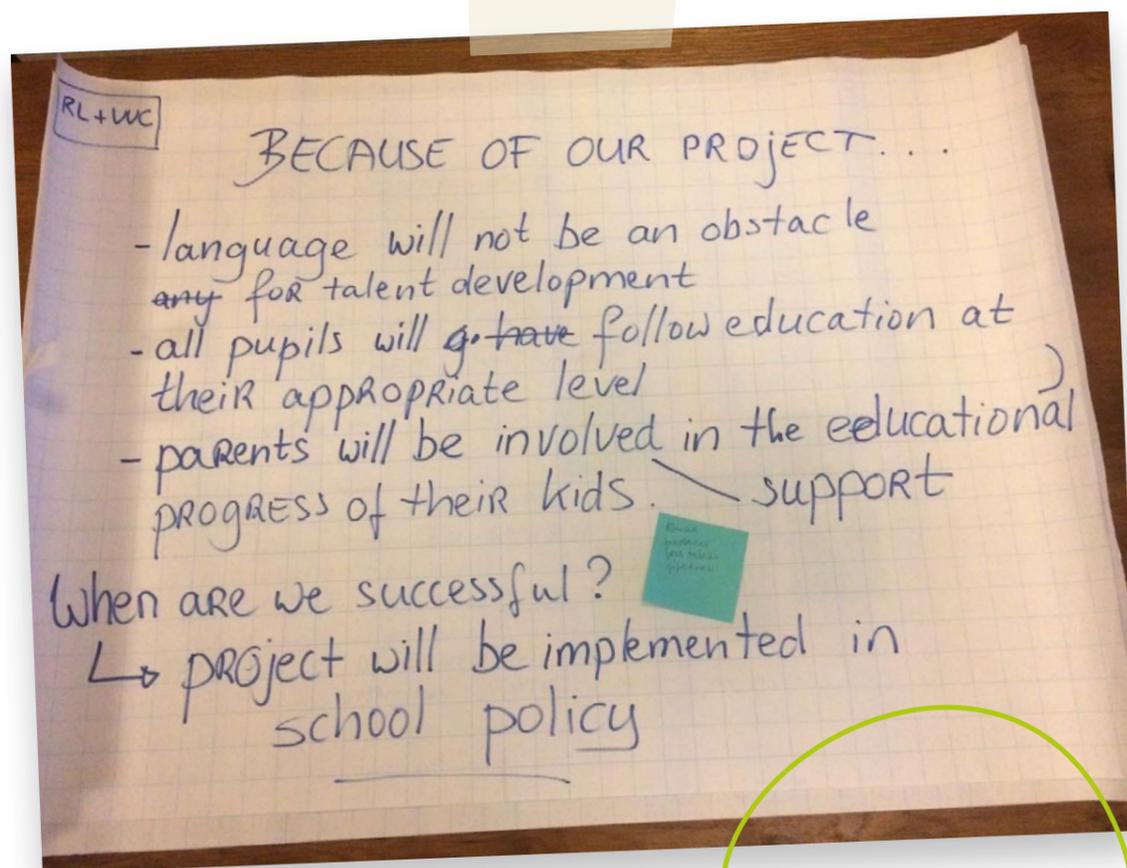


MANUAL.

INTRODUCTION

Students from a less advantaged background, such as those with a low socioeconomic status or a native language other than Dutch, do not always fulfil their potential in terms of academic success. The project 'Creating Equal Opportunities at School: Empowering students from less-advantaged backgrounds through teaching academic language', co-funded by Erasmus+, contributes to bridging the gap between these students' current academic success and their cognitive talent by means of teaching Dutch academic language.

In this manual we share our experiences with setting up and carrying out a project such as ours. All through our process we have been so fortunate to be inspired and advised by Ian Warwick of London Gifted & Talented, who set up the REAL¹ project in the UK. Because of this good practice we didn't have to invent new wheels, but we could build on available knowledge and expertise. We would like to give you a similar head start by using this manual in your process to creating equal opportunities at your school(s).



