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Students' Beliefs on Classroom Didactics of Second Language Teaching in the 21st Century

Ágnes SÁNTHA-MALOMSOKI
University of Pannonia (Veszprém, Hungary)
PhD candidate, Multilingualism Doctoral School
santha.m.agnes@gmail.com

Kálmán SÁNTHA
University of Pannonia (Veszprém, Hungary)
Associate Professor, Institute of Education
santhak@almos.uni-pannon.hu

Abstract. This paper is about the views and beliefs of students, participating in technology-enhanced CLIL (content and language integrated learning) teaching in the senior section of a Hungarian primary school, about the English language, language learning, English classes, and the activities of their teachers. The study is based on mixed methods and a verbal fluency test as well as structured interviews. This paper presents the findings of the structured interview in the case of N = 7 students. The processing of the structured interviews was done using qualitative content analysis, combining deductive and inductive logic. During deductive content analysis, a code list was set up, followed by an inductive exploration of text segments. The reliability of coding was ensured by intercoding. According to the results, students taking part in technology-enhanced CLIL teaching saw language learning as a speech-based process. As for teaching activities, it was found that there were differences between problem-centred and activity-based technology-enhanced teaching and traditional methods based on a classical methodology.[1]

Keywords: student beliefs, CLIL, structured interview, technology-enhanced language learning (TELL)

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Introduction

While investigating teacher effectiveness and in-class activity, attention should be given to learners' reflective thinking and beliefs since they give a more complex view on school work. Analysis of students' beliefs might contribute to a deeper understanding of classroom didactics and hence their modification. The aim of the study is to reveal CLIL students' (aged 13–14) beliefs and reflections on learning in English and their teachers' in-class activities. The main focus point of the study is to reveal primary dual language school leavers' beliefs on the English language, teaching methods, the learning process, and the changes they consider necessary to be made by the teachers.

Theoretical background

Technology-enhanced language learning (TELL)

Integration of technical devices into the teaching-learning process dates back to the ancient times (e.g. abacus). Reason for their use was to make the learning environment more effective, enjoyable, and motivating. Selwyn (2017) indicates that dismay or excessive optimism coming from the appearance of technical devices in each era had always been revealing. As for the contemporary situation, he claims that it is risky to search for digital solutions to non-technological but education-related problems since the possible side-effects caused by their use remain unknown for long years. Consequently, teachers need to take several factors into consideration such as advantages of ICT use, duration, authenticity, and their impact on the learning process. They also need to keep in mind that digital tools cannot be the masters of the lessons (Lewis 2017).

The main difference between CALL (computer-assisted language learning) and TELL (technology-enhanced language learning) is that in the latter one technology has a functional role in the learning environment in which it is embedded and is not only a simple tool (Walker and White 2013). The term (TELL) covers the application of software, hardware, smartphones, game consoles, and tablets, which are normally applied in our daily lives (Walker and White 2013). With their use, students can be active participants and creators of their own learning process instead of being passive receivers of information. Throne (2008) confirms the positive effects of video games in education while stating that learners can gain novel skills, abilities, and information without making a conscious effort. Contrarily, Wood (2012) and Rosen, Lim, Carrier, and Cheever (2011) draw attention to the fragmentedness of learners' attention and the decline of their learning outcomes caused by doing social networking or texting and task completion in parallel.

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Liu, Fang, Deng, and Zhang (2012) highlight the possible long-term effects of overusing the Internet, such as health issues or the deterioration of interpersonal relationships. Polónyi (2017) questions the efficiency of technological novelties in education at all, referring to the inverse ratio between the ascending number of teachers being acquainted with and using IC devices in Hungary and the decline of our students' international test outcomes.

CLIL (content and language integrated learning) in Hungary

Compared to other states in the region, the number of foreign language classes in the compulsory language learning period (year 4 to 10) is high (more than 700) in Hungary; however, their efficiency is questionable: students' foreign language competence seems to lag behind their European peers' (Key Data 2017, Vágó 2009). The differences might derive from the location of schools (village or city), learners' socio-economic background, school equipment at hand, and the qualification of the teaching staff. The final school requirements and the necessary demands for entrance into tertiary education are not in accordance either: learners need to have foreign language knowledge at B1 level by their graduation (at the end of their high school years); however, they have the chance to continue their studies from 2020 only if they have it at a (certified) B2 level (Kovács 2018).

