CLILNetLE

DIGITAL PRACTICES IN AND OUT OF THE CLIL CLASSROOM: SLOVAKIA

A Report by CLILNetLE Working Group 4

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NOTE. This country report presents results from the Slovak dataset, 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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1. Digital Literacies Student Survey (DLSS): Slovakia

1.1. Introduction

The Digital Literacies Student Survey (DLSS) was conducted to gather comprehensive data on the digital literacy skills, practices, and experiences of students in Slovakia. The survey was undertaken in March-April 2024 using an online questionnaire designed to capture a wide array of information related to students' digital engagement both in and out of school. The data collection process was executed in bilingual schools and schools providing CLIL education at lower secondary and secondary levels, i.e., students aged 10-19 in Nitra, Bratislava, Sučany, Martin, and Prievidza. Participants for the survey were recruited through a combination of teacher training school networks, social media outreach, and collaboration with educational institutions. This multifaceted recruitment strategy was essential to achieve a representative sample of the student population. The survey targeted students from various educational levels (elementary and secondary schools), ensuring that insights could be drawn across different age groups and educational backgrounds. Despite the thorough planning, the data collection process faced several challenges, including varying levels of access to digital devices among students and differing degrees of familiarity with online surveys. These challenges were mitigated through continuous support and guidance provided to participants throughout the survey period.

Bilingual schools in Slovakia have a long tradition (there are 55 bilingual secondary grammar schools with English, German, French, Spanish, Hungarian as the language of instruction) in both public and private formats (EUNIS, 2024).

Content and Language Integrated Learning (CLIL) has been promoted in Slovakia since 2001, though there is no specific educational strategy from the educational authorities to support its implementation. A survey in 2012 (SPU, 2012) involving 12 Slovak schools that implemented CLIL in subjects such as Science, Mathematics, Music and arts, and Physical education through English and German demonstrated that CLIL learners developed better linguistic communicative skills compared to their non-CLIL peers. However, the survey did not assess content knowledge, and there was no continuation of the project.

Key Points:

1. **Lack of Formal Strategy**: Despite its promotion since 2001, there is no specific educational strategy for CLIL from Slovak educational authorities.
2. **2012 Survey Findings**: A 2012 survey across 12 schools showed that CLIL students improved their linguistic skills compared to non-CLIL students. However, content knowledge was not tested, and the project was not continued.
3. **Voluntary Implementation**: CLIL is implemented on a voluntary basis by teachers or school management, resulting in an unclear number of schools practising CLIL.

4. **Teacher Training**: Pre-service CLIL teacher training is offered at four Slovak universities: Bratislava, Trnava, Nitra, and Prešov.

These points reflect both the benefits and gaps in the CLIL approach within Slovak schools, highlighting the need for a structured national strategy and comprehensive evaluation of both language and content learning outcomes.

For more information, you can refer to the 2012 final report.

In summary, the DLSS in Slovakia provides a detailed and nuanced picture of students' digital literacies, their CLIL experiences, and the factors influencing their engagement with digital technologies. The findings from this survey will inform educators, policymakers, and stakeholders in developing strategies to support and enhance digital literacy education in Slovakia.

1.2. Summary of main findings

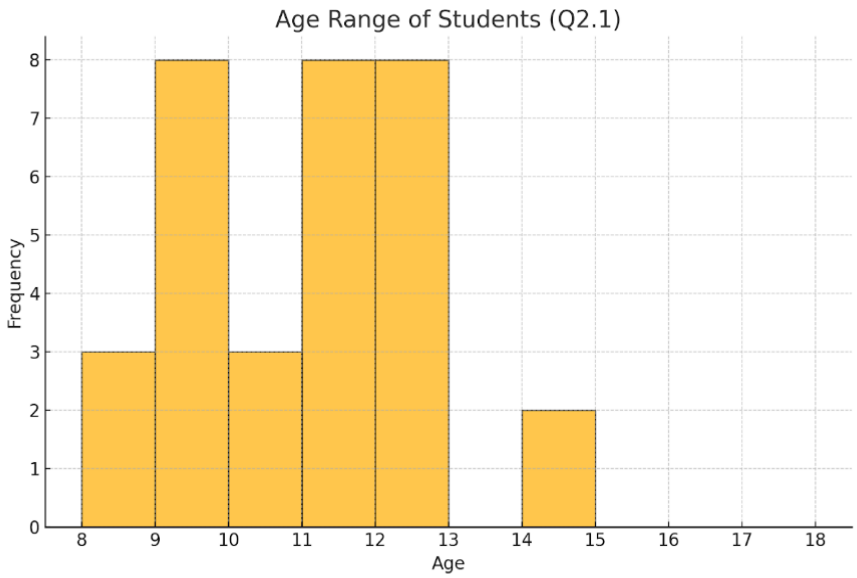
- **Age distribution**: The survey captured a diverse age range of students, with significant participation from ages 9 to 13. This distribution allows for a comprehensive understanding of digital literacy across different educational stages.
- **Gender representation**: The gender distribution was relatively balanced, with both male and female students actively participating in the survey. This balance provides a well-rounded perspective on digital literacy practices and experiences.
- **Parental education levels**: There was a varied representation of parents' education levels, from primary education to higher education. This variation highlights the influence of parental educational backgrounds on students' digital literacy and engagement.
- **Linguistic background**: Students reported using multiple languages at home, reflecting Slovakia's multilingual environment. This linguistic diversity is a critical factor in understanding how language influences digital literacy and CLIL experiences.
- **CLIL provision**: The survey revealed a broad implementation of CLIL in Slovakia, with students learning various subjects through an additional language. English was the most commonly reported CLIL language, followed by other European languages.
- **Spare time activities**: Students engaged in a range of spare time activities that supported CLIL learning, indicating a strong extracurricular involvement in digital literacy practices. These activities varied in their perceived importance, with some being considered more crucial for CLIL support.
- **Access to digital devices**: There was a high level of access to digital devices both in and out of school, suggesting that students were well-equipped to engage in digital literacy activities. However, access varied, with some students facing limitations.

- **Challenges with digital technologies**: Common challenges included technical issues, limited internet access, and difficulty in navigating digital tools. These challenges were noted as significant barriers to effective digital literacy development.
- **Educational stage and digital engagement**: The level of school enrolment influenced digital engagement, with older students reporting higher levels of digital literacy activities. This trend underscores the need for early and continuous digital literacy education.
- **Impact of multilingualism**: Multilingual students showed unique digital literacy practices, leveraging their language skills to navigate digital content and resources. This finding emphasises the role of language skills in digital literacy development.

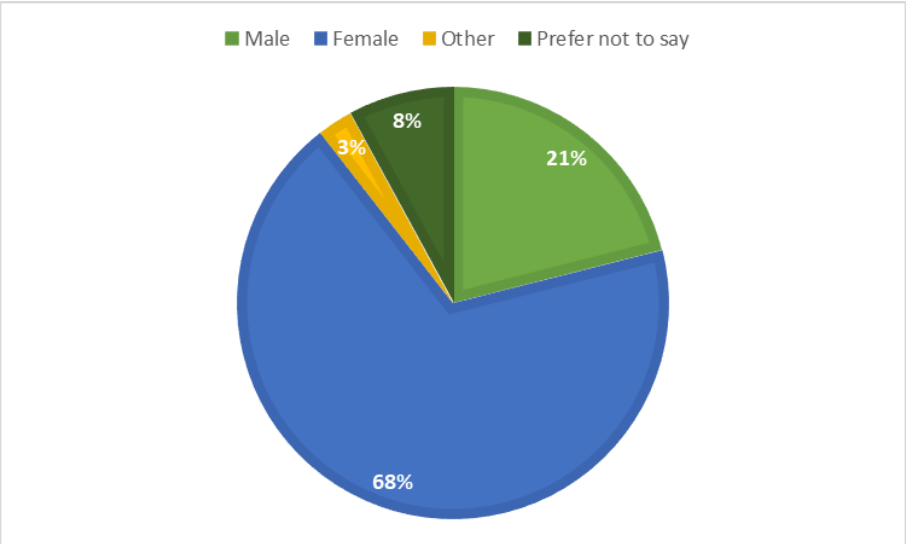
Overall, the DLSS findings provide valuable insights into the digital literacy landscape of Slovakian students, highlighting key areas for improvement and targeted interventions to enhance digital education and CLIL implementation.

1.3. Participant background

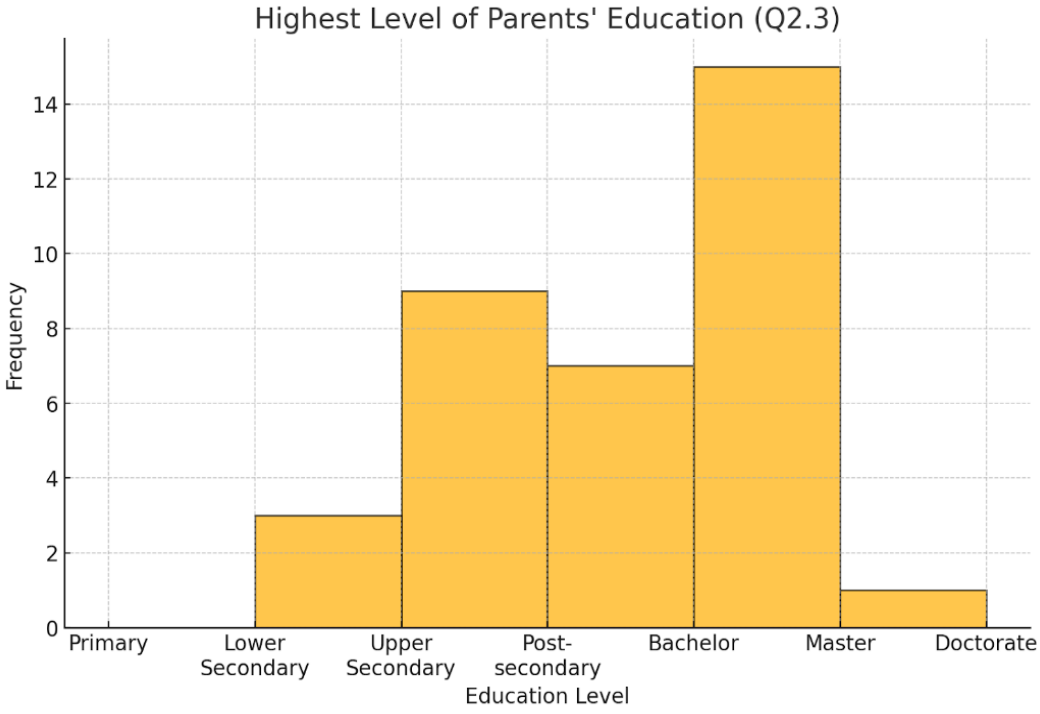
Out of 38 Slovak student participants, the biggest group of respondents in the survey were **aged** 9-10 and 11-13 years old.



