CLILNetLE

DIGITAL PRACTICES IN AND OUT OF THE CLIL CLASSROOM: A PILOT STUDY IN ALBANIA

A Report by CLILNetLE Working Group 4

Katharina GHAMARIAN, Merita HOXHA, Ute SMIT, and Ekaterina STRATI

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Katharina GHAMARIAN, University College of Christian Churches of Teacher Education Vienna
Merita HOXHA, Aleksandër Xhuvani University
Ute SMIT, University of Vienna
Ekaterina STRATI, Aleksandër Moisiu University

NOTE. This report presents results and insights from the piloting phase, collected as part of two pan-European surveys administered by WG4 of the COST Action CLILNetLE. For the main report see *Digital Practices in and out of the CLIL Classroom: A pan-European survey of students and teachers*.

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DLSS & DLTS piloting report

1.Introduction

The Disciplinary Literacies Student Survey (DLSS) and the Disciplinary Literacies Teacher Survey (DLTS) were developed jointly by members of WG4 from March to September 2023 under the lead of Ute Smit and Craig Neville. During this process, several Virtual Mobility Grants (VMGs) and Short-Term Scientific Missions (STSMs) were undertaken as part of this COST Action to provide capacity to complete more substantial elements of the tasks:

- STSM1: Compilation of a literature review (Ekaterina Strati)
- VMG1: Training in the use of Qualtrics and formulation of questionnaire items in the platform (Craig Neville)
- VMG2: Cleaning, adapting and some initial trialling of questionnaire instruments in Qualtrics (Mari Carmen Sanchez)
- VMG3: Piloting of the questionnaires (Merita Hoxha and Ekaterina Strati) in Albania and the subsequent analysis of the resultant data (Katharina Ghamarian)

The two questionnaires were inspired by several existing questionnaires, such as by the UK report (*Children's use of online activities, risks and safety*, Livingstone, et al., 2012), Navarro-Pablo, et al. (2019), Schwarz (2020), Mohammadi, et al. (2022), and Aranda et al., (2023). Furthermore, when creating survey items, ChatGPT was used to simplify and condense existent categories to make them suitable for the age range and the international scope of the survey.

The DLSS and DLTS pilot surveys were administered in Albania from November 2023 to January 2024 by Ekaterina Strati and Merita Hoxha. Albania was chosen as an appropriate pilot country because the Ministry of Education could grant ethical approval centrally. In other European countries, the process would have been lengthier. While piloting the DLSS and DLTS, the survey administrators consulted the legal framework for data ethics provided by the Ministry of Education and Sports, whose ad hoc Commission allows researchers to collect data in public and private education institutions in Albania. Based on this procedure, the administrators contacted the school principals and administrators, who then discussed it with teachers and parents for consent. The parental/guardian consent form '*Project: COST Action 21114. Your use of technology at home in your CLIL language and how it helps your learning*' was translated into Albanian by the survey administrators and was signed by the parents.

The surveys were translated from English to Albanian in two steps. Qualtrics offered rough automatic translations that required careful checking and revising, which was completed by the survey administrators. The piloting was done in various schools and resulted in 68 responses for the DLTS and more than 138 responses for the DLSS. Additionally, a think-aloud protocol was undertaken with two students to get more feedback on the content of the DLSS instruments. During survey administration, both students and teachers received explanations of the general aims of the surveys. They were also informed about their rights, especially their right to withdraw from the study at any time.

2. Structure of pilot surveys

Informed by the main and sub-research questions for both surveys (see Table 1 below and Chapter 2.2 of Main WG4 Report), the two questionnaires were developed in parallel, with several researchers signing up to develop items for specific sub-research questions. As the crucial notions of 'CLIL teacher', 'CLIL learner', 'CLIL language' and 'bi/multilingual disciplinary literacies' (BMDLs) needed clarification for a pan-European survey, the researcher teams also developed easily understandable explanations that could be included in the flow of the questionnaires. In this context, it soon became clear that the notion of disciplinary literacies would be too abstract and complex for a survey targeting teenagers. Therefore, the DLSS research questions do not feature BMDLs, but instead focus on 'knowledge areas', '(literacy) purposes' and 'potential … for learning'. Correspondingly, the explanatory texts for the DLSS included 'knowledge areas' (Smit & Strati, 2024).