Previous approaches considered language learning as a self-serving, endless process targeting the perfect knowledge (Singleton and Cook 2014). By now, the role of language learning and teaching has changed: their ultimate goal is to help learners achieve functional language use. The usage-based approach to language learning regards the language, the learner, and the learning process as dynamic, adaptive systems that are in constant interaction and thereby change (Ellis 2007, Verspoor 2017). This is why language cannot be looked at independently. According to this approach, language is a set of meaningful, complex, long-developed, and fixed units and not just a combination of syntax and lexicon (Verspoor 2017). Since syntax is not the core of language, explicit practice is unnecessary in the learning process because the constant repetition of units leads to the construction of language (Ellis 2002, 2015; Verspoor 2017). In accordance with this, Lightbown and Spada (2013) point out that communicative language teaching can only be effective if language is used for reasonable aims within proper contexts and frequency, with the involvement of authentic materials and a necessary amount of grammatical explanations.

CLIL is a holistic approach for institutional language teaching which focuses on the parallel improvement of content and language in the target language context (Nikula, Dalton-Puffer, and García 2013). Even though learning through the target language is a lot more challenging for learners than traditional methods, it guarantees higher exposure, which is a crucial factor in language acquisition

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(Ball, Kelly, and Clegg 2015). Since creation of knowledge (content) is one of the main aims of usage-based approaches, teachers' role is supposed to change. Instead of being the unique source of knowledge, they need to work as facilitators and create an optimal environment which might contribute to and result in individual learning paths (Verspoor 2017). This can only be a realistic aim if a novel methodological repertoire is applied. The implementation necessarily co-occurs with the blurring of teacher–learner roles, less tight lesson settings, indirect mode for error/mistake correction, preference of cooperative teaching methods, and the use of authentic materials, all supported by IC devices. Contrarily, some researchers draw attention to the limitations of implicit language learning, claiming that not all target language inputs are made use of. Ellis (2015) agrees with this while stating that "naturalistic" second language learning cannot be as successful as first language development.

Teachers working in a dual-language school might be concerned about the question of who their learners really are, and hence they should be taught with different methods, in a faster pace with far-from-usual approaches. According to Grosjean (2013), they are bilinguals as they are able to use both languages to achieve their goals. The phenomenon of bilingualism and the effects on cognitive development attributed to it are in the focus of heated discussions due to controversial data in this research field. While Bialystok (2012) confirms the high level of executive functioning caused by constant shifts between languages, others (e.g. von Bastian, Souza, and Gade 2016) refuse the existence of any kind of advantage originating from bilingual state. Contrarily, Kovács and Trentinné's (2014) research conducted with dual-language learners points out the positive outcomes of bilingualism: learners are seen as fluent and brave speakers with perfect inductive logical thinking skills and communication in both languages. Although CLIL learners gesticulate more than their monolingual peers, they rarely do code-switching. Beardsmore (2008) states that they do quite well in tasks requiring the imagination of different types of solutions. In the process of creative knowledge construction, CLIL learners apply thinking skills such as data analysis, synthesis, evaluation, discussion, and understanding. Compared to their peers learning according to a traditional curriculum, CLIL learners gain more detailed and thorough knowledge that they are able to present with the application of proper terminology as well (Quartapelle and Schameitat 2012).

Current regulations in Hungary specify those school subjects that can be taught in the target language in CLIL programmes: biology, geography, physics, chemistry, civilization, maths, information technology, English language, and history. CLIL programmes are launched from the beginning of the first school year with 8–10 target-language classes per week. By the end of the eighth year, most of the learners are able to face the challenge of taking a complex B2 (intermediate) level language exam with confidence and success (Kovács 2018).

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Verbal Fluency

Semantic and phonemic fluency tests are well-known, widely accepted and applied measurement devices in clinical practice and research used for assessing verbal abilities. Even though these tests are quite similar regarding their construction, cognitive mechanisms that are required to complete them are highly diverse. While associative thinking is more typical in the semantic fluency task, the completion of a letter fluency test requires a less automatic and more abstract way of thinking since the testee needs to suppress semantically similar solutions to apply various word retrieval strategies. With the involvement of neuroimaging techniques, researchers confirmed the fact of diverse brain processing and activity in the case of the two test types (Katzev, Tüscher, Henning, Weiller, and Kaller 2013). Apart from the proper operation of executive functions, other factors might also have impact on test outcomes, such as socioeconomic status or maturational differences, although this latter factor might cover neuroanatomical and/or social differences as well, leaving the question open. Studies focusing on gender differences corroborate the existence of dissimilar processing strategies in women and men. While women tend to shift among clusters more often compared to men, they create clusters with more items but generate less words in total (Weiss, Ragland, Brensinger, Bilker, Deisenhammer, and Delazer 2006).

Apart from participants' flexible thinking skills and processing strategies, the application of verbal fluency tests might provide information about their lexicon. Luo, Luk, and Bialystok (2010) came to the conclusion that the number of words generated in verbal fluency tests is consistent with the vocabulary size of the bilingual individual. In the standard phonemic fluency test, participants are required to produce as many words beginning with F, A, and S as they are able to within a limited time (1 minute). After testing the basic indicators (number of generated words and perseverations), clusters (with at least two words), shifts between clusters, long words, and unique words were assessed. Clustering and shifting have the same relevance in the analysis (Banerjee, Grange, Steiner, and White 2011; Kavé, Kigel, and Kochva 2008); however, the number of words and their length might reveal the level of language proficiency.