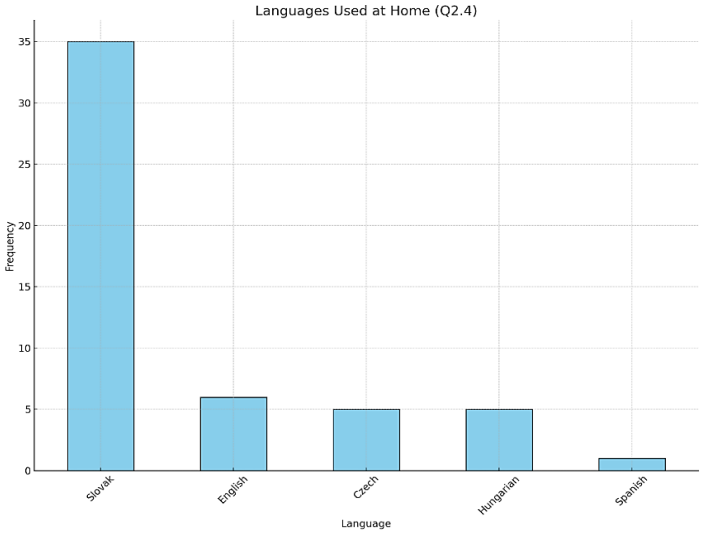
The biggest number of respondents were females (68%), followed by males (21%), another 8% preferred not to say and 3% indicated ‘others’.



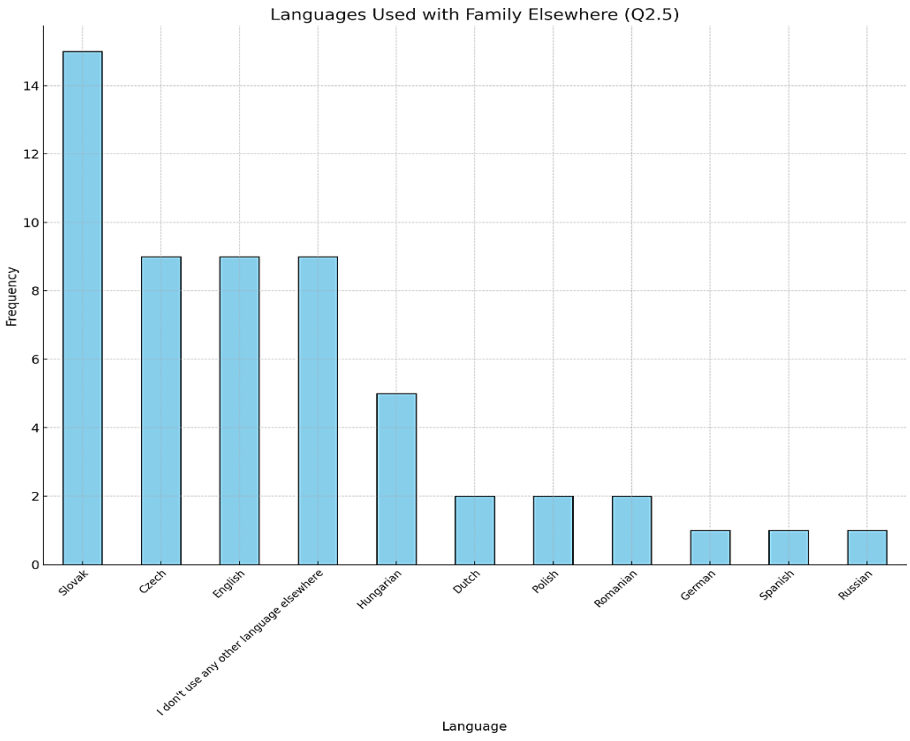
The highest **level of parents’ education**-master’s degree was claimed by 15 respondents, followed by upper secondary level (*N*=9) and then post-secondary (*N*=7). Zero respondents claimed primary level of parents’ education.



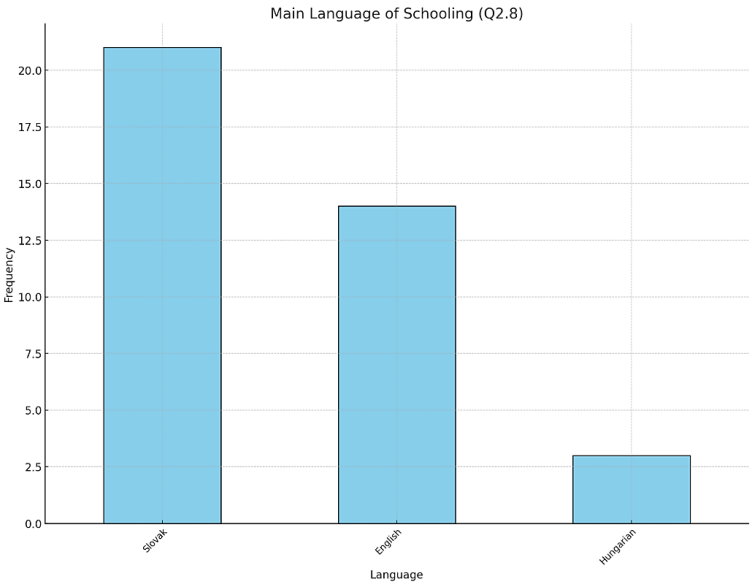
The majority of respondents spoke Slovak at home (*N*=35), followed by English (*N*=6), Czech and Hungarian (*N*=5), and Spanish (*N*=1). It is clear that more respondents used more than one **language at home**.



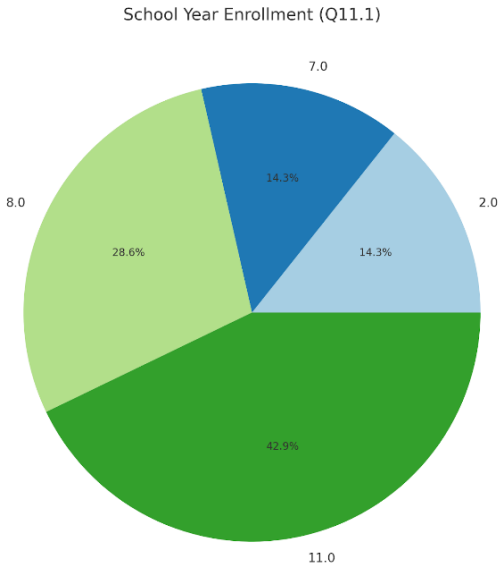
Most of the students claimed the **use of more than one language**. The majority used Slovak (*N*=15), followed by Czech and English (*N*=9). The same number of respondents (*N*=9) said that they did not use any other language. 5 respondents used Hungarian, and the other languages used were Dutch, Polish, Romanian (*N*=2). Russian, German and Spanish were each spoken by 1 respondent.



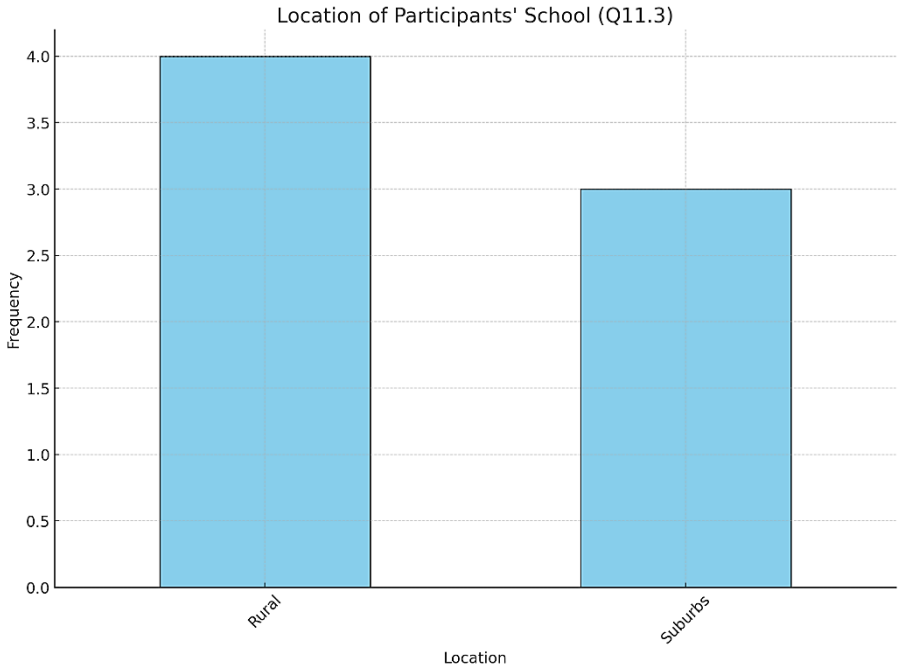
The main **language of schooling** was Slovak (*N*=21), followed by English (*N*=14), and Hungarian (*N*=3).



The chart below shows the **distribution of school years** that the students were in at the time of data collection. The results show that 42.9% of respondents were in the second year of their secondary level of education. 28.6% placed themselves in the 8th grade of elementary school. 14.3% were in the 7th grade of elementary school. 14.3% of the respondents placed themselves in the second year. Considering that the questionnaires were distributed in the lower secondary and secondary levels, the last group of respondents probably identified themselves as the second year of secondary school. Eventually, the group claiming to be in the 11th year and the 2nd year can be counted together (42.9 and 14.3 percent), thus 57.2 percent of the participants were in the same year - the second year of the secondary level of education.

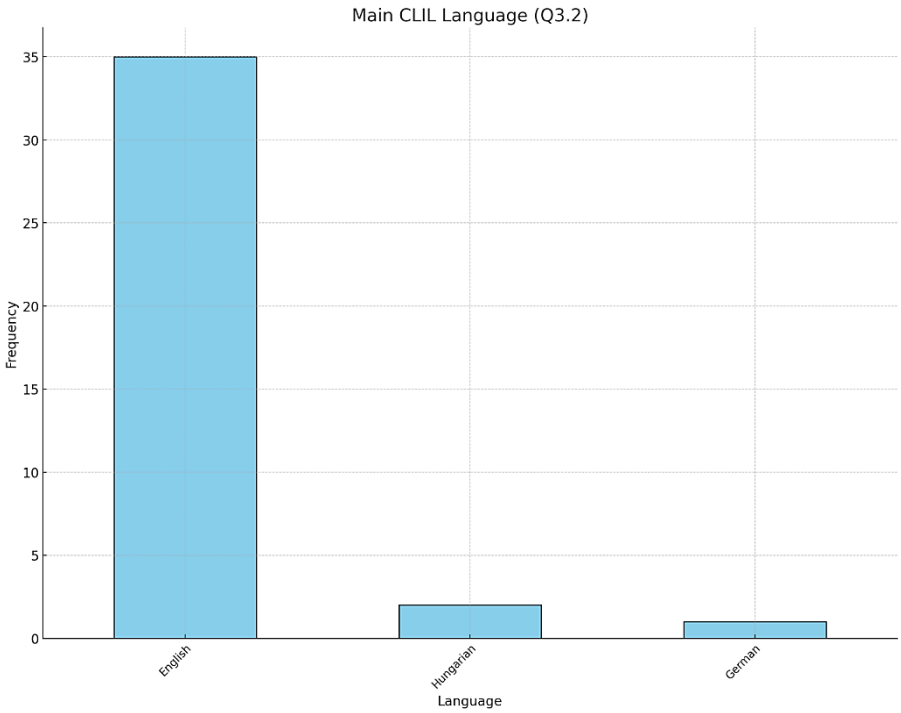


The question about the **school location** was answered by only 7 respondents, out of which 4 said to attend rural schools and 3 suburban ones.