Table 1. Research questions (RQs)

	DLSS	**DLTS**
Main RQ	What kinds of digital practices and/or resources do CLIL learners engage in their CLIL language(s) out of school and in their CLIL lessons?	Which digital tools/resources do teachers use to develop bi/multilingual disciplinary literacies in different subject areas, how frequently do they use them and with which age groups? Why do they choose to use technology in this way?
Sub-RQ	• To what extent do CLIL learners use which digital tools in their CLIL language? • For what knowledge areas do CLIL learners use which digital tools in their CLIL languages? • For what (literacy) purposes do they use digital tools in their CLIL languages? • What challenges do students face when engaging in digital practices in the CLIL languages? • How do students evaluate the potential of their digital practices for learning?	• Who are the CLIL teachers? • Which digital tools/resources do teachers use to develop bi/multilingual disciplinary literacies? • What is the rationale behind using such digital tools and resources to develop bi/multilingual disciplinary literacies, i.e., what value does the digital element add? • Do teachers' practices differ depending on which age group they are using them with? • How do these practices differ between disciplines/subject areas? • What do teachers know about what students do extramurally in terms of technology to support their development of bi/multilingual disciplinary literacies? • What are teachers' beliefs and perceptions of using technology for the development of bi/multilingual disciplinary literacies in CLIL? • What are the perceptions of teachers with regard to the effectiveness of their digital practices in the CLIL classroom? • How do teachers develop critical digital literacy skills in CLIL lessons with their students as an inherent part of any literacy development in the 21st century?

All suggested questionnaire items and explanatory texts were collected online, first in a Word document format and then transferred manually to Qualtrics. As they were thus accessible to all participating researchers, this procedure allowed us to engage in various stages of shared reviewing, resulting in the DLSS and DLTS pilot questionnaires, whose overall structures are included in Table 2.

Table 2. Structures of pilot questionnaires

DLSS	DLTS
A. Informed consent/assent	**A.** Informed consent
B. Personal Information	**B.** Who are CLIL teachers? What are disciplinary literacies?
C. Information about CLIL and non-CLIL classrooms (explanatory texts)	**C.** Demographic Information: tell us about you
D. Use of digital devices	**D.** Demographic Information: tell us about your school
E. Focus on spare time	**E.** Demographic Information: your use of technology
F. Focus on school	**F.** Your digital practices in CLIL lessons
G. Information about school subjects	**G.** Beliefs and perceptions of technology use
H. CLIL subjects in school and digital spare time activities	**H.** Students' technology use outside the classroom
I. CLIL lessons in school	**I.** Critical Digital Literacies
J. Devices in school	
K. Challenges	

Starting with the obligatory section of informed consent/assent (DLSS/A and DLTS/A), both questionnaires included sections providing explanations (DLSS/C+G and DLTS/B) and asking for personal information (DLSS/B+D+I and DLTS/C+D+E) before turning to the actual topics of digital activities in the CLIL languages extramurally (DLSS/E and DLTS/H) and in school (DLSS/F+I and DLTS/F), to then finish with the perceptions and evaluations linked to these (DLSS/H+K and DLTS/G+I).

In view of this structure, it is maybe not totally surprising that one of the main results of the piloting phase was a very high drop-out rate for both surveys. It was, therefore, decided to change the order of some of the sections to improve the likelihood of participants not dropping out early. For instance, some of the demographic information was moved further back in the DLSS to make it potentially more interesting while at the same time not asking for too much personal information directly, as this might dissuade participants from taking the whole survey (Dörnyei, 2009). More information on the impact of the piloting phase on the final questionnaires is provided in Sections 4 and 5 below.

Figure 1A. Screenshot from DLSS/A in Qualtrics Platform showing the questionnaire flow.