1. WHY

Inequality in education is a problem in many countries. Prosperous countries like the Netherlands and Belgium belong to the 10 countries in the world where socioeconomic status has the largest impact on school success². Socioeconomic status is the position people have in society. Examples of indicators that are used to measure socioeconomic status are: the language spoken at home and the income, professional status and educational level of their parents³. Inequality in opportunities means that background and socioeconomic status, instead of cognitive or academic abilities, can determine academic success⁴ to the detriment of the learner. Language seems to play an important role in this⁵.

It is essential that schools, students and parents become aware of this problem. It is also important that they should know where to find and how to make use of the learning materials that are available to teach students 'school language', also called academic language. Many students have an apparent fluency in a language but this masks severe gaps in their actual vocabulary. The project 'Creating equal opportunities at school: Empowering students from less-advantaged backgrounds through

teaching academic language', co-funded by Erasmus+, offers a solution. The purpose of this project is to improve the academic language skills of cognitively talented students from less advantaged backgrounds. It aims to increase the chance that these students' academic success is in line with their potential because language is no longer a barrier, leading to a growth in their motivation and self-confidence.

Our mission statement:

This project will uncover and develop unseen cognitive talents of students from disadvantaged social groups by improving their academic linguistic strategies.

From a broad perspective, the end goal should be that the influence of socioeconomic status on talent development, school results and school success will diminish. This fundamental change could ultimately lead to a more diverse and equal society.

- 2 UNICEF Office of Research (2017). Building the future: Children and the sustainable development goals in rich countries. Opgehaald van https://www.unicef-irc.org/publications/pdf/RC14_eng.pdf
- 3 Inspectie van het Onderwijs (2016). De staat van het onderwijs [Onderwijsverslag 2014/2015]. Opgehaald van <https://www.onderwijsinspectie.nl/documenten/publicaties/2016/04/13/staat-van-het-onderwijs-2014-2015>
- 4 Onderwijs in Cijfers (2018). Eindexamens voortgezet onderwijs 2016/2017. Opgehaald van <https://www.onderwijsincijfers.nl/keng-etallen/vo/leerlingen-vo/prestaties-eindexamens>
- 5 Cameron, L. (2002). Measuring vocabulary size in English as an additional language. *Language Teaching Research* 6,2 (2002); pp. 145–173.

2. HOW

A team was formed of various schools and experts from the Netherlands, Belgium and the United Kingdom, working together in this project, benefitting from each other's experience and expertise. The schools, Rijswijks Lyceum / Van Vredenburg College and Zuider Gymnasium in the Netherlands, and Lucerna College and Stedelijk Lyceum Pestalozzi in Belgium, are experts on working with a very diverse population. LondonG&T advised and inspired us with their REAL project, aimed at learners of English as foreign language as well as native born students for whom 'academic' English is essentially also a foreign language. The Centre of Psychological Assessment of the Thomas More University of Applied Sciences developed a digital intelligence test that is less culturally biased and therefore suitable for our target group. The Radboud University has expertise on giftedness and Bureau Talent is expert on giftedness in secondary education.

As a team, we formulated two questions:

1. How can we identify gifted students from disadvantaged backgrounds?
2. How can we improve their language skills in order to improve their opportunities for success in higher education levels?



3. WHAT

1. How can we identify gifted students from disadvantaged backgrounds?

The first step in the Erasmus+ project is to select cognitively talented students from less-advantaged backgrounds through a culturally less biased test. Per school the 20% best scoring students on a test for cognitive abilities, from a disadvantaged background, were identified.

Our project used the CoVaT-3⁶, a test for cognitive abilities that is based on the Cattell-Horn-Carroll model of intelligence. This test is a digital test that can be administered as a group screening and consists of verbal and non-verbal subtests. The two non-verbal reasoning subtests were used to select the cognitively most able students. The two verbal subtests for crystallised intelligence were used to measure progress in language abilities.

The disadvantaged background was assessed based on ESCS measures. When at least one of the following was true for a student, they were identified with a lower ESCS: (1) home language other than Dutch, (2) when the student or at least one of his/her parents were born in a foreign country, (3) low maternal education level and/of low paternal occupational level.

There were two cohorts: the first one from November 2019 until March 2020; the second one from March until July 2021.

2. How can we improve their language skills in order to improve their opportunities for success in higher education levels?