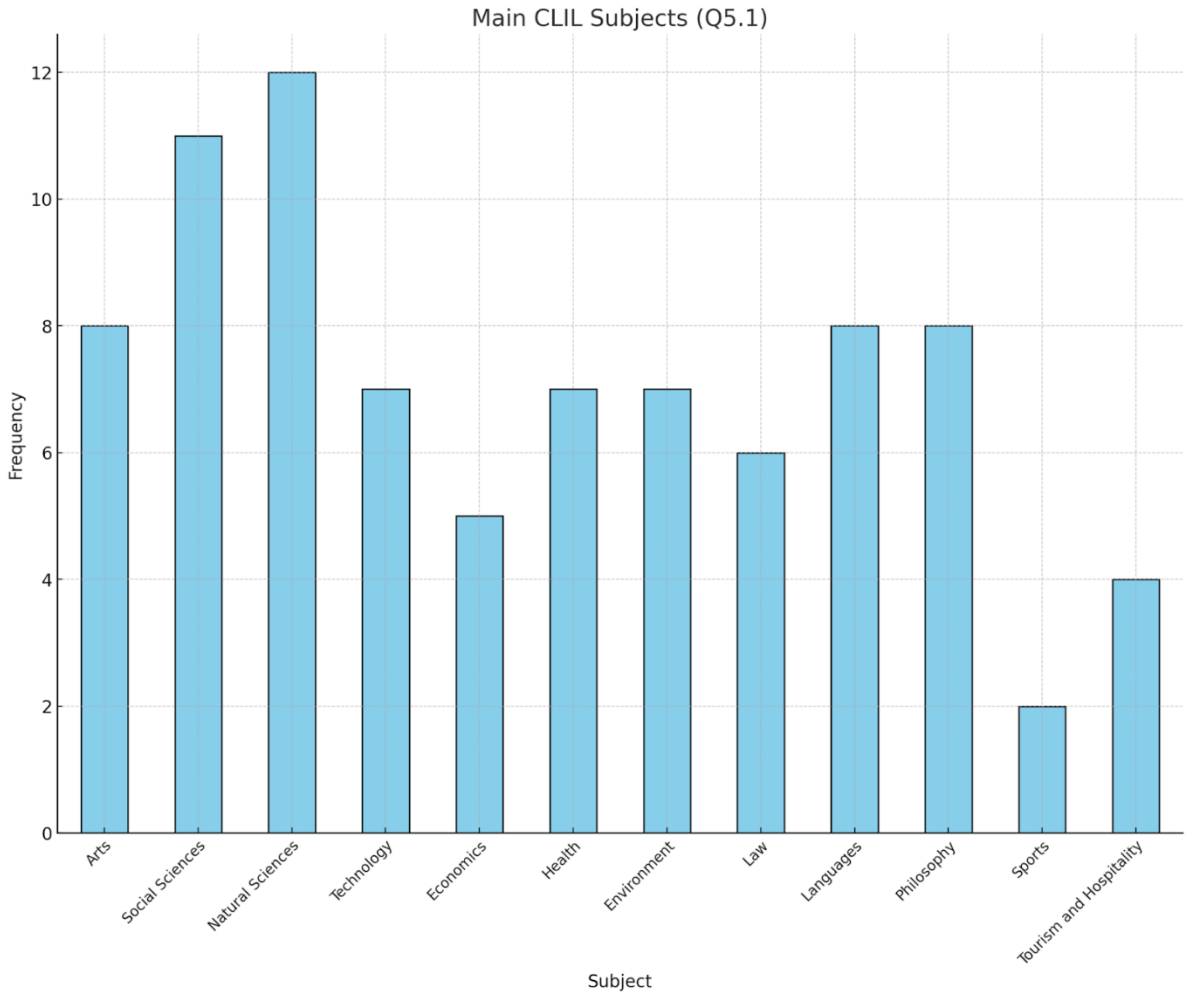


1.4. Participants' CLIL learning experience

The **main CLIL language** from the participants that answered the questionnaire was English (*N*=35), followed by Hungarian (*N*=2) and German (*N*=1).



Natural Sciences were identified as the **main CLIL subjects** (*N*=12), followed by Social Sciences (*N*=11) and Arts, Languages and Philosophy (*N*=8).



The average on a 0-100 scale for the **objective of CLIL lessons** showed a trend towards more "language and subject contents", being the mean 60.38%, indicating that on average, the lessons were balanced towards both language and content learning.

The average scale for the **extent of CLIL language** use was 88.63%, indicating that on average, the lessons were significantly oriented towards multilingual use.

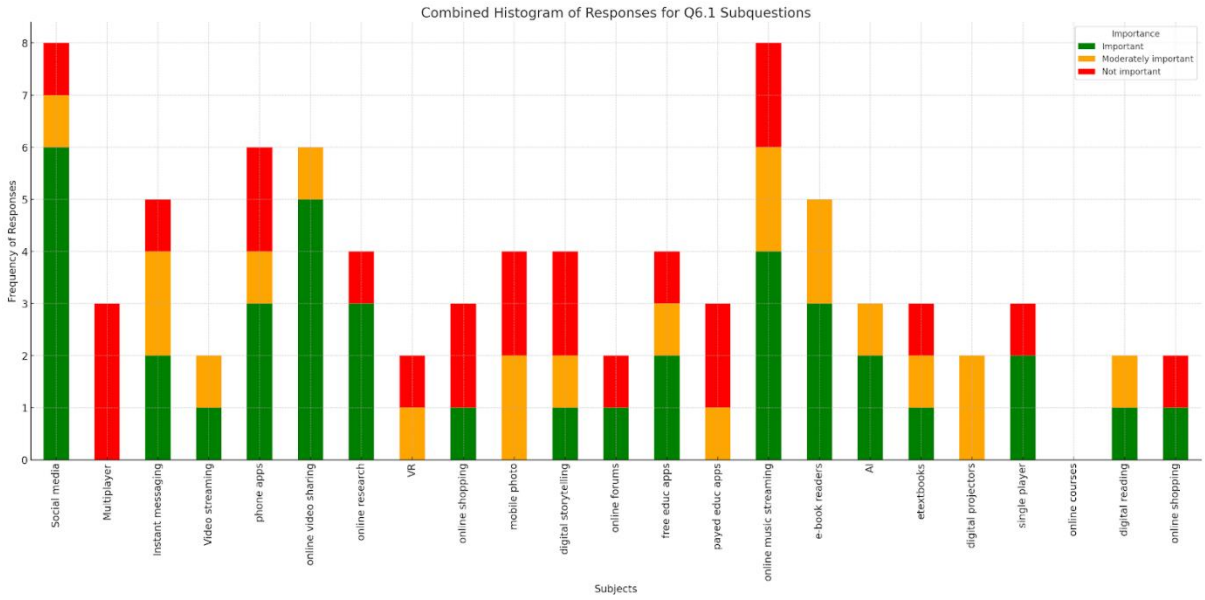
1.5. Focus on spare time

The following data shows participants' views on the **importance of various spare time activities in supporting CLIL** (Content and Language Integrated Learning) learning. The activities were categorised into three levels of importance: ‘Important’, ‘Moderately Important’, and ‘Not Important’.

The majority of activities were perceived as either ‘Important’ or ‘Moderately Important’ by the respondents. Notably, activities related to digital engagement, such as using educational apps, watching educational videos, and participating in online forums, were frequently marked as ‘Important’, indicating a strong recognition of their value in enhancing language and content learning.

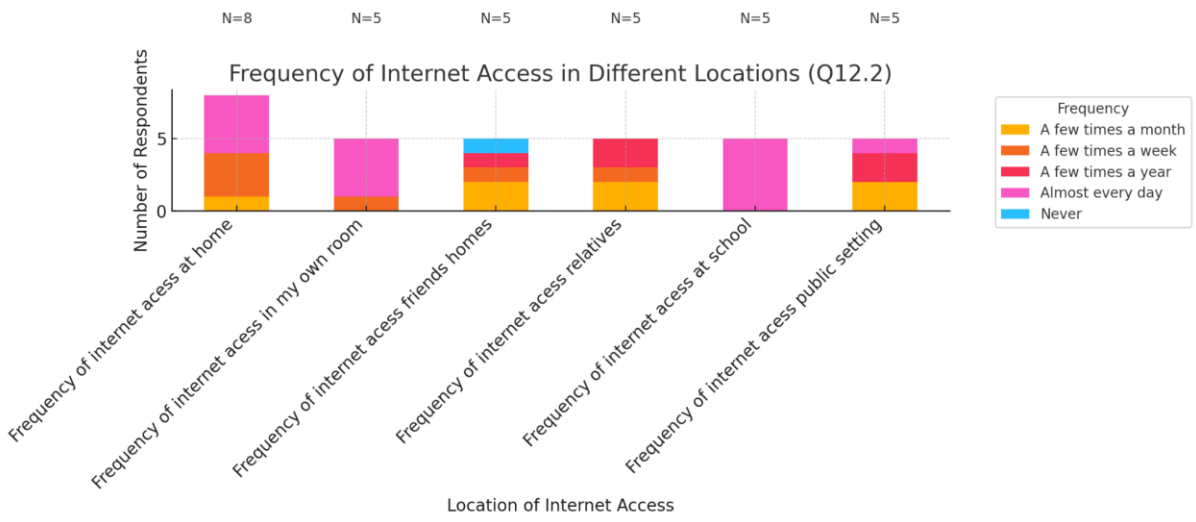
Conversely, a smaller portion of respondents considered these activities ‘Not Important’, highlighting a general consensus on the positive role of these activities in supporting CLIL learning outside the classroom.

Overall, the data suggests a broad acknowledgment of the benefits of engaging in various educational and digital activities to support language and content acquisition in CLIL contexts.