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Research methodology

General background of the research

This study looks for answers to the following questions: how senior section students of a primary school taking part in bilingual education think about teaching English, the English language, how they learn the language; how they would change teachers' activities and English lessons.

Research sample

The sample was made up of primary school students of a dual language school (N = 32). One group of students (N = 13) took part in technology-enhanced English language classes at least once a week for ten months, while the other group (control group, N = 19) did not receive similar education on a regular basis. The selection of the technology-enhanced group (hereinafter also referred to as the TELL group) was based on stratified convenience sampling technique, where the basis of stratification was technological enhancement. The control group did not receive technology-enhanced education, but students were still students of the same school receiving dual language education.

Instruments and procedures

The study was based on a sequential model of mixed methods (Creswell 2012). In the first stage, a verbal (phonemic) fluency test was conducted: this assessed the language skills of the students. Following this, students who had high scores (N = 7, out of which three took part in technology-enhanced dual-language education, and four belonged to the control group) participated in a structured interview of 17 questions so as to explore their subjective views and to get detailed answers to the research questions. The structured interviews were conducted in writing, during regular school time, in 45 minutes. The text corpora consisted of two pages on average. Processing the structured interviews was facilitated by the MAXQDA software. The verbal fluency test and the structured interviews made it possible to implement methodological triangulation (Flick 2014). This paper presents the findings of the structured interview.

Data analysis

The processing of the structured interviews was done using qualitative content analysis, combining deductive and inductive logic. During deductive content analysis, a code list was set up, using a priori coding. A priori coding is a form of

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data coding during which the main codes are generated before the analysis, based solely on theory and/or even the researcher's own experience. So, for structured interview questions, ten main codes were available: learning habits, favourite subject, learning English, development, in Hungarian, time spent studying, task, language learning, if I were a teacher, and lesson. The process based on deductive logic was followed by an inductive discovery of the deep layers of text segments, i.e. finding subcodes that constitute a match between the meaning of texts and subcodes. The reliability of coding was ensured by intercoding, and the text corpora were re-coded using the same logic to implement the final classification of the questionable elements. During re-coding, there was no conceptional change, but some code names had to be modified.

Ethical aspects

During the research, ethical parameters were strictly observed, and anonymity was assured. Parents were asked to provide a formal consent in which they agreed to the participation of their children in the study. As it was a qualitative research, it was best to create such an atmosphere that participants could pronounce their ideas and express themselves frankly, without any limitations. As the students had been in a long relationship with the teacher making the interview, they were able to reveal their opinions openly.

Findings

The outcome of the structured interviews was 164 coded units, including 115 codes, according to MAXQDA's project information.

Discussion

The data were analysed according to the code hierarchy, comparing the groups involved in technology-enhanced dual-language education and traditional dual-language education. The analysis was done according to the following axes in the case of both groups: learning habits – favourite subjects; learning English – development – in Hungarian; time spent studying; preferred subjects – disliked subjects; language learning strength – language learning weakness; If I were a teacher – lesson.

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Learning habits – favourite subjects

Learning habits can be detected in the case of five subcodes in the technology-enhanced dual-language (TELL) group (task difficulty, description, listening to music, drawing, repeating aloud). Learning according to task difficulty is based on gradualness: "I get home and then I first do the difficult tasks (homework) and then the easy ones." Re-writing means copying the material to be learnt several times in order to enhance memorization, while listening to music means learning amid continuous background noise. Re-writing and listening to music were seen as important by the same pupil. Drawing appeared when it came to learning tables: "If I have to learn a table, I often draw it." The same student thought thinking and speaking aloud is also helpful when learning. Both description–music and drawing–thinking aloud are intriguing combinations.

In the case of the control group (non-TELL-CLIL), the analysis of the data was conducted on the basis of the same subcodes. Here, one student remarked that he/she does not have learning habits, and learning on the last day also appeared as an option. These two did not appear in the group receiving technology-enhanced dual-language education; they saw learning as a process, not merely as matching isolated elements of knowledge. Gradualness also appeared here in the file of one student: "I start with the easy tasks; if there is a draft or we have to write a story, I usually do that first." In this group, we did not detect description or drawing, but two students mention listening to music ("I start the music and I sit down to read the stuff.") and repeating aloud ("I do the written tasks alone, and I do oral tasks with my brother or I recite them alone.") as important activities.

The most popular subject is English language class in the TELL group; the next two subjects were PE and music. One student regarded technology and arts as their favourite subjects, but other students mentioned literature and ethics as well. As for the school subjects taught in English (geography, civilization, history), only geography was considered as a favourite one.

