First longitudinal results of the "ALPHA – zesumme wuessen" pilot project 2026:

Key findings at a glance

Context

The student population in Luxembourg is characterized by a high linguistic diversity with close to 60 % of primary school students speaking another language at home than Luxembourgish and/or German. Considering that Luxembourgish is the main instruction and communication language in preschool and that German becomes the language of literacy acquisition in primary school (C2.1, grade 1), this means that a high share of students is learning to read and write in a language other than their home language.

National and international research, such as ÉpStan and PISA, have repeatedly shown that students speaking another language than Luxembourgish/German at home are at a higher risk of struggling academically in Luxembourg's education system than their peers speaking the instruction language at home. These inequalities can be explained, at least in part, by the demands of the national trilingual curriculum, which requires students to progressively master several languages from the beginning of their schooling.

To better meet the needs of such a linguistically diverse student population and to counter existing educational inequalities, the Luxembourgish government has broadened the language offer in the education system by introducing European Public Schools, in which students can chose their main instruction language between English, French and German, as well as by launching the pilot project "*ALPHA – zesumme wuessen*" in four pilot schools, allowing students in C2.1 to learn to read and write in either French or German.

This approach is in line with international research findings showing that students have more equal learning opportunities when learning to read and write in a language that corresponds or is at least linguistically closer to their home language (e.g., French or Portuguese speaking children learning to read and write in French). In research, this is considered the facilitation hypothesis.

Scientific evaluation of the pilot project "*ALPHA – zesumme wuessen*" and methodology

Via a stepwise integration into the ÉpStan, students participating in the "*ALPHA – zesumme wuessen*" pilot project (as well as those attending European Public schools) are assessed within the national monitoring, allowing to provide timely information on important academic outcomes, such as their academic achievement and their motivation to learn, in comparison to students of the same cohort following the regular Luxembourgish curriculum. By relying on encompassing full-cohort data, the ÉpStan thereby allow to scientifically evaluate the impact of the pilot project.

The "*Épreuves Standardisées*" (ÉpStan, epstan.lu) consist of standardized achievement tests in educational key domains (e.g., mathematics, listening, and reading comprehension), and of student and parent questionnaires, that are administered every autumn in C2.1, C3.1 and C4.1 (primary education) as well as in 7e and 5e (secondary education).

Their main purpose is to evaluate whether students have met the education standards of the previous learning cycle as defined by the Ministry of Education, Children and Youth in the Plan d'Études.

Whereas the first ALPHA report published in 2024 had focused on the first full cohort of students that had started their primary education in the scope of the ALPHA pilot project in C2.1 in 2023/24 (see Colling et al., 2024), the present report was able to follow these students into C3.1, where they were assessed for a second time within the ÉpStan in the school year 2025/26.

	Preprimary		Primary						Lower secondary		
	C1.1	C1.2	**C2.1**	C2.2	**C3.1**	C3.2	**C.4.1**	C.4.2	**7e**	6e	**5e**
School Monitoring			EPSTAN		EPSTAN		EPSTAN		EPSTAN		EPSTAN
First ALPHA cohort			**23/24** 	→	**25/26** 		27/28		29/30		31/32

Comparison groups

Considering that both ALPHA-French students (learning to read and write in French) and ALPHA-German students (learning to read and write in German) differ from the student population at the national level with regard to important background characteristics, such as a lower socio-economic status (SES; see *Table A.3 in the Appendix*) in C2.1, the statistical approach of propensity score matching was used to create respective statistical reference groups for both ALPHA-French students (ALPHA-French reference group) and ALPHA-German students (ALPHA-German reference group).

These reference groups consist of 5 so-called statistical twins for each student participating in ALPHA and they thus consist of students that are more comparable to the ALPHA-French and ALPHA-German students in their individual background characteristics (e.g., gender, SES, language, and migration background) than the students at national level, thereby allowing for less biased comparisons.

Sample Description of the Longitudinal ÉpStan Cohort followed from 2023/24 to 2025/26

					Language background[8]		
	N	HISEI (M/SD)	% female	% natives	% Lux/German	% French	% Portuguese
"ALPHA - zesumme wuessen"							
ALPHA-French group	37	42 (17)	51 %	14 %	16 %	27 %	43 %
ALPHA-German group	46	46 (17)	46 %	46 %	52 %	13 %	24 %
Regular curriculum							
ALPHA-French reference group	172	46 (18)	57 %	16 %	21 %	28 %	45 %
ALPHA-German reference group	257	45 (16)	46 %	45 %	47 %	10 %	21 %
National level	4769	53 (16)	49 %	44 %	46 %	21 %	19 %

Note. *N* = Number of students. HISEI = Highest international Socio-Economic Index of Occupational Status. In addition to the HISEI mean (*M*), the standard deviation (SD) is indicated in brackets.

