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GRINS FOUNDATION

Missione 4 Istruzione e Ricerca

Workshop on Households' Sustainability

Napoli, 26-27 October 2023

Work Package #2:

Informed Educational Choice

GRINS FOUNDATION

Participants

First research unit:

- Elisabetta Lodigiani (UNIPD), Giorgio Brunello (UNIPD), Lorenzo Rocco (UNIPD)

RTDA recruited on PE9-GRINS funds : Francesco Campo (UNIPD); Martina Miotto (UNIPD)

Second research unit:

- Maria Giulia Matteucci, Department of Statistical Sciences, UNIBO.

Research fellow recruited on PE9-GRINS funds: Luca Bungaro

+ Silvia Bianconcini, Silvia Cagnone, Matteo Farné, Stefania Mignani (formally not included in the PE9-GRINS project)

The project «Informed Educational Choice»

Aim of the project: to investigate the main determinants of school choices with a focus on post-secondary education.

1) We will run our own **survey** which investigate students' intentions about post-secondary choice (UNIPD).
2) We will investigate specific gaps and determinants in digital competences which may guide the school and university choice with existing data (UNIBO).

The survey

- We will focus on students at the last high school year in all the Italian regions.
- The sample: 100 high-schools (lyceums), 200 classes, minimum of 3000 students (on average 15 students per class)
- Create a representative dataset at NUTS1.
- We want to administer the survey to high-school students before (and after) post-secondary education choices:
  - 1 wave, December 2023-April 2024.
  - Follow up, March-April 2025. Participants will receive a gift voucher worth 20 euros. Expected number of students: 600 (min.) 1500 (max.)

The survey

Steps done:

- literature review; sample design; questionnaire of the first wave.
- Survey administered by Ipsos (contract signed in September 2023).
- We made a dépliant and a video to promote schools' participation in our project.

The survey

- The first part of the questionnaire will be devoted to gathering students' information regarding gender, migration status, family background (e.g., parents' occupational status, educational level of family members including older brothers/sisters and grandparents, field of study of family members if tertiary educated).

The survey

- The second part of the questionnaire will collect information about students' self-beliefs about major-specific monetary returns at different ages (30 and 40 years old).

Fields of study are aggregated into seven macro-category:

1 – Civil Engeneering , Architecture and Design

2 - Engeneering, ICT, Matemathics, Physics and Natural Sciences

3 – Economics, Business and Law

4 – Medicine, Veterinary Medicine and Health Professions

5 - Psychology, Political Sciences and other social sciences

6 - Literary studies, Philosophy and Humanities

7 – No tertiary education

The survey

- The third part of the questionnaire will collect information about students' beliefs about major-specific non-monetary returns (e.g., beliefs about work-life balance, work flexibility, employability etc.).

- The fourth part of the questionnaire will collect information about students' preferences, attitudes and abilities (e.g., beliefs about relative skills ranking). We will collect beliefs about upcoming university choice.

- We will ask students their SIDI code in order to match their answers with their INVALSI test scores (optional).

The survey

The results from the questionnaire items will be used:

- to investigate how university choices are sensitive to expected monetary and non-monetary returns, and how the sensitivity differs along the geographic, gender and ethnic dimension.
- to construct indicators for the Amelia platform (for example, to generate indicators on the deviation of self-beliefs on expected earnings by major choices from plausibly real population values of the corresponding variables built from secondary data, such as Labour Force Survey)

If possible: extend our survey to technical schools (istituti tecnici).

Digital skills among students: inequalities and determinants

Aim: to build indicators based on IEA-International Computer and Information Literacy Study (ICILS) data on grade 8 Italian students.

- indicators of gender differences in the computer and information literacy (CIL) and computational thinking (CT) scales by considering the quantile distribution of the achievement scales;
- indicators of geographical differences (North-Center-South) in the CIL and CT scales by considering the quantile distribution of the achievement scales;
- indicators of the main determinants of the CIL and CT achievements (related to contextual variables such as the student home environment, the school environment, including teacher capacity to use ICT, and the country policies and active practices).

Available data: IEA-ICILS 2018 on the CIL scale; IEA-ICILS 2023 on both CIL and CT scales (public-use 2023 database expected for March, 2025). Indicators will be developed with 2018 data and then replicated with the 2023 data.

Digital skills among students: inequalities and determinants

Statistical methodology: quantile regression, multilevel models, item response theory, classification and regression trees.

Current state: review of the necessary literature and national/international/technical reports, data exploration (data with complex structure in terms of response variables/plausible values, sample weights, hierarchical structure).

Thanks!