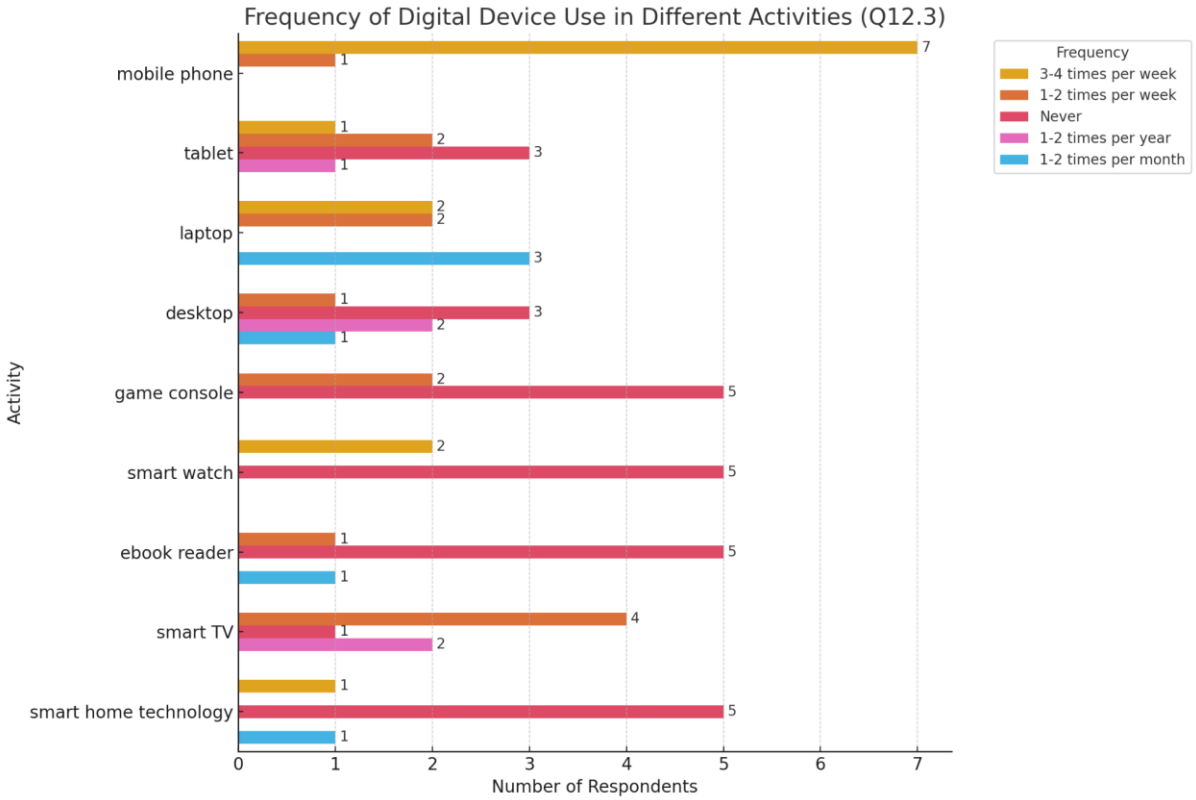


1.6. Access to digital devices in and out of school

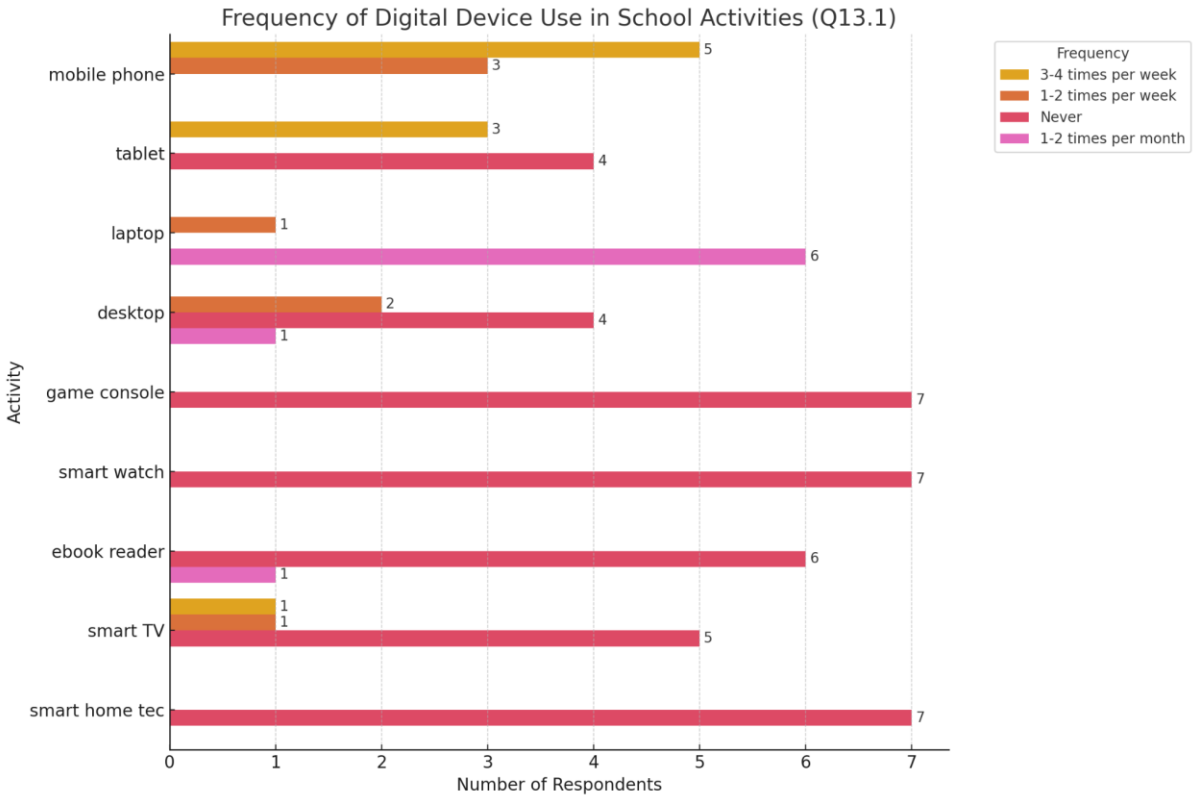
33 respondents answered the question on the frequency of Internet access. They claimed to use the internet access at school almost every day. The school environment was followed by internet access in their own room and at home and eventually at public settings. On the other hand, the respondents claim that they never use the Internet at friends' homes.



Regarding their use of the listed devices outside of school, 7 respondents claimed the highest use was of mobile phones, i.e., '3-4 times per week', followed by a laptop, smart watch and smart home technology. They also claimed that they never used game consoles, e-book readers, and smart home technology (*N*=5).

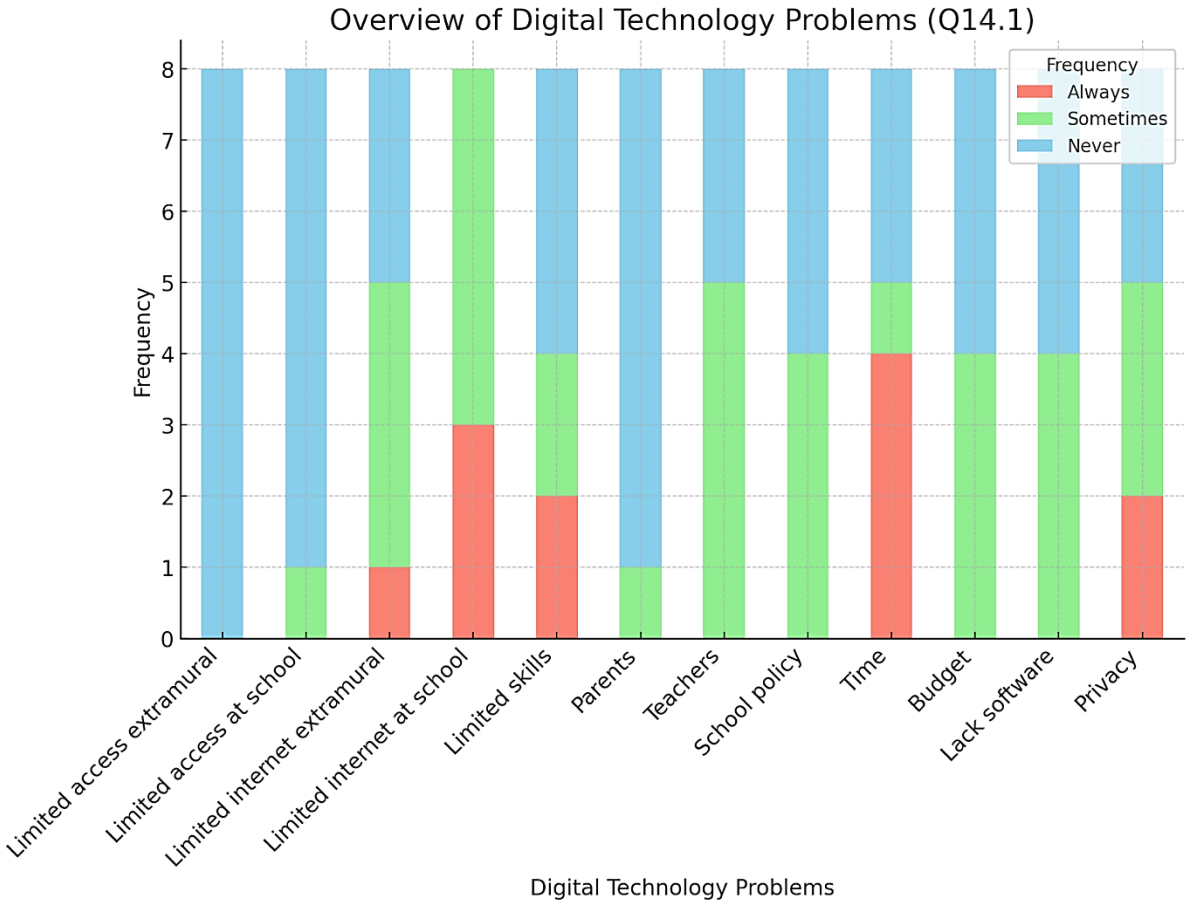


As for their use of these devices as part of their learning at school, 5 respondents claimed to use their mobile phones in school, i.e., 3'-4 times per week'. 7 reported that they never used game consoles, smartwatches and smart home technology int he school setting. Laptops in schools were used '1-2 times per month'.



1.7. Challenges when using digital technologies

Respondents identify the following **challenges** in digital technology: the least problematic was extramural limited access. The problems with parents and limited internet access at school were reported by 7 students. The ones chosen as highly problematic were related to time (*N*=4) and limited internet at school (*N*=3). 5 respondents identified teachers to be sometimes problematic within digital technology skills.


Overview of Digital Technology Problems (Q14.1)
Frequency
Always
Sometimes
Never
Frequency
0
1
2
3
4
5
6
7
8
Limited access extramural
Limited access at school
Limited internet extramural
Limited internet at school
Limited skills
Parents
Teachers
School policy
Time
Budget
Lack software
Privacy
Digital Technology Problems

2. Digital Literacies Teacher Survey (DLTS): Slovakia

2.1. Introduction

The survey was undertaken in February - April 2024 through administration to the schools that provide bilingual education at lower-secondary and secondary levels. The schools were chosen based on the criteria of availability and willingness to cooperate. The participants, teachers are cooperating with the university as teacher trainers working in training schools where pre-service teachers undergo their teaching practice. They were recruited based on the previous cooperation or found online based on the stated criteria - CLIL provision. They were contacted beforehand via emails or phone and later on sent the link for the DLTS. The challenges in the data collection were faced CLIL provision in Slovakia is supported by the educational authorities however, not compulsory and left on the decision of school managements. The challenges in gathering data were in participants' willingness to take part in the survey due to not having enough time capacities.

CLIL implementation in schools in Slovakia depends on the capacities of school management and the number of competent teachers to provide this type of instruction. The educational authorities promote and support CLIL in schools, mainly in lower-secondary and secondary levels of education, however, there is no direct support or regulation in didactic and professional preparedness of teachers for CLIL. Faculties providing pre-service teacher education gradually anchor courses of bilingual education and CLIL into their curriculums. Four faculties in Nitra, Trnava, Bratislava, and Prešov prepare their university students for CLIL implementation (Kováčiková, 2021). In-service CLIL teachers develop their didactic and teaching skills and competences within CLIL methodology based on their personal and professional interest and enthusiasm. The last national report on CLIL implementation in lower-secondary schools was published in 2012 (SPU, 2012). The results showed increased motivation and higher development in communicative skills in the foreign language. No national surveys so far have shed light on content knowledge in bilingual education or CLIL.

CLIL challenges in Slovakia include lack of formal strategy in CLIL implementation, lack in didactic preparation in pre-service education, and low number of longitudinal studies and surveys on CLIL carried out in Slovakia (Štefková, Kováčiková, Kordíková, 2023).

These points reflect both the benefits and gaps in the CLIL approach within Slovak schools, highlighting the need for a structured national strategy and comprehensive evaluation of both language and content learning outcomes.

For more information, you can refer to the 2012 final report.