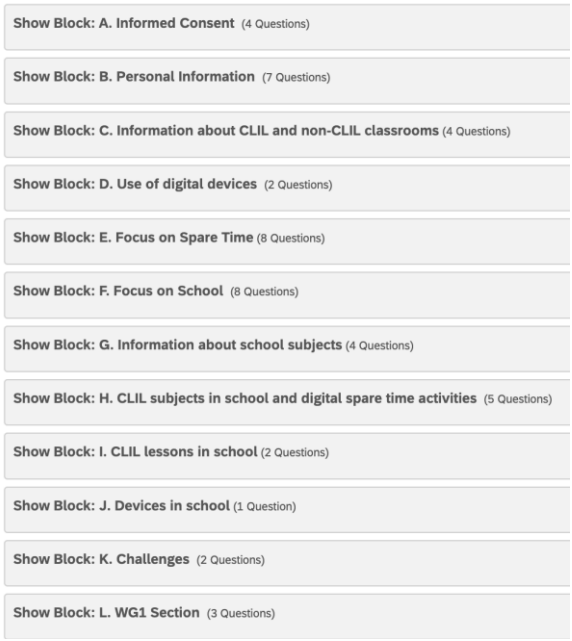
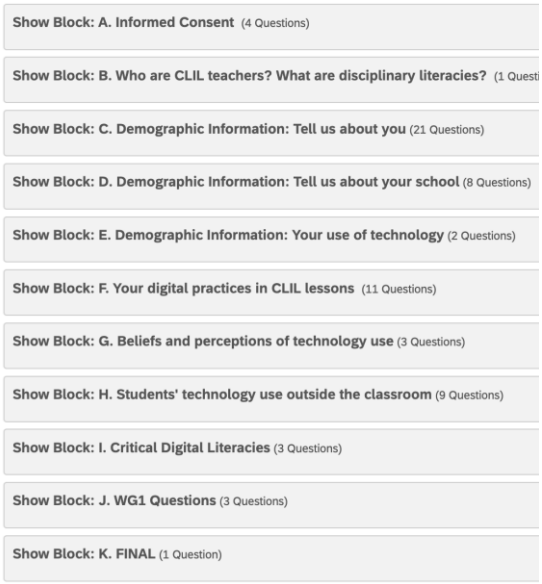


Figure 1B. Screenshot from DLTS/A in Qualtrics Platform showing the questionnaire flow.



3. Albania as piloting setting

CLIL has been established based on various policies and agreements between schools and the Ministry of Education and Sports in Albania. A set of agreements and memoranda was duly established to ensure the effective implementation of bilingual education in institutions of higher secondary education in recent years.

These measures aim to enhance the quality and effectiveness of bilingual education within the pre-university educational system for the academic year 2022-2023, providing students with valuable language skills and cultural exchange opportunities (Order No.22, Ministry of Education and Sports, academic years 2022-2023).

a. Agreement Prot. No. 6045 (dated 13.06.2016) between the Ministry of Education in Albania and the Ministry responsible for International Education of the Republic of France. It focuses on fostering cooperation in bilingual education.

b. Memorandum of Understanding (dated 12.12.2019) between the Ministry of Education and Sports of the Republic of Albania and the Ministry of Foreign Affairs and International Cooperation of the Republic of Italy. It outlines the framework for functioning Albanian-Italian bilingual sections.

c. Memorandum of Cooperation (dated 22.07.2016) between the Ministry of Education, Sports, and Youth of the Republic of Albania and the Federal Embassy of Germany in Tirana. This memorandum pertains to establishing and operating the Albanian-German bilingual section, including the approved teaching plans.

CLIL takes place in Albania in both private and public schools. This piloting study engaged with teachers and students from nine schools in Albania. We calculated our potential pilot population size on our future pan-European questionnaires and then calculated 10% of these estimated populations.

Table 3. Calculated sample sizes.

