

# Creating equal opportunities at school: Empowering students from less-advantaged backgrounds through teaching academic language, the outcomes.

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**“Economic disadvantage undermines equal opportunities: in every country studied, 15-year-olds from more privileged families achieve substantially better educational results than their less-advantaged peers” (UNICEF, 2017)**

**The project ‘Creating Equal Opportunities at School: Empowering students from less-advantaged backgrounds through teaching academic language’, co-funded by Erasmus+, aims to bridge the gap between students’ cognitive talent and their current academic success by means of teaching Dutch academic language in schools in the Netherlands and Belgium (Flanders). In our former article (ECHA News, autumn 2021) we described our experiences with setting up and carrying out the project. This article gives a summary of the results of our study.**

Inequality in education is a big problem in every wealthy country. The Netherlands and Belgium even belong to the 10 countries in the world where the Economic, Social and Cultural Status (ESCS), which refers to the position people have in society, has the biggest impact on school success (UNICEF Office of Research, 2017). The majority of pupils with high potential who drop out of school or who participate in fewer extracurricular activities are from low ESCS families and/or racial minority groups (Reis & Renzulli, 2009). Governments and organisations worldwide underline the need for action to diminish the growing inequality in opportunities in education (UNIA, 2018; OECD, 2018). This project aimed at diminishing the influence of ESCS on talent development and educational results.

Our project started in the summer of 2018. After a year of preparation and development, the execution of the intervention, a lesson programme on academic language, and the study investigating the intervention started. The study took place in two cohorts, during school year 2019/2020 and school year

2020/2021 in a pre-test-intervention-post-test design.

For the first wave (school year 2019-2020) 361 - about 55-60% of the enrolled first-year students - participated in the pre-test. During the second wave (school year 2020-2021, COVID-19 pandemic) 206 students (34-43%) participated. In both waves, 48% of the participating students were boys.

In each school, all participating students with low ESCS and a score in the top 20% for the extracurricular non-verbal reasoning pre-test were identified as cognitive talented and selected for the project. These students were randomly assigned to the intervention or control group. Not all students of the programme and control group participated at the post-test and for some no post-test school results were available. During the first wave, the post-tests were postponed to the next school year because of the school lockdowns related to the COVID-19 pandemic. On the first post-tests, there were 25% missing data for the extracurricular tests and motivations questionnaires: About 18% of the students had missing school results.

For the post-tests in the second wave, there were less missing data, respectively 12% and 8%.

## Economic, Social and Cultural Status (ESCS)

The ESCS was based on home language, migration status, and maternal education/paternal occupation. The selection of these ESCS indicators was based on (inter)national guidelines (Vandenbroeck, et al., 2017; UNICEF Office of Research, 2017), together with the feasibility of gaining information about the indicator in the research project. Students and their parents, who reported at least one low ESCS indicator were considered to be from a minority background. These students were able to be selected for the programme or control group if they scored in the top 20% on the non-verbal extracurricular reasoning test.

## Cognitive ability

The COVAT-3 (Magez, Van Parijs, Joris, & Tierens, in development) was used to estimate the cognitive talent of the students. This is the digital version of the CoVaT-CHC Basic version (Magez, o.a., 2016), which is a Dutch test for cognitive abilities developed for children from 9 years and 6 months through 13 years and 11 months.

## Motivation

Motivation was measured by a motivation questionnaire developed for the Project TALENT (Verschuere, Sypré, Struyf, Lavrijnsen, & Vansteenkiste, 2021)<sup>1</sup>. The questionnaire, on a five-point Likert scale, consists of six scales: Motivation, A-motivation (having no intentionality or motivation), Involvement, Boredom, Flow,

<sup>1</sup> Project TALENT – Tailoring education and care to talents of youth (<https://www.projecttalent.be/>)

and Burnout and are based on known questionnaires. The students filled out the questions on an online platform (Qualtrics) at pre-and post-test.