In summary, the DLSS in Slovakia provides a detailed and nuanced picture of students' digital literacies, their CLIL experiences, and the factors influencing their engagement with digital technologies. The findings from this survey will inform educators, policymakers, and

stakeholders in developing strategies to support and enhance digital literacy education in Slovakia.

2.2. Summary of main findings

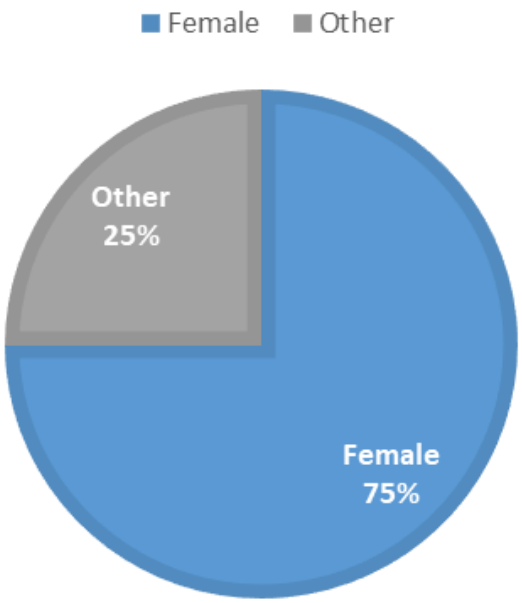
- **Participant demographics and background**: The gender distribution among respondents was balanced, and the majority were bilingual or multilingual. English was the predominant language used in CLIL, with German being the second most common. Respondents had varied teaching experiences, with an average of 16 years of teaching and approximately 4.75 years specifically of CLIL teaching.
- **CLIL subject involvement**: A significant majority of respondents were involved in teaching CLIL subjects, indicating the widespread adoption of CLIL methodology in bilingual education in Slovakia. A smaller proportion of respondents were not engaged in CLIL teaching, reflecting diverse teaching practices and the optional nature of CLIL implementation.
- **Use of digital technology in CLIL**: The survey revealed varied engagement levels with digital tools. Social media, instant messaging, video streaming, online video sharing, and online research platforms are frequently used by teachers in their CLIL practices, indicating these tools were integral for CLIL teaching. In contrast, tools like multiplayer games and VR & AR technologies showed lower usage frequencies, suggesting limited engagement. This highlights a reliance on certain digital tools, with others yet to gain significant traction. Teachers reported spending a significant amount of time using digital technologies in CLIL lessons, with a mean time of approximately 3.3 hours per week.
- **Students' digital competences and usage**: For the 9-12 age group, students frequently used social media, gaming, instant messaging, video streaming, mobile apps, online video sharing, online research, online shopping, mobile photo, digital storytelling, and online music streaming outside the classroom. However, there was no reported use of VR & AR, online forums, educational apps, e-book readers, and AI, highlighting specific preferences and gaps in technology usage among younger students.
- **Importance of student's technology use for CLIL lesson planning**: The majority of teacher respondents viewed the use of technology by students as either important or very important for CLIL lesson planning, emphasising the critical role technology plays in educational strategies.
- **Teacher competence and challenges**: Teachers reported varying levels of competence with digital tools for providing feedback, with a general trend towards moderate to high self-reported knowledge. Challenges in using digital technologies in teaching included limited access to resources, lack of training, and time constraints, indicating areas where further support and professional development are needed.

- **School environment**: The main language of schooling was predominantly Slovak, with a high percentage of bilingual or multilingual students. This reflects the linguistic diversity in Slovakian schools and the integration of CLIL in various linguistic contexts.

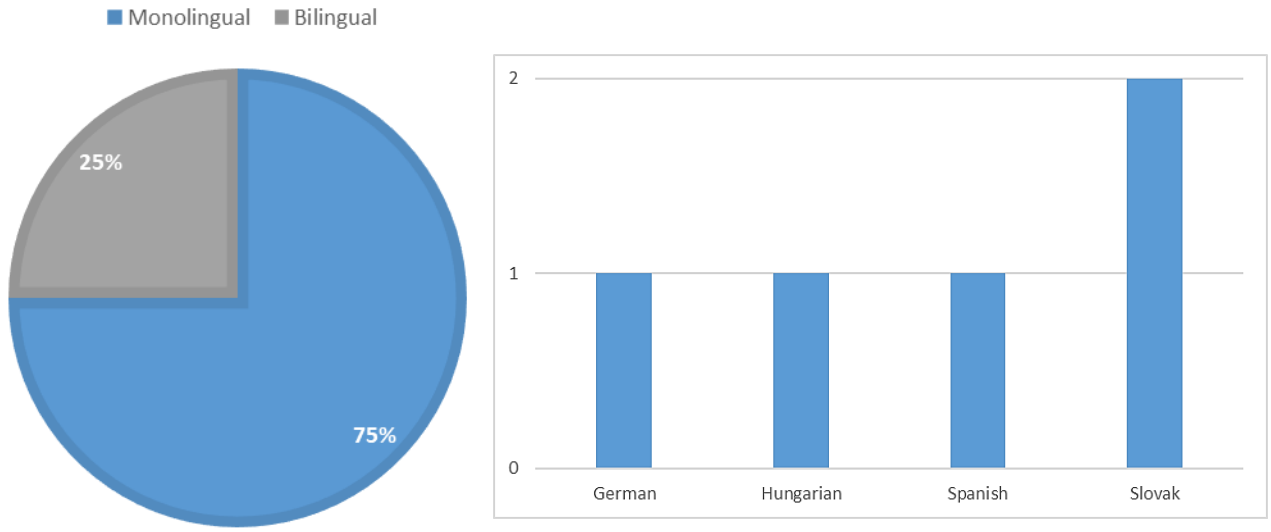
These findings provide valuable insights into the digital literacy practices, challenges, and teaching environments of educators in Slovakia, highlighting areas for further professional development, resource allocation, and support to enhance the integration of digital technologies in CLIL education.

2.3. Participant background

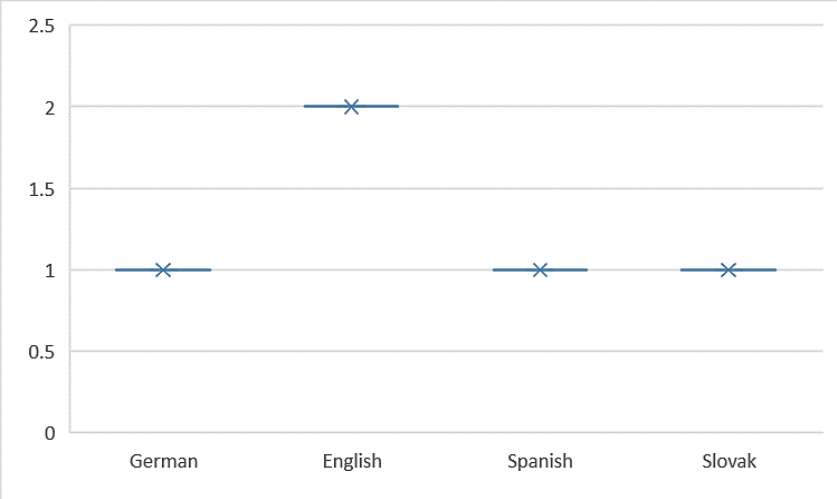
As for the participants' gender distribution, 3 respondents were females and 1 chose the 'other' option.



3 respondents identified themselves as monolingual and 1 as bilingual. 2 respondents used Slovak as L1, 1 used Spanish and Hungarian and 1 used German as **L1**.



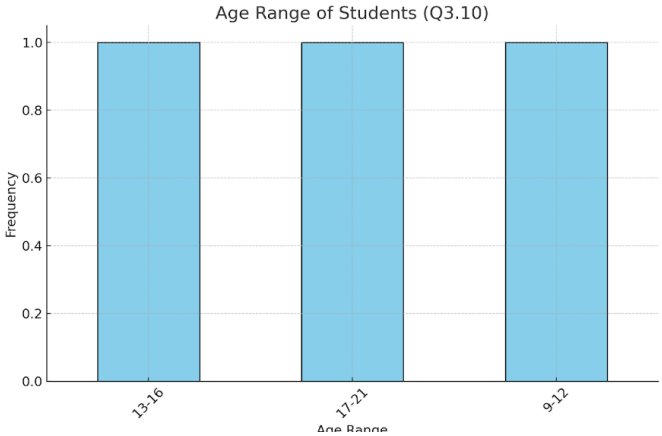
2 teachers taught in schools with English as a **language of schooling**, 1 respondent taught in a school with German, and another one with Slovak and Spanish as languages of schooling.



As for the **CLIL language**, 3 respondents claimed to have English and 1 German as their main CLIL languages.

Regarding the **teaching subjects**, more options were available in this question. According to this questionnaire answers collected, Slovak teachers taught many subjects: 1 respondent taught Arts (drama, music, art), 2 taught Health and Healthcare, 2 taught Languages and Communication, 1 respondent taught Biology, and 1 taught Chemistry.

In the question about the age range of their students, only 3 respondents replied. In this case, 1 chose the age group of 9-12- year olds, 1 taught the 13-16 age group, and 1 respondent taught 17-21 year-old students.



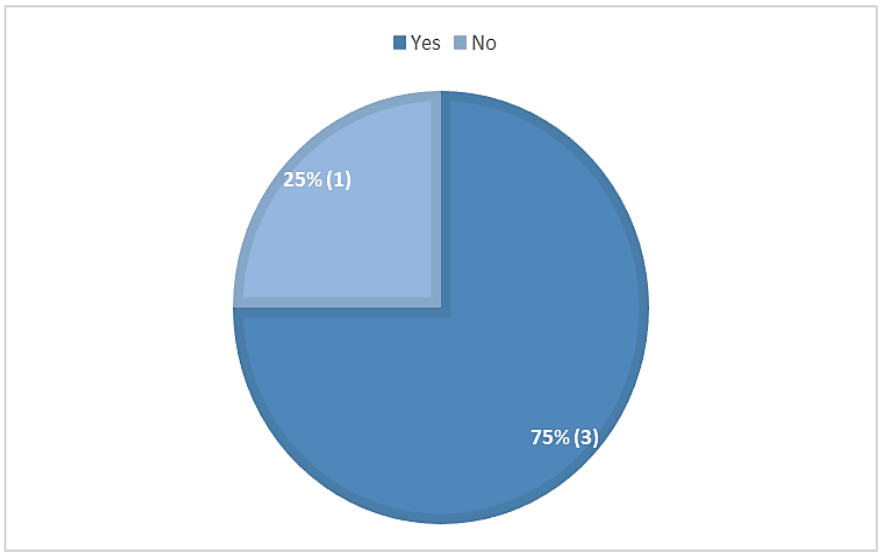
Next, we looked at the **years of teaching experience**. One teacher revealed his/her teaching practice to be of 26 years, 1 respondent had been teaching for 25 years, 1 claimed to have an 8-year-long teaching practice, and 1 had been teaching for 5 years.