The selected students were randomly assigned in an intervention and control group. The students of the intervention group were invited to participate in the programme, consisting of an online programme to help them learn academic Dutch and small-group learning sessions with a teacher. Students of the control group received an alternative program or were put on the waiting list and were invited to complete the program the following year.

Teachers and experts have worked together to compile a list of academic words, based on previously developed lists^{7,8}, amongst others an academic wordlist developed for newcomers in the Netherlands or Belgium who want to study at a university.

The online programme allows students to study and use the words on their own. The small-group learning sessions with the teacher are aimed at discussing and using the words. Playing with the new words and looking for the words in new contexts are also part of these lessons. The aim of the programme is that students will be able to recognize and use academic language in formal school settings as well as in their everyday lives so that a lack of language skills no longer forms a barrier when it comes to academic success.

In the next part of this manual you will find many of the documents that we developed during the project. Please use them and adapt them to the situation in your country, your language area and your school(s). Obviously, we are willing to help and advise you!

Birgit Broekhoven, *Rijswijks Lyceum / Van Vredenburg College, Rijswijks, the Netherlands*

Daphne Gemballa, *Lucerna College, Anderlecht, Belgium*

Michael Vermeer, *Zuider Gymnasium, Rotterdam, the Netherlands*

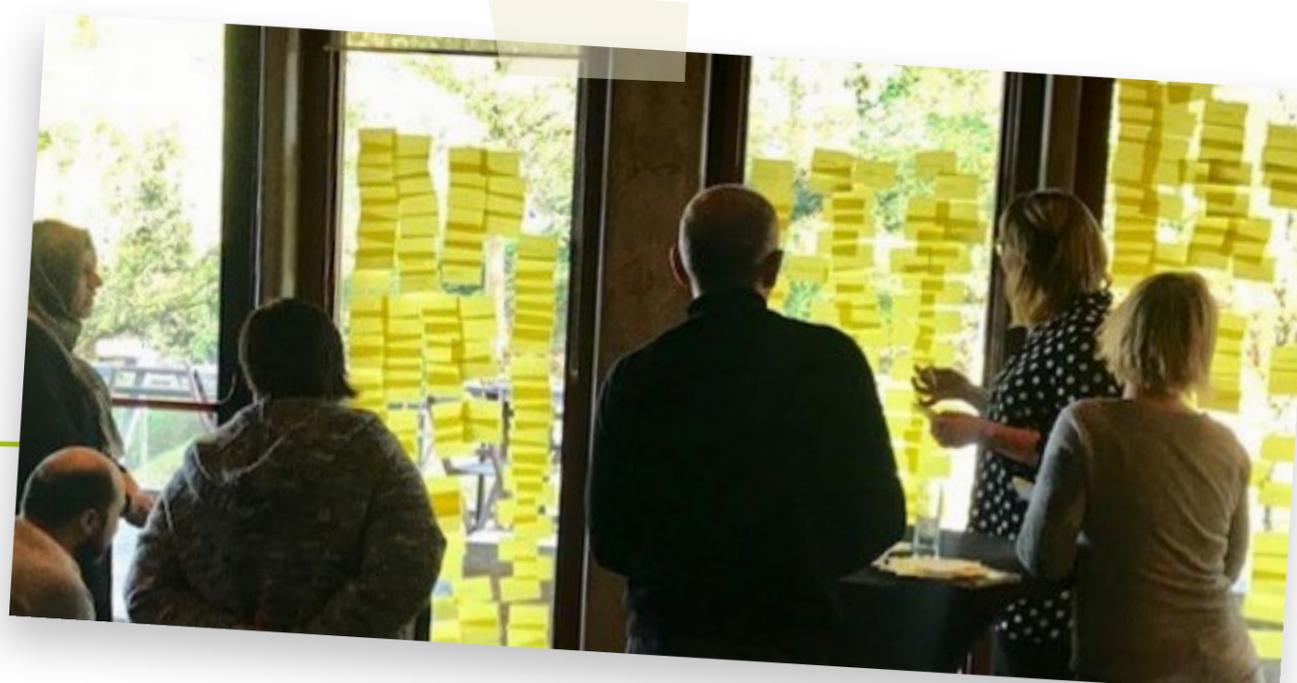
Annick Liesenborghs, *Stedelijk Lyceum Pestalozzi, Antwerpen, Belgium*