Estimated Sample Size for full DTLS and DLSS surveys	Sample Population for piloting (10%)
DLSS: 2000 **DLTS:** 400	**DLSS/A:** 200 **DLTS/A:** 40

It was felt that based on the potential CLIL population in Albania of teachers and students that this sample size would be, more or less, achievable. In the end, we recruited 68 teachers and 138 students. So, while we satisfied our teacher quota we did not satisfy that of the students. We believe that this may have been due to the length of the questionnaire instrument illustrated also by the high levels of incompletion. While some participants may have started and left the questionnaire, some may not have started at all given their peers negative experiences.

Additionally, think-aloud protocols were undertaken with two students (one in Elbasan and one in Tirana). The survey-based data were analysed using SPSS and JASP (2023).

4. Exemplary findings

As the main aim of running a pilot of data collection instruments is to indicate whether they have suitable reliability and validity and, hence, measure the constructs they were designed to measure, only results will be represented in the following sections which indicated that some adaptation was necessary for the final formats. This will be followed by a short conclusion, which summarises the main points of change identified throughout the piloting phase.

4.1. Data cleaning

In the process of data cleaning for both surveys a high drop-out rate was identified. In particular the DLSS had a drop-out rate of 53.62 percent with 63 valid questionnaires out of 138 cases while the DLTS had a slightly lower drop-out rate of 30.88 percent with 47 valid questionnaires out of 68 cases. This points to the fact that especially the student questionnaire might have been too long, complex, or monotonous for students of the target age group. Consequently, after the piloting, questions were reduced and combined using different question formats to enhance the variability while taking the questionnaire and making it more appealing for students of different age groups.

Additionally, it was observed that data cleaning was time consuming due to the format of the question items chosen in Qualtrics. This resulted in, for example, a dataset with multiple variables recorded in one cell of the dataset. However, no solution could be found for this issue apart from sharing the workload to separate these variables into separate columns

4.2. Personal background variables

In the piloting, it was attempted to have a similar participant group as aimed for in the main study. However, age groups were not evenly distributed allowing for no insights regarding differences between certain age groups.

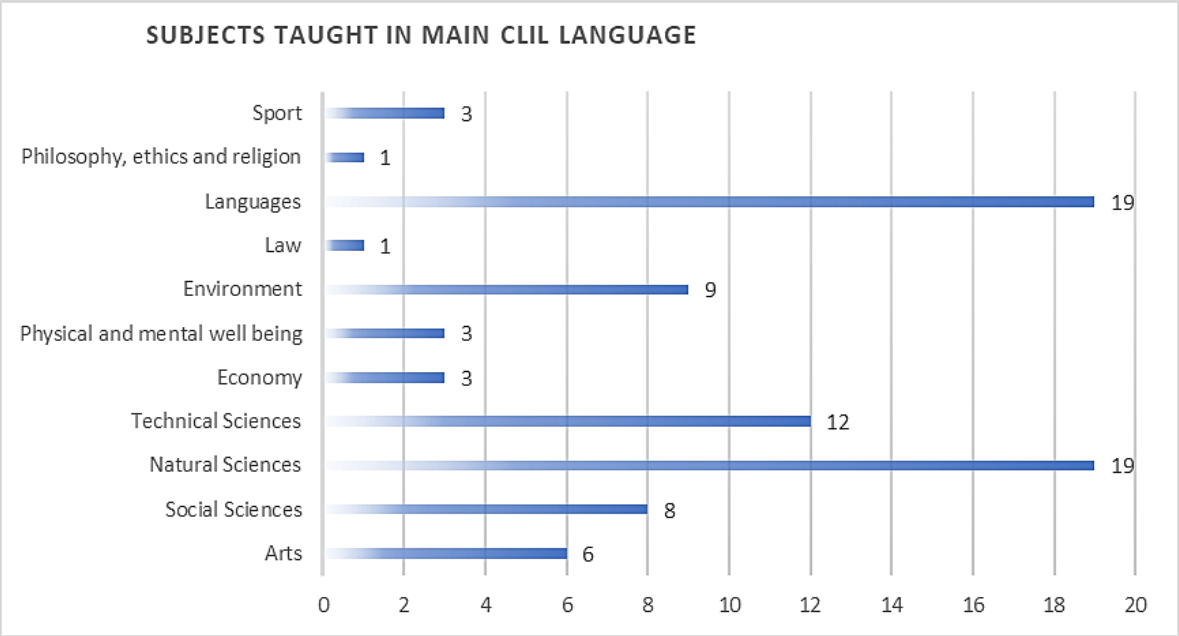
Considering gender, out of 63 valid cases 46 identified as female, 15 as male, two as other, and nobody preferred not to say.