Q3.16_Years_Tg	
Valid	4
Missing	0
Mean	16.000
Std. Deviation	11.045
Minimum	5.000
Maximum	26.000

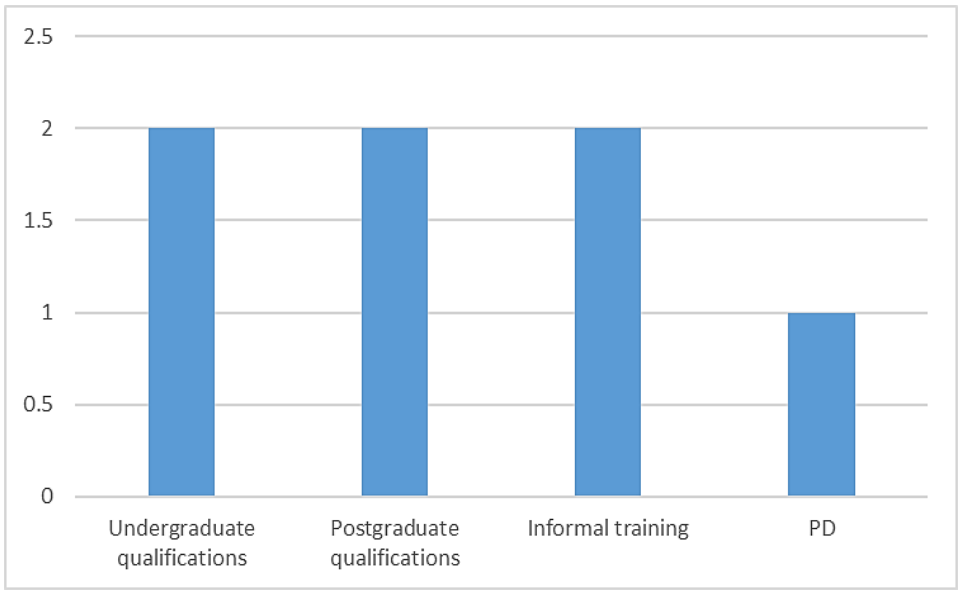
We also examined **years of CLIL teaching**. 2 teachers claimed to have taught CLIL for 5 years,1 for 3 years, and 1 for 6 years.

Q3.16_Years_CLILTg	
Valid	4
Missing	0
Mean	4.750
Std. Deviation	1.258
Minimum	3.000
Maximum	6.000

Regarding **CLIL training**, out of 4 respondents, 3 claimed to have training in CLIL, and 1 did not.



Examining the answers about the **type of CLIL training**, it was evident that out of 4 respondents only 3 filled this part as a result of the previous question. 1 respondent claimed to have achieved undergraduate and postgraduate qualifications, 1 respondent had undergraduate qualification, informal training and also CLIL training as a part of professional development. The last participant had achieved postgraduate qualification and informal training.

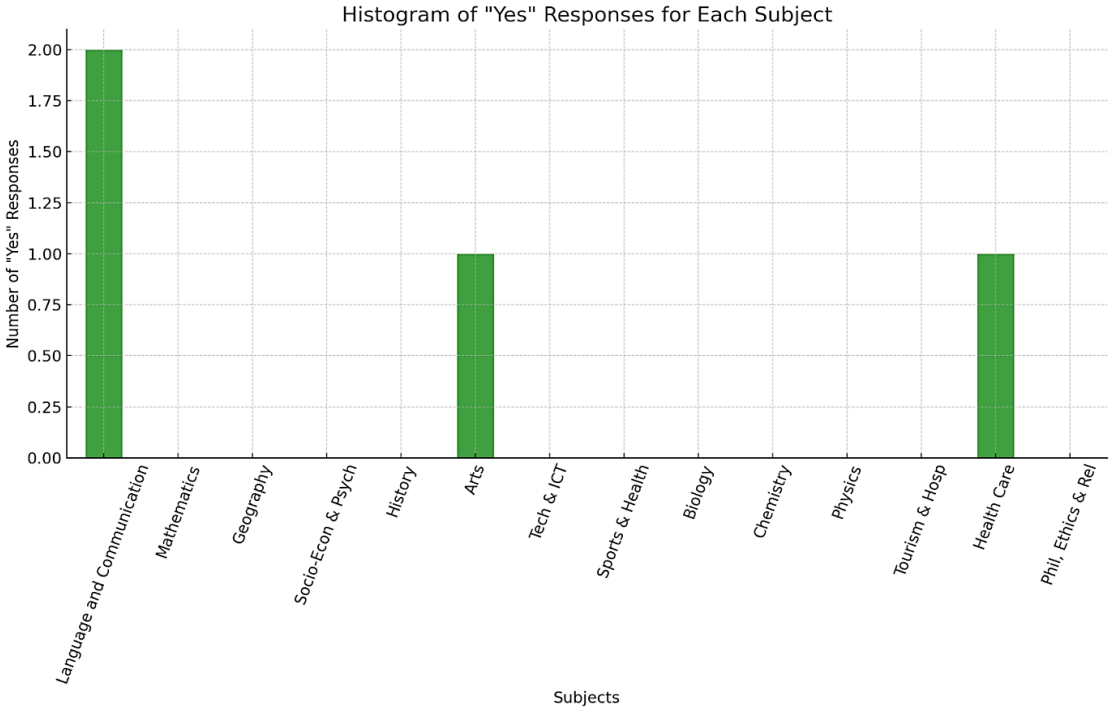


All 4 participants were teachers of **foreign languages**. More specifically, 3 respondents taught English, 1 taught German, and 1 taught Spanish as foreign language.

2.4. Participants' CLIL teaching experience

Next, we examined the **CLIL subjects**, represented in the following bar chart. This particular bar chart shows that:

- The majority of respondents (*N*=3) were involved in teaching CLIL subjects, as indicated by the higher bar for the 'CLIL' category.
- A smaller proportion of respondents were not involved in teaching CLIL subjects, represented by the 'No CLIL' category.
- 2 respondents taught Language and communication, 1 taught Arts, and 1 taught Health Care.



Out of 4 respondents, 1 claimed 65% **objective of CLIL** being on the content, 1 respondent claimed 60% objective being also on the content, 1 respondent claimed 55% of objective in CLIL being on content, and 1 respondent claimed 14% of objectives leaning towards language.

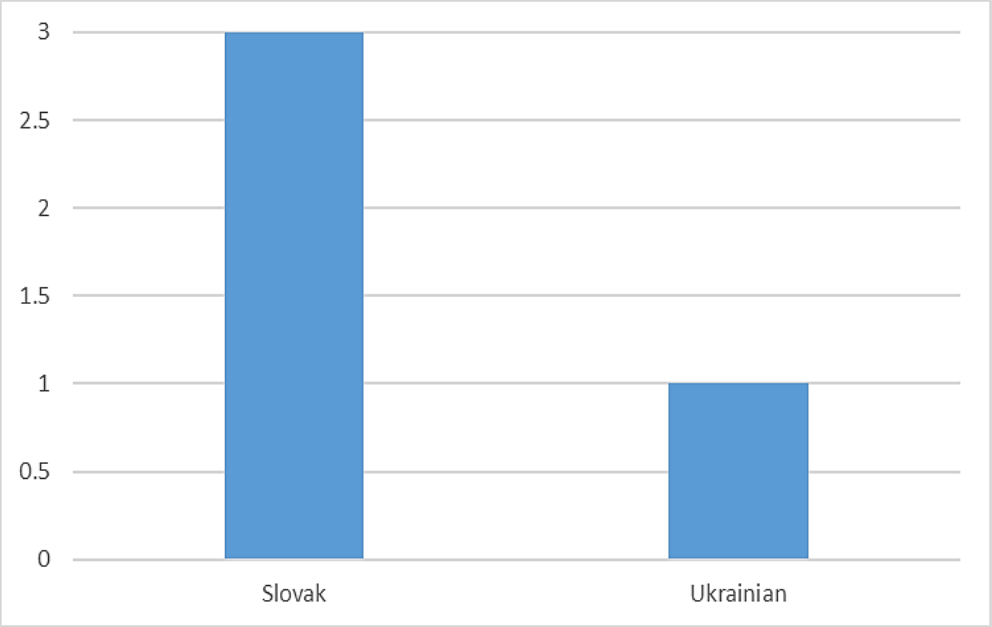
Q3.14_CLIL_TgAims_Lg-Content	
Valid	4
Missing	0
Mean	48.500
Std. Deviation	23.360
Minimum	14.000
Maximum	65.000

As for the **language use in CLIL lessons**, 2 respondents claimed that in CLIL lessons they mostly used CLIL language (88% and 91%) and 2 respondents claimed that 35% and 39% of their CLIL lessons were more multilingual.

Q3.15_LginCLIL_Biling-TargetLg	
Valid	4
Missing	0
Mean	63.250
Std. Deviation	30.380
Minimum	35.000
Maximum	91.000

2.5. Participants' school environment

Out of 4 respondents, 3 of them chose Slovak as their **main language of schooling**, 1 chose Ukrainian.



Only two respondents answered the question about the percentage of students in their school who were bi-/multilingual. 1 claimed that 99% were, and 1 claimed that 100% of their students were bi-/multilingual.

Q4.9_%BiMultilingStudents	
Valid	2
Missing	2
Mean	99.500
Std. Deviation	0.707
Minimum	99.000
Maximum	100.000

2.6. Use of digital tools in CLIL

3 respondents answered the question about their **use of digital tools**. Mobile phones were used for personal use, for teaching and for both purposes. Tablets were used for teaching and personal purposes, Laptops were used for both purposes, desktop was used for both - personal and teaching purposes, and consoles were used for personal and both purposes. Smart watches were used only for personal use. E-book readers were also used for personal use. Smart TVs were used for personal use and for both teaching and personal use. Smart home technology as well, for both teaching and personal use.

Technology	Personal use	For teaching	Both
Mobile Phone	1	1	1
Tablet	0	1	1
Laptop	0	0	3
Desktop	0	0	3
Consoles	1	0	1
Smart Watch	3	0	0
Ebook Reader	2	0	0
Smart TV	2	0	1
Smart Home Technology	2	0	1

The following analysis of **digital technology use in the main CLIL language** demonstrated a significant reliance on certain digital tools such as social media, instant messaging, video streaming, and online research platforms, indicating these were integral for CLIL teaching practices. The moderate engagement with mobile phone apps and online shopping suggested that these tools were supplementary but not central. In contrast, the lower usage of multiplayer games and VR & AR technologies indicated they were less commonly integrated into CLIL teaching. The diversity in usage patterns, as shown by the high standard deviations for some

technologies, highlighted varied adoption and preference levels among educators. This suggested that while some digital tools were widely embraced, others had yet to gain significant traction, indicating potential areas for further professional development and resource allocation to enhance the integration of digital technologies in CLIL education.