Marlies Tierens, *PDC Thomas More, Antwerpen, Belgium*

Ian Warwick, *London Gifted & Talented, London, United Kingdom*

Lianne Hoogeveen, *Radboud University, Nijmegen, the Netherlands*

Lineke van Tricht, *Bureau Talent, Leiden, the Netherlands*



6 Magez, W., Van Parijs, K., Joris, S. & Tierens, M. (in preparation). COVAT-3: digitale cognitieve vaardigheidstest. Antwerpen: Psychodiagnostisch Centrum Thomas More & CAP vzw.
7 Giezenaar, G., e.a. (2017). Wijze woorden. Woordenlijst Academisch Nederlands met idioom oefeningen. Intertaal.
8 Reints, M., & P. Merckx (2017). Examenbundel 2017/2018 vwo Nederlands. ThiemeMeulenhoff.

APPENDICES

I. Preparation

II. Planning & Organisation

- a. Overall
- b. At schools
- c. At the research institute

III. Lesson programme

IV. Research programme

I. PREPARATION

In the preparation of our project several steps were taken, starting with a small group of partners who felt the urgency of tackling the issues experienced in secondary schools. Below you will read all steps we took, up until the first intervention.

Prior to the steps described below, partners were found and the Erasmus+ application was done. In the preparation of the Erasmus+ application we used the impact tool, based on Theory of Change and provided by our National Agency. The impact tool systematically works from the intended impact back to outcomes, output, activities and input. We worked through this tool with a small workgroup that represented the partners in the project. The steps of preparation described below start after the application was approved by Erasmus+.

i. Preparation of the programme

- Literature research on Dutch academic wordlist
- Developing the programme of the kick-off and teachers' days
- Developing the lesson programme
- Piloting the first lessons
- Improving the lesson programme
- Building the online tool
- After the first intervention: improving the lesson programme, based on research results and teachers' and students' experiences.

ii. Preparation of the research

- Literature research on selecting gifted students from a disadvantaged background
- Selection of the measures:
 - Criteria of ESCS
 - Non-verbal tests from COVAT-3 to select the cognitive potential
 - Verbal test from COVAT-3 for pre- and posttests
 - Motivation questionnaire
 - School results for pre- and posttests
 - Writing informed consent letter for parents and students
 - Writing an application to the Social and Societal Ethics Committee and getting approval
 - Planning of pre-tests at the schools to identifying cognitive talents in students with approval to participate (by their parents)
 - Doing the cognitive tests and gathering information from parents (approval, ESCS) and schools (school results)
- Selection of cognitive talent with lower ESCS per school
- Randomly assigning the cognitive talent to an intervention and control group
- Planning the post-test at the school for the intervention and control group
- Doing the cognitive tests and gathering information from schools (school results)
- Analyses
- Writing a research rapport and presenting results