4.3. CLIL subjects

The following results show that students seem to have misunderstood the term CLIL language. Twenty-five students reported that Albanian was their main CLIL language. This was counteracted in the final data collection instruments by adding clearer definitions of 'CLIL language' in very simple words (using mostly high-frequency vocabulary), as well as examples. In addition, teachers or researchers present during data collection were advised to watch a video with the students explaining the concept of CLIL to them. Furthermore, it was suggested that a researcher should be present during data collection to answer open questions.

Q3.3 Main CLIL language	Frequency	Percent	Valid Percent	Cumulative Percent
Albanian	25	39.683	40.323	40.323
English	15	23.810	24.194	64.516
French	2	3.175	3.226	67.742
German	15	23.810	24.194	91.935
Italian	3	4.762	4.839	96.774
Macedonian	1	1.587	1.613	98.387
Ukrainian	1	1.587	1.613	100.000
Missing	1	1.587		
Total	63	100.000		

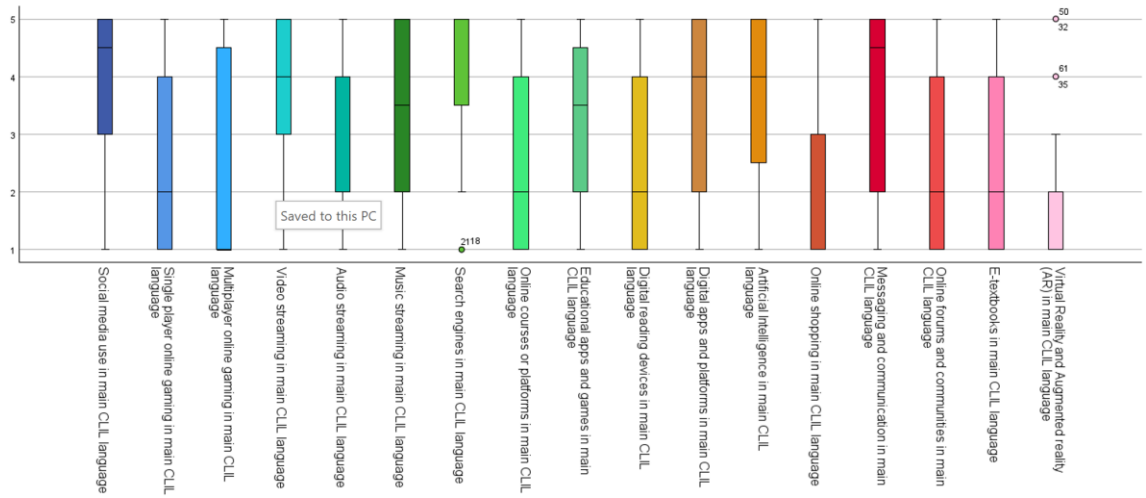
As seen in the graph below, subject/knowledge areas were summarised in so-called 'content areas', which would be understandable in different regions and countries in Europe and could be compared to educational subjects. All subject areas were mentioned during the piloting phase with Natural Science subjects (*N*=19) being mentioned most often, together with Languages (*N*=19). This high number of students reporting to be taught languages in a CLIL setting raised the question of whether foreign language teaching was subsumed under this label. Consequently, more detailed descriptions and examples of the subject/content areas were to the final version of the questionnaire to ensure clarity. If students/teachers felt unsure about a subject/content area they could click on them and see an explanation or a list of examples.



4.4. Extramural digital activities in the main CLIL language

The pilot also revealed first insights into students' extramural digital activities in their main CLIL language. As visible in the clustered boxplot below, all digital activities seemed to be clear to students, as activity was noted for each of the categories.