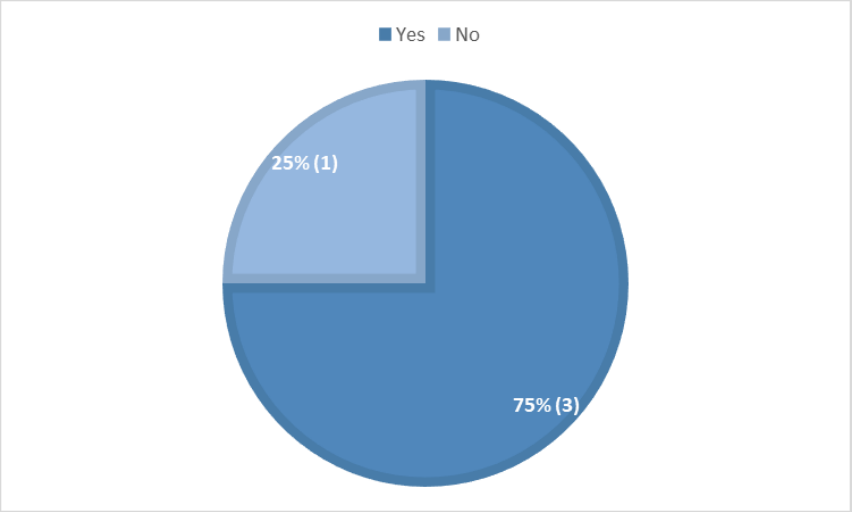
Device	Mean	Standard Deviation	Minimum	Maximum
Social Media	2.75	2.06	1.00	5.00
MultiPlayer Games	1.75	1.50	1.00	4.00
Instant Messaging	2.75	1.26	1.00	4.00
Video Streaming	2.75	0.50	2.00	3.00
Mobile Phone Apps	2.50	1.29	1.00	4.00
Online Video Sharing	3.00	0.82	2.00	4.00
Online Research Platforms	3.00	1.83	1.00	5.00
VR & AR	1.75	0.96	1.00	3.00
Online Shopping	2.25	1.50	1.00	4.00

- **Social media**: On average, respondents used social media with a mean frequency of 2.75, ranging from a minimum of 1 to a maximum of 5. The standard deviation was 2.06, indicating a varied usage among respondents.
- **Multiplayer games**: The average usage frequency was 1.75, with a range of 1 to 4 and a standard deviation of 1.50.
- **Instant messaging**: Respondents used instant messaging with an average frequency of 2.75, a range from 1 to 4, and a standard deviation of 1.26.
- **Video streaming**: The mean frequency was 2.75, with a narrow range from 2 to 3 and a standard deviation of 0.50.
- **Mobile phone apps**: The average usage was 2.50, with a minimum of 1 and a maximum of 4. The standard deviation was 1.29.
- **Online video sharing**: The mean usage was 3.00, with a range from 2 to 4 and a standard deviation of 0.82.
- **Online research platforms**: This category had a mean of 3.00, with a wide range from 1 to 5 and a standard deviation of 1.83.
- **VR & AR**: The average usage was 1.75, ranging from 1 to 3, with a standard deviation of 0.96.
- **Online shopping**: The mean frequency was 2.25, with a range from 1 to 4 and a standard deviation of 1.50.

Next, we looked at the **time spent on digital technologies in CLIL lessons**. Out of 4 answers 2 respondents claimed to spend 15 minutes per lesson using digital technologies, and the 2 other respondents spent 20 minutes using digital technologies.

Q6.7_Time_DigTech_CLIL	
Valid	4
Missing	0
Mean	17.500
Std. Deviation	2.887
Minimum	15.000
Maximum	20.000

1 respondent also taught **non-CLIL lessons**, while 3 respondents taught CLIL only.



As for the comparison between participants' **use of digital technology in CLIL vs non CLIL**, in this question only one respondent claimed that 89% use of digital technology was different in CLIL vs non CLIL teaching.

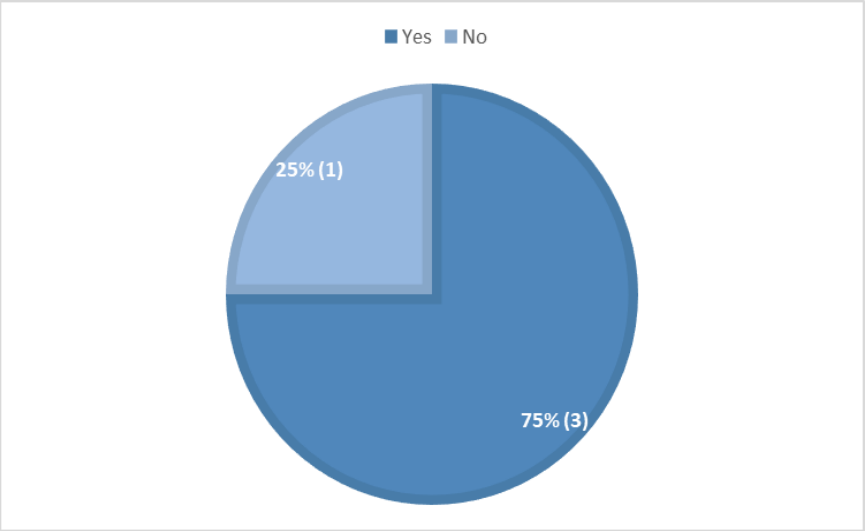
Q6. 10_1_DiffCLIL_nonCLIL_DigTech	
Valid	1
Missing	3
Mean	89.000
Std. Deviation	NA
Minimum	89.000
Maximum	89.000

2.7. Teachers' competences and challenges

Regarding teachers' self-reported knowledge of digital tools used for feedback, we report answers from 3 respondents:

- For statement 1 'I integrate effectively technology into my teaching and learning including videos, images, interactive elements', all 3 respondents reported 'average' usage.
- For statement 2 'I select digital resources, tools or platforms appropriately', 1 respondent indicated that they had 'never heard of it' and 2 respondents reported 'average' usage.
- Statement number 3 'I align my use of digital tools and resources with specific learning objectives' corresponds with previous statement, as 1 respondent had 'never heard of it' and 2 reported 'average' usage.
- For statement 4 'I encourage and facilitate communication and collaboration between students using digital technologies', we collected all 3 different responses: 1 being 'beginner', 1 being 'average', and 1 being 'expert'.
- Statement 5 'I assess students and provide feedback to students using digital tools' provided two different answers by our respondents: 1 submitted being a 'beginner' in the matter, and 2 respondents submitted 'average' level of competence.
- In statement 6 'I evaluate my own digital strengths and weaknesses easily', 2 respondents indicated feeling 'beginner' level of competence and 1 reported 'average' level.
- For the last statement, number 7, 'I adapt teaching, learning and assessment using digital technologies to ensure that learning experiences are inclusive', 2 respondents reported their level of competence being 'average' and 1 being 'beginner'.

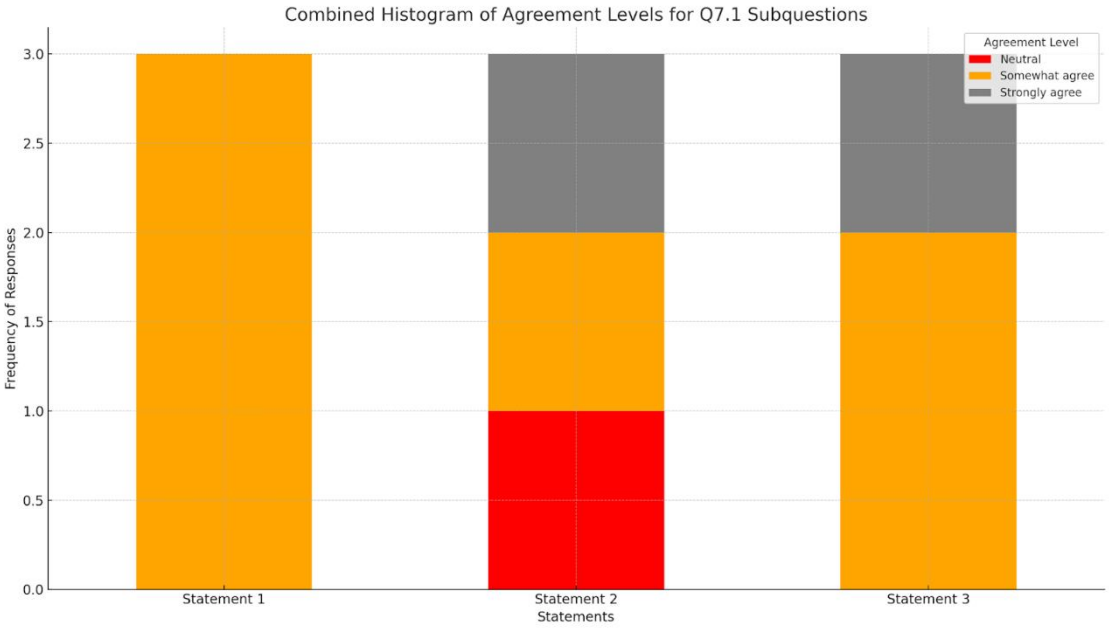
3 respondents reported no **challenges** in use of digital technologies. 1 respondent reported challenges in use of digital technologies.



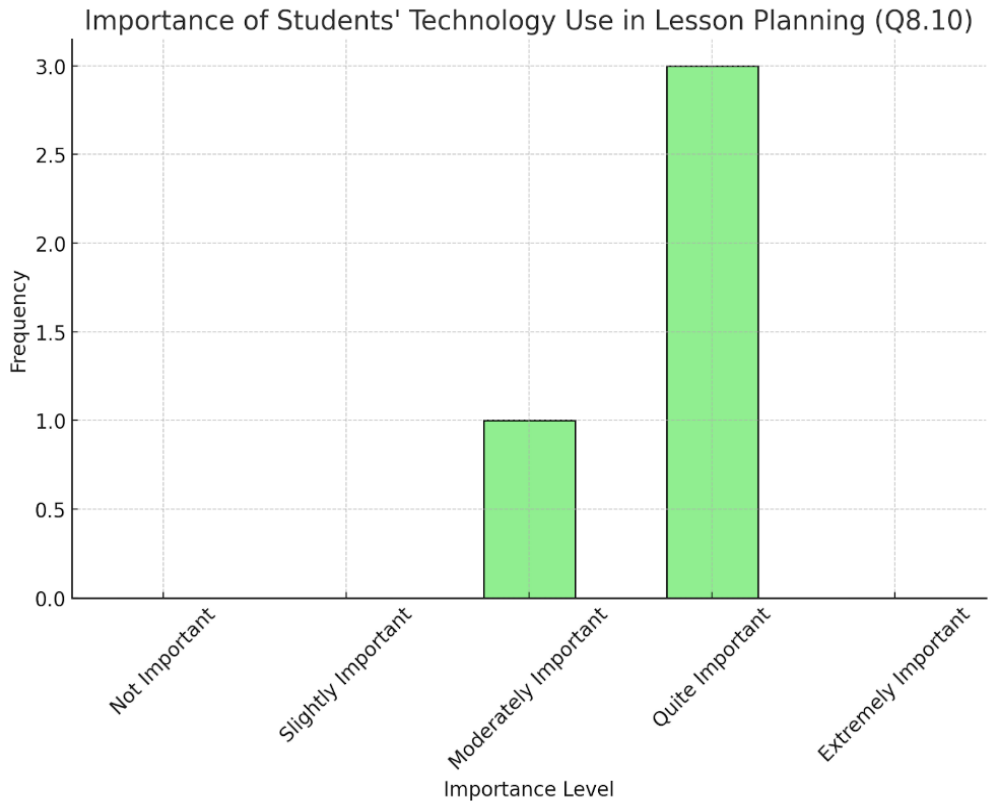
2.8. Teachers' perceptions of digital technologies in CLIL

4 teachers reported their perceptions regarding the 3 following statements.

- For the first statement 'Students´ disciplinary literacy skills improve when incorporating technology into CLIL teaching' all 3 respondents 'somewhat agreed' with.
- Statement 2 'Using technology encourages students to be more multilingual in their learning' reported one answer from each of these three possible responses: 'neither agree nor disagree', 'somewhat agree' and 'strongly agree' option.
- The last statement, number 3, 'Students are inherently more motivated to use language and content in an integrated way (i.e., project work) when a digital tool or technology is required to complete it' we found 2 responses of 'somewhat agree' and 1 response of 'strongly agree'.