II. PLANNING & ORGANISATION

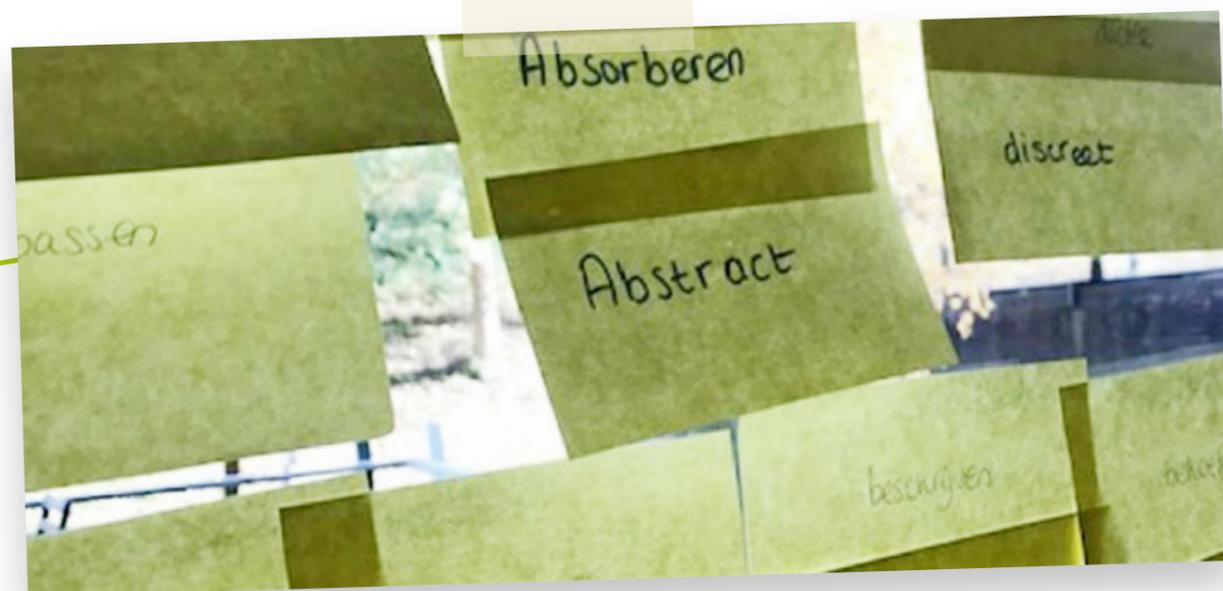
All through the project we used a planning & organisation document which was the overall guideline of activities. Obviously, it had to be adjusted over time, especially as covid-19 caused difficulties in carrying out all activities. Apart from the overall planning and organisation, the schools and researchers had their own planning and organisation. Our planning & organisation documents can be found below.

a. Overall

Erasmus+ Project

Creating equal opportunities at school: empowering talented pupils from less-advantaged backgrounds through teaching academic language

TPM = transnational project meeting	
PMI = project management and implementation (i.e. planning, local project activities, promotion, dissemination, writing reports)	
IO = intellectual output (developing materials, curriculum, tools, web-site/app)	
ME = Multiplier Event	
LTT = Learning Teacher Training	
Project team	Lineke van Tricht (projectleader, Bureau Talent), Ian Warwick (LondonGT), Lianne Hoogeveen (Radboud University), Marlies Tierens (PDC Thomas More), Birgit Broekhoven (Rijswijks), Michael Vermeer (Zuider Gymnasium), Daphne Gemballa (Lucerna), Annick Liesenborghs (Pestalozzi)
Research team	Marlies Tierens, Birgit Broekhoven, Lianne Hoogeveen



Activity	Date	Place	Funds	Information	Who
Projectteam meeting	September 2018 6 hours Friday 28th	Leiden	TPM	Agree on tasks, responsibilities, programs; prepare kick-off meeting	Projectleader + 1 representative per partner
Kick-off meeting with teachers	November 2018	Nijmegen	LTT	Introduction Lianne Hoogeveen: why don't we find the talents among these special groups?	Projectleader + three teachers per school + projectteam
AND	See Programme Kick-off days				
Workshop Days for teachers				Introduction Ian Warwick: the REAL project.	
20 hours per teacher				Two days in which the teachers work on the AWL for 11/12 year-olds.	
Collecting and creating materials to work with ac. words	November 2018 - February 2019 38 days		IO	Bureau Talent	
Draft material to teachers	Before Christmas holidays			Bureau Talent	
Preparation of research	January 2019 1 day	Antwerpen	PMI	The research group makes a research plan.	Research team
Try-out by teachers	January – March				Participating teachers
Development of the app/site	November – April 2019	Netherlands	Exceptional costs	With the input of the teachers and Bureau Talent the website builders start building.	WebEdu
Introducing teachers to work with the app/site	23 May 2019 3 hours	Rijswijks Lyceum	LTT	The app/website builders collect feedback and build the final version.	Projectleader, teachers, Bureau Talent, WebEdu
Projectteam meeting	Friday 7th June 2019 6 hours	Brussels	TPM	Evaluation of the project so far; preparation of Intervention #1	Projectleader + 1 representative per partner
Teacher, parent, student meeting	June - September 2019 1 – 2 hours	At each school	PMI	Informing teachers, parents and students about the project. Asking for permission to participate; filling out parents' questionnaires.	contactperson at school
Identification	September 2019 0,5 day	At each school	PMI	Non-verbal intelligence test + achievement test + school results. The top 10% - 20% of students is invited to join the intervention.	COVAT representatives Contactperson at school Information to projectleader
Intervention I	October 2019 – February 2020 12 weeks; 2 meetings weekly of 25 minutes	At each school	PMI	Invite students + information (why are you invited to join?); students are guided in the process by teachers.	Bureau Talent provides teachers with programme; contactperson per school keeps in touch with BT.
Evaluation	March/April 2020 3 hours	At each school	PMI	Achievement test + school results.	Contactperson with teachers at school; information to research team and projectleader
Projectteam meeting	7 May 2020 6 hours 2 hours online	Rotterdam MS Teams	TPM	Presenting results intervention I; Evaluation intervention I; preparation intervention II; preparation Teachers Days	Projectleader + 1 representative per partner