These same groups were followed over time and the ÉpStan data collected in autumn 2025/26 thus allows for a first time to longitudinally analyze how the students participating in the pilot project (ALPHA-French and ALPHA-German students) compare to students with comparable background characteristics (ALPHA-French and ALPHA-German reference groups) as well as to the full C3.1 cohort of students at the national level in academic achievement, motivation and wellbeing, as well as parental support.

Central findings in C3.1 and interpretation

Students were tested in mathematics, as well as in listening and reading comprehension in their respective language of literacy acquisition as summarized in the following overview. The flags indicate the test language.

Groups	Mathematics	Listening Comprehension	Reading Comprehension
ALPHA-French	🇫🇷	🇫🇷	🇫🇷
All other groups	🇩🇪	🇩🇪	🇩🇪

On average, students in C3.1 showed comparable **academic achievement** results in mathematics as well as in listening and reading comprehension, and this irrespective of their language of literacy acquisition. The assumption that learning to read and write in a language that is linguistically closer to the students' home language background facilitates their literacy development is thus currently not reflected in the ÉpStan data as ALPHA-French students (learning to read and write in French) showed comparable achievement levels in listening and reading comprehension compared to their reference group consisting of peers with comparable background characteristics (learning to read and write in German).

Regarding the other student outcomes, **academic motivation** was generally high across all groups. Whereas ALPHA-German students expressed a higher motivation in mathematics compared to all the other groups, ALPHA-French students reported a higher motivation to learn in their language of literacy acquisition. Although **parental support** was also generally high across all groups, ALPHA-French parents reported a higher perceived capacity to support their child academically (e.g., in language learning) compared to parents from the ALPHA-French reference group based on their own language skills in their child's language of literacy acquisition.

Possible explanation and methodological limitations

Despite international research showing that learning to read and write in a language linguistically closer to the students' home language background facilitates literacy development, this anticipated advantage is currently not reflected in the C3.1 ÉpStan data.

One potential explanation for the current findings might lie in the fact that students are learning to read and write in different orthographic systems (French for ALPHA-French students compared to German for the other four groups). In this context, research indicates that literacy development in opaque languages, such

as French (e.g., more inconsistent letter-sound correspondences), requires students to face higher decoding demands, than literacy development in transparent languages such as German. Learning to read and write in an opaque language (i.e., French) might impact the pace and visibility of the language learning progress and a potential advantage for the ALPHA-French students compared to their reference group (i.e., learning to read and write in German, a transparent language) might therefore only become observable at later stages of their educational careers (e.g., C4.1).

Another potential explanation might lie in the roles that the pilot project is allocating to the different languages of the national education system. Whereas students in ALPHA are split into respective language of literacy acquisition groups for language subjects and mathematics (depending on the respective school's decision), the so-called side subjects (e.g., science, art, sports) are taught orally in Luxembourgish with written materials and visual supports provided in the students' respective language of literacy acquisition. Both ALPHA-French and ALPHA-German students are thus less exposed to their respective language of literacy acquisition than, for example, EPS students, which are exposed to one main language across all subjects, and for which positive results in mathematics (in all assessed grades) as well as in their language of literacy acquisition were observed in P1/C2.1 compared to their peers learning in a language more distant to their home language (see Colling et al., 2025).

Although these findings offer important indications on key educational outcomes of students, who are taking part in the pilot project, they have to be interpreted with caution due to the very limited cohort size (i.e., N = 37 ALPHA-French and N = 46 ALPHA-German students) and the resulting methodological limitations (e.g., French language tests cannot be scaled, test comparability).

Conclusion and Outlook

Taken together, the currently available ÉpStan data does not provide any indication of systematic performance differences in favour of students learning to read and write in a language linguistically closer to their home language background. Additionally, it should be noted that the present report does not allow to draw conclusions about how the results found in the specific context of the pilot project (e.g., student composition in the four pilot schools, which differs considerably from students at the national level) would generalize to the national education system in the scope of a nationwide implementation of the pilot project.

From a scientific perspective, encompassing further cross-sectional as well as longitudinal research with bigger and more representative samples is needed before being able to draw sound conclusions on the potential impact of the pilot project on students' academic development. In this context, the continuous monitoring in the ÉpStan (e.g., C4.1) in combination with more fine-grained tests and research designs (e.g., assessing reading skills at more frequent time points in individual settings) would provide essential additional insights on the effectiveness of the pilot project in Luxembourg's unique trilingual educational system.

While the LUCET considers the broadening of the language offer in Luxembourg's school system a valuable approach, the current findings suggest that key aspects of its implementation warrant further evaluation. This includes factors such as students' exposure to the language of instruction, class composition, and the pedagogical approaches used, all of which may affect learning outcomes.