is crucial in educational policies, which have to be coordinated with the school calendar. If this fails, both the effectiveness of the project and the feasibility of the evaluation are threatened.