Activity	Date	Place	Funds	Information	Who
Projectteam meeting	8 October 2020 4 hours online	Rotterdam MS Teams	TPM	Presenting results intervention I; Evaluation intervention I; preparation intervention II; preparation Teachers Days	Projectleader + 1 representative per partner
Teacher, parent, student meeting	June - September 2019 1 – 2 hours	At each school	PMI	Informing teachers, parents and students about the project. Asking for permission to participate; filling out parents' questionnaires.	Contactperson at school
Teachers' Days &	16, 17, 18 November 2020 3 days		LTT	Presentation of results intervention I; exchanging experiences; visiting schools; formulating improvements; preparing intervention II; preparing presentations.	Projectleader + teachers + research team.
Regional Exchange	2 hours + 4 hours preparation by contactperson	Rijswijk, Brussels	ME	Presenting results of the project to other schools.	Contactperson per school + teachers (+parents and students).
Identification + post-test invention I	September 2020 0,5 day	At each school	PMI	Non-verbal intelligence test + achievement test + school results. The top 10% - 20% of students is invited to join the intervention.	COVAT representatives Contactperson at school Information to projectleader
Intervention II	October 2020 – February 2021 March – June 2021 12 weeks; 1 meeting weekly of 40-50 minutes	At each school	PMI	Invite students + information (why are you invited to join?); students are guided in the process by teachers	Bureau Talent provides teachers with programme; contactperson per school keeps in touch with BT.
Projectteam meeting	January March 2021 6 hours	Antwerp Online	TPM	Preparing symposium	Projectleader + 1 representative per partner.
Evaluation	March/April June 2021 3 hours	At each school	PMI	Achievement test + school results.	Contactperson with teachers at school; information to research team and projectleader.
Finishing research; analysing results; writing report	May June/July/August 2021 20 hours per person	Netherlands	PMI	Research team with students	Research team
Writing the manual	May June/July/August 2021 2 days	Netherlands	IO	Projectleader with input project team	
Final Event; dissemination symposium	June September 2021 1 day	Antwerpen	ME	All partners + visitors	

b. At schools

The schools appointed a CEOS coordinator in the school as a liaison person with the project coordinator and the research group. The following tasks were done by the CEOS coordinator.

First and foremost activity for schools was to inform students and parents in order to have them participate in the project. Schools were provided with a presentation that could be used in a parents meeting at school. A letter with information about the project and a form of informed consent was provided by the research team.

The second organisational task for schools was the pre- and post-test for two cohorts of students. Also, the schools had to follow up on students results for the research group and for internal use.

Thirdly, teachers had to be selected to do the language programme with the students. Lesson timetables had to be taken care of and classrooms with computers had to be organised. In order to have colleagues and parents involved, schools also had to take care of communication.

c. At the research institute

The Centre for Psychological Assessment (Thomas More University of Applied Sciences) Thomas More in Antwerp was the research institute to carry out the pre- and posttest. The university first selected the measures and tests of cognitive abilities from the COVAT-3 used in the pre- and post-tests, and wrote an informed consent tighter with the schools.

Next, researchers filled out an application and got approval from an Ethics Committee.

The pre- and post-test were planned together with the schools and researchers collected data at the schools. When restrictions for COVID-19 prevented the researchers (from Belgium) to go to schools in the Netherlands, they educated professionals from the Netherlands to use the COVAT-3 so they could collect the data at the schools. The researchers also monitored collecting information from the parents (ESCS) or schools (school results).