As visible in the boxplots, students in Albania engaged the most with social media, messaging, and communication in their main CLIL language. This was followed by video streaming, digital apps and platforms, and artificial intelligence. The activities that students engaged in the least were online shopping, virtual reality, and multiplayer games, although multiplayer gaming showed a considerably higher variability than the other two activities. Most importantly for the piloting, however, was the fact that all categories appeared to be clearly distinguishable from each other and resulted in interesting insights.



Note. 1=Never, 2=Rarely, 3=A few times per month, 4=A few times per week, 5=Almost daily

4.5. Extramural digital activities & statistically significant gender differences

Significant differences were found regarding single-player online gaming, multiplayer online gaming, online forums, and communities. However, several of the digital activities were close to being significant, which indicated that the items were well constructed for the main study.

4.6. Extramural digital activities & significant differences by CLIL language

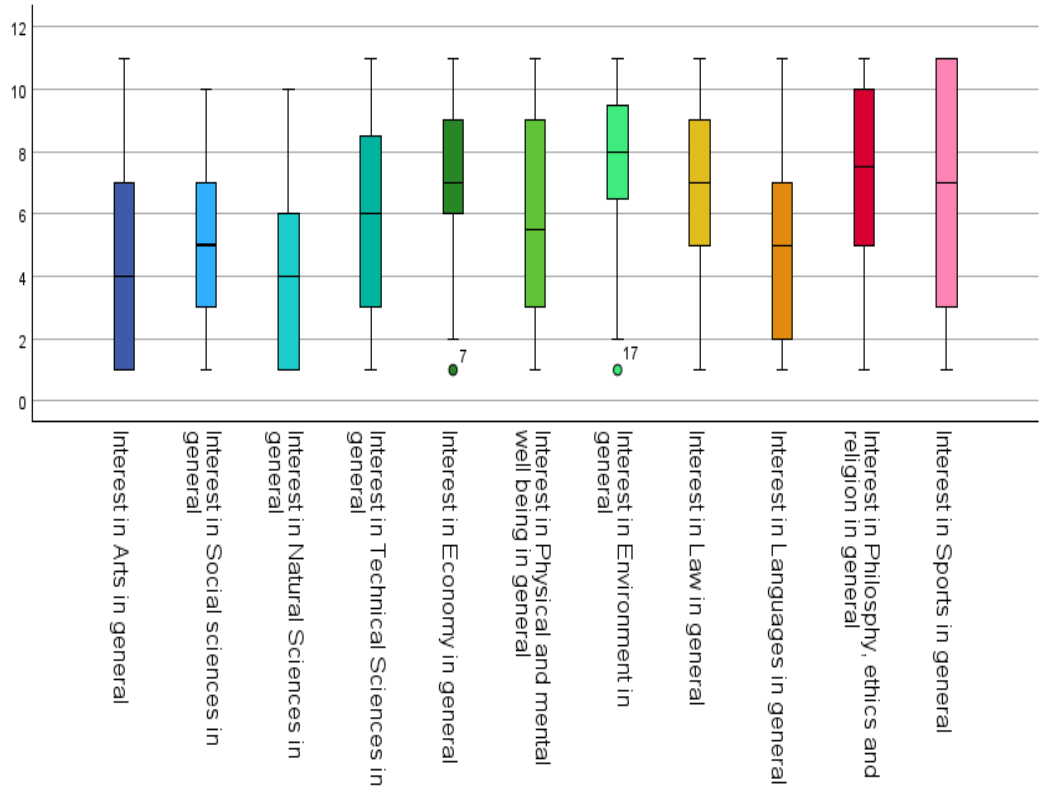
At a further stage, we attempted to calculate whether there were significant differences regarding extramural digital activities by CLIL language. For this purpose, the different CLIL languages were summarised in three main categories: ‘English’, ‘German’, and ‘Other’. The following significant results were detected within the piloting data:

- **Social media**: English > German; English > Other.
- **Single-player online gaming**: English>Other.
- **Multiplayer gaming**: English>German.
- **Video streaming**: English>German.
- **Messaging & communication**: English>German.