### School results

The school results for five courses were collected at pre-test (first periodical evaluation after the start of school) and post-test (last periodical evaluation of the school year) after completing the programme. At the end of the first wave, the post-test was postponed to the first periodical evaluation of the next school year. The courses for which school results were collected were Dutch, maths, history, geography, and art (drawing or music).

**The procedure, analyses and results of this study can be found in the research report** [https://bureautalent.nl/images/download/Research\\_report\\_CEOS\\_dec\\_2021.pdf](https://bureautalent.nl/images/download/Research_report_CEOS_dec_2021.pdf)

### Based on the results we came to the following conclusions:

The project "Creating equal opportunities at school" aimed at raising the school success of students with high potential from ethnic minority and economically disadvantaged backgrounds in the Netherlands and Belgium. In the two Belgian schools that only provided general education, small to medium correlations were found between the extracurricular test and the school results for the different courses (except art). This relation is in line with previous research (Magez & Bos, 2016). In contrast, there were no or very small correlations in the school from the Netherlands that provided general and technical education as well as vocational training. The most plausible explanation is that this is due to a problem of the methodology as the school results of this school were taken together over study orientations, with different teachers and evaluation criteria.

Analyses showed that in the pre-test less than half of the cognitive talented students with low ESCS (21 to 48%)

showed learning outcomes that were in the top 20% of the schools' participating students with low ESCS. This indicates that the majority of these students were not able (yet) to convert their cognitive talent or abilities into learning achievement. The identification of the cognitive talent using a non-verbal reasoning test and ESCS status identified other cognitive talented students compared to school results, or verbal extracurricular tests. This indicates that this test is suitable to identify hidden talent. This supported the findings of Project TALENT, where judgments on cognitive talent by teachers were more related to school results than cognitive ability (Lavrijsen & Verschueren, 2020).

The second goal was to develop and evaluate a programme on academic language similar to the REAL project<sup>2</sup> in consultation with teachers of the participating schools. Post-test analyses indicated no overall effect of group for changes in scores on the extracurricular tests and school results. This means the programme group did not perform significantly better, compared to the control group over schools and both waves. Some small interaction effects were found. In school A, at wave 1, the programme group received higher results for history at the time of the post-test than the control group. For geography, students of the programme group in school A showed a smaller decline in results than the control group at wave 2. For the motivation variables, there were some small, but not significant, effects where students of the programme group reported more boredom, but also more feeling involved and fewer feelings of a-motivation, compared to the control group. As language skills develop over years (Hof, 2013; Heppt, Haag, Böhme, & Stanat, 2014), it is possible that there was an effect of academic language learned in the programme but that this was not (yet) generalised to school courses and extracurricular tests.

In summary, this Erasmus+ project is innovative because of its target group that is underrepresented in many Gifted-and-Talented programmes. This project was able to uncover hidden cognitive talent using a non-verbal extracurricular

reasoning test. Due to this project, teachers, staff, pupils, and their parents know where to find and how to make use of materials that help pupils with low ESCS improve their command of Dutch Academic Vocabulary. There was no overall evidence for an increase in learning outcomes or changes in the extracurricular tests due to the developed academic language programme. However, because of the large differences between schools, the changes in the language programme between the two waves, and the challenges due to the COVID-19 pandemic it was impossible to do analyses on larger groups of students. Small (interaction) effects give some indication of the effectiveness of the programme on more feelings of involvement at school, fewer feelings of a-motivation, and the school results of some theoretical courses, such as geography and history. In contrast, participation in the programme also seemed to be related to more feelings of boredom. Future research, with larger amounts of students and pre-and post-tests in the language programme, is needed to draw more correct conclusions. From a broad perspective, the final goal of this and future projects is that the influence of socioeconomic status on talent development, school results and school success can diminish. This fundamental change can ultimately lead to a more diverse and equal society.

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<sup>2</sup> <http://www.realproject.org.uk/>

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