Fourth, the researchers identified and selected the cognitive talented students with low SES and divided them in an intervention and control group (per school).

Finally, they were responsible for all analyses, the research report and presentation of the results.

III. LESSON PROGRAMME

Framework CEOS programme 2021

What do students need:

notebook, pen, log in data EduCourse

Basic outline of the lessons:

- One lesson of 40 – 50 minutes per week.
- Start the first lesson with a pre-test: the students mark words on the wordlist that they already know. They do this individually. The teachers collect the wordlists. Do this again in the last lesson as a post-test.
- The ending of every lesson: which new words have you learned? Write them in your notebook with the meaning, definition, a sentence, image.
- Every lesson the students get a week assignment. This assignment is aimed at using and remembering the new words. The next lesson, the teacher takes 10 – 15 minutes to discuss the week assignment. After that, students work on the online exercises.
- Every uneven week, the lessons is about newly learned words in their textbooks. This lesson can also be linked to tests students have to make / have made.

- Every even week, the lesson is about societal context: the news, school TV, newspaper article, formal/informal language, literature, the academic world...
- After 8 lessons, discuss the progress the students are making and ask them their opinion about how things are going.

Examples of Week Assignments:

- Choose 3 words you have learned and count all the times you see, hear or use these words.
- Choose 3 words and draw an image to help you remember the meaning of the words.
- Choose 3 words and use them at least once in an answer (in a lesson, an assignment, a test or at home with your family 😊).
- Make a poem with the words you have learned this week.
- Teach someone in your environment three words from the list (brother, sister, parent, ...)
- Make a top 3 of the most beautiful words you have learned. Make a sentence with them and translate the words in three other languages.
- Make a puzzle with the words of this week. Exchange with a classmate.
- Make an information clip in which you use all the words of this week.

IV. RESEARCH PROGRAMME

ESCS (only pre-test, gather from parents)

- Students home language
- Birth country from student and (both) parent(s)
- Education & occupation level mother and father

Cognitive abilities (pre- and posttest, at schools, supervised by researchers)

In the project, the digital version of the COVAT-series is used, which is based on the Cattell-Horn-Carroll model (CHC model) of intelligence. This test is validated in children and adolescents from 9 years 6 months to 19 years 11 months. To get a good insight into the cognitive profiles of the pupils, several cognitive abilities will be assessed.

- Fluid intelligence (Gf, non-verbal):
 - **Point Series** (PuntR, Puntreeksen)
 - **Symbol Reasoning** (SymR, Symbol Redeneren)
- Crystallized intelligence (Gc, verbal)
 - **What doesn't belong?** (Schift, Schiftingen)
 - **Opposites** (Teg, Tegenstellingen)

Motivation Questionnaire (pre- and posttest, at schools, supervised by researchers)

Questionnaires adapted for and used in the TALENT-project (www.projecttalent.be). To get an insight in the motivation, study engagement and study flow of the participating students and to investigate the effect of the program on the motivational and emotional functioning of these students, some of the questionnaires from the TALENT-project on cognitive talent in Flanders were used:

- **Motivation:** translation of “Academic Self-Regulation Questionnaire” (SRQ-A; Ryan & Connel, 1989)
- **Amotivation:** translation “Academic Amotivation Scale” (Legault, Green-Demers, Pelletier, 2006) supplemented with 4 items from “Verzet bij jongeren” (Aelterman; Vansteenkiste, Soenens, Haerens, 2016)
- **Engagement with learning:** translation “Engagement Versus Disaffection With Learning: Student-Report” (Skinner, Furrer, Marchand, Kindermann, 2008)
- **Flow & burnout:** translation “School Engagement Inventory” (Salmela-Aro & Upadaya, 2012) & “School-Burnout Inventory” (Salmela-Aro, Kiuru, Leskinen & Nurmi, 2009; translated by LOWA)

The questions were adapted, simplified, for the second year because they were too difficult formulated.

School Results (pre- and post-test, collected by the schools)

Results of following courses were assessed:

- Dutch
- Math
- History
- Geography
- Art