This showed that the items were well designed to allow calculation of such findings in the main study.

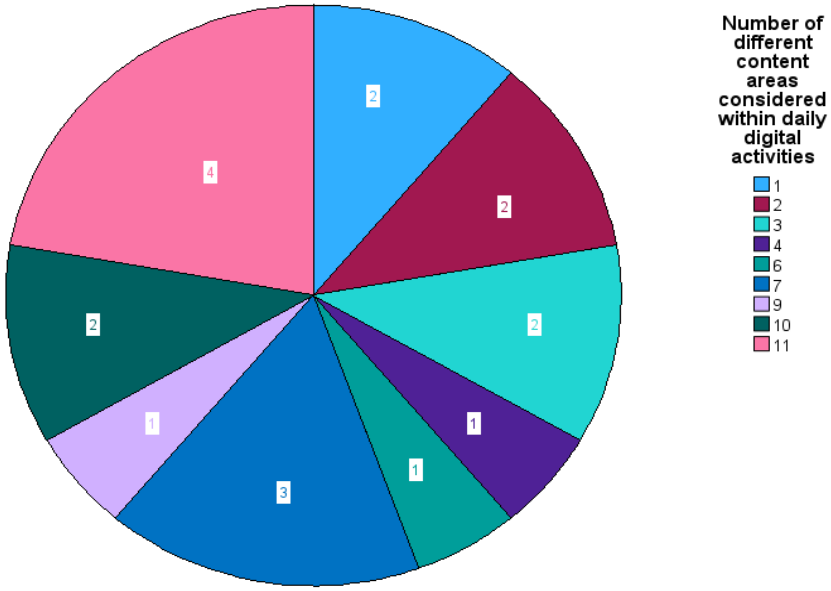
4.7. Content areas of extramural activities

The boxplot below displays the degree of interest stated by students in each content area (regardless of the language used). Participants were very interested in topics regarding the Environment, followed by Philosophy, Ethics and Religion, Economy, Law, and Sports. The ones they are least interested in were Arts, and Natural Sciences. While these results were reassuring and implying that the content areas appeared to be distinguishable and clear for participants in this question, adaptations such as adding examples and extra explanations were still made in the final data collection instruments due to the prior findings.



4.8. Content areas of daily extramural activities in the main CLIL language

When turning to the item eliciting students' interest in content areas per daily digital activity in the primary CLIL language, the analysis turned out to be problematic because of the fact that the multiple choice format of the questions resulted in multiple content areas named for each digital activity in one column. As clear answers could thus not be reached, a new variable was calculated to provide an overview of how many different content areas participants were interested in when engaging in daily digital activities in their primary CLIL language (see pie chart below). This variable could be used to investigate whether a narrow or wide scope of interest could be a factor for other variables.



As the original interest in analysing content areas per digital activity would be a necessity for the main study, a solution could be found for how to split the variables with multiple values in Excel, computing at least an overview of which content area was considered how often within the use of different digital devices.

5. Conclusion: insights for final study

While the section above presented some exemplary insights into results relevant for the piloting and the improvement of the final data collection instruments, this section attempts to present an overview of the insights gained within the piloting phase of this project. The insights will be presented in bullet points:

- **Limited insights due to low case number:** Due to the low number of valid questionnaires for DLTS and DLSS and the high number of variables, the findings produced were limited and for sure preliminary. However, they were sufficient to gain insight into areas of improvement for the final data collection instruments.
- **High drop-out rates for both questionnaires:** A high drop-out rate was identified for both questionnaires, indicating the need to shorten and partially restructure the questionnaires and change some of the question formats. Consequently, the piping option was used in Qualtrics allowing individualised questions to be shown to participants dependent on their previous answers, which should reduce the number of redundancies and shorten the time necessary to take the surveys. While this was deemed necessary, we were aware that this would result in many missing values for certain variables as these variables were not even presented to participants anymore due to the piping function.
- **Complex question formats:** Qualtrics offers a broad range of question types of which we used a variety to make the questionnaire more interesting to fill in. More complex

question types such as ranking and ordering questions were chosen to reduce the number of questions and to combine items. While this was effective for shortening the main-study questionnaires to reduce potential drop-out and to enhance the interactive nature of the questionnaires, these questions turned out to be difficult to analyse due to the complexity of the data produced by such questions.