The bar chart below represents the perceived **importance** that teachers have of **students' technology use in lesson planning** as assessed by 4 respondents. 3 respondents rated the importance as 'Quite important', making it the most selected category. The category of 'Moderately important' received 1 response, while 'Not important', 'Slightly important', and 'Extremely important' received no responses at all.



Regarding the relevance of technology for CDLS or skills, all respondents tended to think that using technology outside the classroom was beneficial for developing bilingual and multilingual disciplinary literacy skills. This is reflected in the mean of 79, which tended towards 100 (=development of bilingual and multilingual disciplinary literacy skills), rather than towards 0 (=development of linguistic skills only).

Q8.11_Teval_relevTeachCritDLs+LgSkills	
Valid	4
Missing	0
Mean	79.000
Std. Deviation	14.283
Minimum	64.000
Maximum	98.000

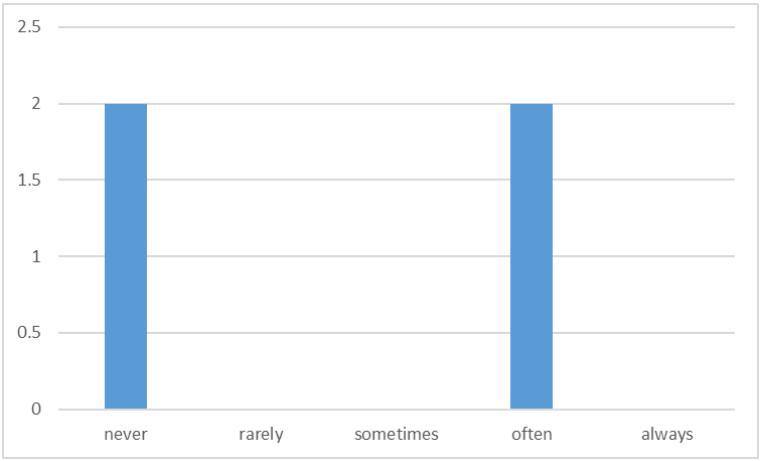
2.9. Students' digital competences: teachers' perceptions

The question "*How often do you discuss the use of technology outside of school with your students*" was answered differently by each of the respondents. One answered that they 'never' discussed the use of technology, one 'sometimes', one 'often' and one 'always'. Thus, the answers ranged from never to always.

Q8.1_TechDiscussion_Freq	
Valid	4
Missing	0
Mean	2.500
Std. Deviation	1.291
Minimum	1.000
Maximum	4.000

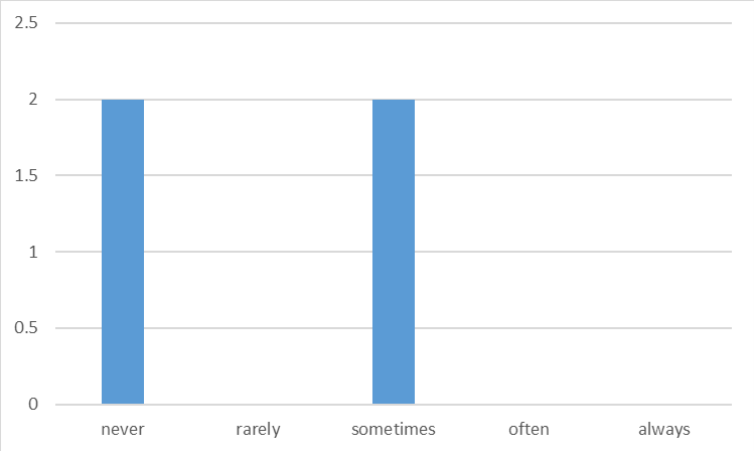
To the question regarding whether the respondents saw the explicit link between the discussion from the previous question and student learning in the CLIL classroom, half of the respondents answered that they 'often' saw this link, while the other half 'never' saw the explicit connection between the discussion about the use of technology outside of school with students.

8.2_TechCLIL_makelinkexplicit	
Valid	4
Missing	0
Mean	3.000
Std. Deviation	1.732
Minimum	1.000
Maximum	4.000



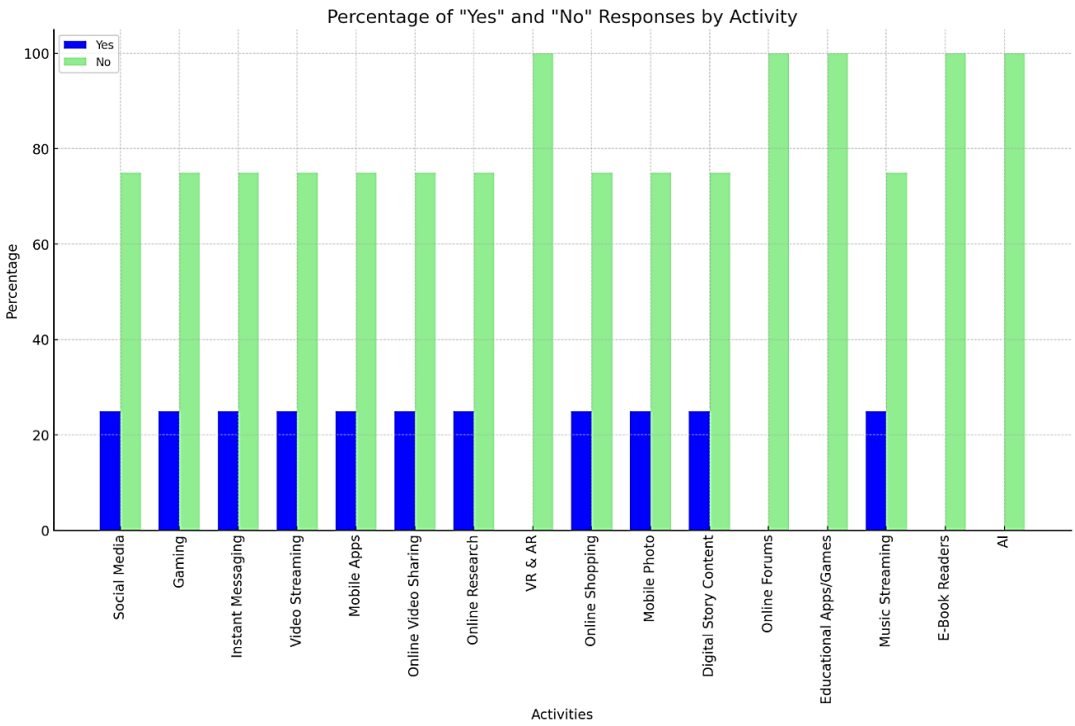
All the respondents answered the question regarding whether they provided guidance or specific suggestions for students on how to use technology outside of school to improve the CLIL language. The answers showed that 2 of them 'never' provided any guidance nor specific suggestions, and that another 2 of them 'sometimes' provided the guidance or suggestions in using technologies outside of school in order to improve CLIL language.

Q8.9_T_Guidance_extramuralus e	
Valid	4
Missing	0
Mean	2.000
Std. Deviation	1.155
Minimum	1.000
Maximum	3.000



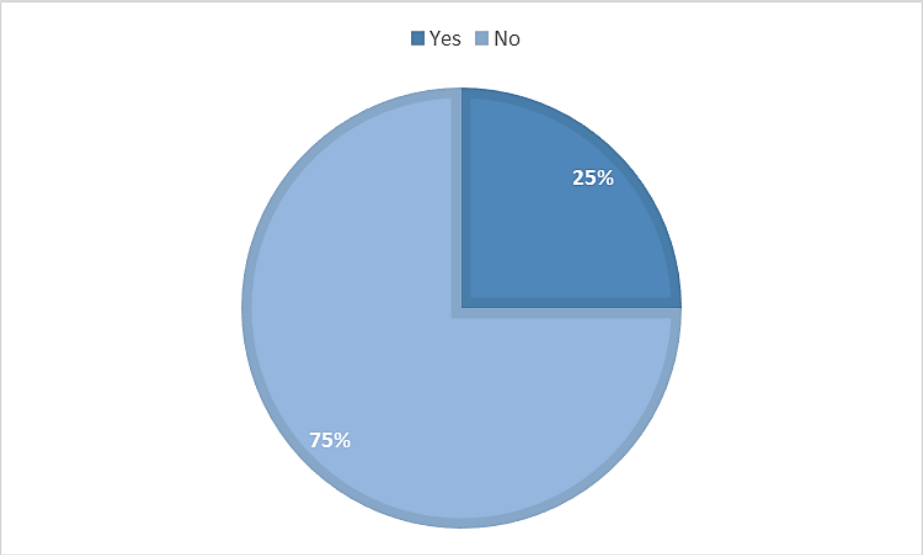
2.10. Students' extramural use of digital technologies: teachers' perceptions

For this section we report the age group of 9-12. In a survey of 4 respondents regarding **students' extramural use of technology**, a consistent pattern emerged across several activities. 25% of respondents (1 out of 4) reported 'Yes' for the use of social media, gaming, instant messaging, video streaming, mobile apps, online video sharing, online research, online shopping, mobile photo, digital story content, and music streaming, with the remaining 75% (3 out of 4) indicating 'No' use. In contrast, activities such as VR & AR, online forums, educational apps/games, e-book readers, and AI showed no engagement, with all respondents (100%) reporting 'No' use.



2.11. The teaching of Critical Digital Literacies in CLIL

Teachers were asked if they were aware of the concept of Critical Digital Literacies (CDLs). 3 respondents answered this question positively, meaning that they had heard of critical digital literacies, and one respondent had not heard of this term yet.



Finally, for the question about the frequency of use of CDLs in CLIL teaching, we report only 1 valid response. which limits the variability and meaningfulness of standard deviation and other spread measures (hence they are NaN, not applicable). The responses range from a minimum of 2 (slightly less frequent) to a maximum of 4 (often), indicating varying levels of agreement with the use of CLIL strategies across the following statements.

- Q.9.3_1: 'Assess the credibility, accuracy and reliability of online information'.
- Q.9.3_2: 'Analyse and interpret media bias, understand persuasive techniques (i.e. photo editing, decontextualized images), examine stereotypes (i.e. stereotypical images of masculinity)'.
- Q.9.3_3: 'Discuss issues related to online privacy, cyberbullying, digital footprint and responsible online behaviour'.
- Q.9.3_4: ' Discuss how to be safe online '.
- Q.9.3_5: 'Use digital technologies to foster communication, collaboration and knowledge sharing'.
- Q.9.3_6: 'Using technology to solve problems'.
- Q.9.3_7: 'Discuss the principles of copyright, piracy'.
- Q.9.3_8: 'Encourage students to reflect on their own digital skills'.

Statistic	Q9.3_1	Q9.3_2	Q9.3_3	Q9.3_4	Q9.3_5	Q9.3_6	Q9.3_7	Q9.3_8
Count	1	1	1	1	1	1	1	1
Mean	3.0	3.0	4.0	4.0	4.0	4.0	2.0	4.0
Std	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Min	3.0	3.0	4.0	4.0	4.0	4.0	2.0	4.0
25%	3.0	3.0	4.0	4.0	4.0	4.0	2.0	4.0
50%	3.0	3.0	4.0	4.0	4.0	4.0	2.0	4.0
75%	3.0	3.0	4.0	4.0	4.0	4.0	2.0	4.0
Max	3.0	3.0	4.0	4.0	4.0	4.0	2.0	4.0

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