- **Problematic format of Qualtrics data:** Another problematic aspect identified was the format of Qualtrics data when downloading it. The cleaning process was immense as all the variables had to be shortened and renamed for use in statistical programs. The workload was decided to be shared in the main data collection process.
- **Large data set:** The questionnaires resulted in a huge data set due to the number of items included and the complex question formats chosen.
- **Re-coding process:** Some variables required rather complex recoding before being usable to investigate individual research questions. Consequently, some of the question types were still adapted but others had to be recoded in the main data sets to answer certain research questions.
- **Technical issues & typos:** A few technical issues and typos were identified, which had to be altered in Qualtrics such as the refusal of consent actually leading to the last page.
- **Multiple-choice question formats:** Multiple-choice questions were difficult to analyse within statistical programs such as JASP and SPSS as they resulted in string variables of multiple answers given within one column. Instead of adapting the question format to individual single-choice questions (this would have lengthened the questionnaire considerably), we found a work around by splitting split these variables in Excel so as to compute new variables.
- **Definition of CLIL language(s):** Apparent misunderstandings were identified regarding the definition of 'language of schooling' and 'CLIL language(s)'. Consequently, a clearer definition was incorporated into the final questionnaire, which was furthermore combined with an explanatory video participants could watch before taking the survey.
- **Content areas:** To clarify the notion of subject/content areas, more explanations and examples were added to the questionnaires. These were optional add-ons intended to enhance clarity of the categories.
- **Overall,** the insights gained from the piloting phase indicate that our research focus could be operationalized as suggested.

References

Aranda, D., Mohammadi, L., Montaña Blasco, M., Estanyol, E., & Fernández-de-Castro, P. (2023). A dataset about Spanish young people's digital skills, use of technology and online platforms. *F1000Research, 12*(26). https://doi.org/10.12688/f1000research.128899.1

Dörnyei, Z. (2009). *Research methods in applied linguistics: quantitative, qualitative, and mixed methodologies*. Oxford University Press.

IBM Corp. (2023). *IBM SPSS Statistics for Windows, Version 29.0* [Computer software]. Armonk, NY: IBM Corp.

JASP Team. (2023). *JASP (Version 0.16.4) [Computer software]*. Retrieved from https://jasp-stats.org/

Livingstone, S., Davidson, J., Bryce, J., Millwood Hargrave, A., & Grove-Hills, J. (2012). *Children's online activities, risks and safety: The UK evidence base.* London: UK Council for Child Internet Safety. Retrieved July 28, 2024, from http://eprints.lse.ac.uk/69571/

Mohammadi, L., Aranda, D., Montaña Blasco, M., Estanyol, E., & Fernández-de-Castro, P. (2022). Questionnaire on digital literacy competencies. Retrieved July 28, 2024, from figshare: https://doi.org/10.6084/m9.figshare.21618870.v1

Navarro-Pablo, M., López-Gándara, Y., & García-Jiménez, E. (2019). The use of digital resources and materials In and outside the bilingual classroom. *Comunicar, 27*, 83-93. https://doi.org/10.3916/C59-2019-08

Schwarz, M. (2020). *Beyond the walls: A mixed methods study of teenagers' extramural English practices and their vocabulary knowledge*. Retrieved July 28, 2024, from http://othes.univie.ac.at/63632/

Smit, U., & Strati, E. (2024). *Extramural digital practices and their relevance for disciplinary literacies in CLIL: Piloting a European student survey*. [Paper presentation] Conference #YouthMediaLife Interdisciplinary Perspectives on Digital Practices, University of Vienna, Austria.