The control group was in many aspects different from the TELL group. Here, music and PE were not mentioned as favourite subjects, nor did technology and geography appear as such. English language class is the favourite subject again, followed by civilization (culture and civilization, which did not appear in the case of the TELL group); other subjects were arts, literature, and ethics. Both groups were taught exactly by the same teachers in most of their lessons except for the English teacher.

Learning English – development – in Hungarian

Learning English came to the surface in several ways in the TELL group. Students think that the most important aspects are grammar and speaking, "to

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be brave and self-confident speakers", and it is important to make themselves understood abroad even if they use the language less accurately ("I see how bad it is if you can't make yourself understood abroad.", and "You can make yourself understood even with a number of grammar mistakes."). The reason for learning English is primarily the fact that it is the lingua franca, but another respondent mentioned getting a language certificate as well. The influence of parents and godparents also surfaced as we are speaking about primary school students who are influenced by members of their families ("It was the idea of my godmother for me to learn English as I liked counting and singing the alphabet even when I was a little child."; "My parents enrolled me to this school."). Individual interests also surfaced as one student emphasized how interesting the English language was ("It's interesting, and I like it.").

The answers of the control group are also varied. There are many similarities, and the differences that we detected came from different approaches. One student thought in complex terms and saw learning as a combination of speaking, writing, and thinking ("I'd like to learn to speak, to write, and to think in English as well as in Hungarian."). When speaking about necessity, English as a lingua franca appeared ("English is studied everywhere and everybody will speak it in the future."). The most important factors mentioned were vocabulary, grammar, and speaking. Students also said that language is important to make ourselves understood and to be able to understand others. Besides usefulness, language as a tool of self-development also appeared ("I want to develop my logic and thinking."). The significance of world language turned up again ("Almost everybody understands English, and it feels good to be able to speak and translate when abroad.").

In terms of development, there is one very important subcode in the case of the technology-enhanced dual-language group as all students considered their speech and pronunciation to have developed the most. Besides this, although classical elements also appeared (grammar, reading, listening), nobody reflected on reading.

The answers of the control group showed a different concept of teaching and learning. Reading and listening did not appear; however, writing did ("We have developed in writing as we wrote many compositions.") along with grammar ("I've learnt how to use grammar properly."). Here we see the difference between the concepts of traditional and technology-enhanced teaching: the opposition of the explicit, rule-driven grammar and writing practice versus speech-centred, implicit education. Reflections about speech also mentioned aspects of psychology and group dynamics ("My vocabulary has developed, and I used to be shyer when it came to English. Now, I'm a more active participant during lessons.").

Ideas about what students would prefer to learn in Hungarian also gave us intriguing insights. In the case of the technology-enhanced bilingual group,

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geography appeared once, while history was mentioned in all responses. This shows that the subject is difficult, the mastering of dates, periods, and cause-and-effect relationships requires a lot of effort in English. This problem is also felt by members of the control group as they marked both history ("There are words only used in history, and these are very hard in Hungarian, let alone English.") and geography ("Only because we learn it in English; so, it's much harder.") in equal numbers. One student remarked that he/she would not learn anything in his/her mother tongue ("I would prefer English to Hungarian as it is easier and clearer.").

Time spent studying

When finding out about time spent studying, we considered two aspects: the time spent studying English, and the time spent studying any other school subject.

When asked about learning in English, one student from the technology-enhanced group remarked that he/she studies 6 hours ("I watch videos and movies, I write stories, and I read; so, I do not consider this as studying. I never just sit down with a book to study."). This student prepares for classes in a flexible form, actively using the language. This much time is exceptional, nobody else reported that much time in the control group. In this group, students spend 1 or one and a half hours dealing with their English language studies, and, on average, they spend 1 or 2 hours studying other (Hungarian) subjects depending on the lessons of the following day.

In the control group, students' time spent on studying English and in English is 1 or one and a half hours ("If we write a test, I study more. I watch videos every day, but only in American/British. I learn a lot from this because some people keep a vlog, make videos of what they do every day."). One student claims he/she studies all the time ("I watch and read everything in English. So, all the time"), whereas another student says it is enough to spend 10 to 15 minutes studying English ("10–15 minutes. This is enough for me to understand the stuff."). These are extreme cases that serve as food for thought concerning teachers' activities (e.g. Is there differentiation in classes? What methodological culture does the teacher have?). Time spent studying is the most variable in the case of this group as time varies from 20–30 minutes to 3–4 hours ("I sometimes spend 3–4 hours studying. It depends on what subjects there are to study and if there is oral preparation as well.").

Preferred and disliked activities

Students reflected on both classroom and home activities. Based on these, we were able to set up two categories: preferred and disliked ones (*Figure 1*).

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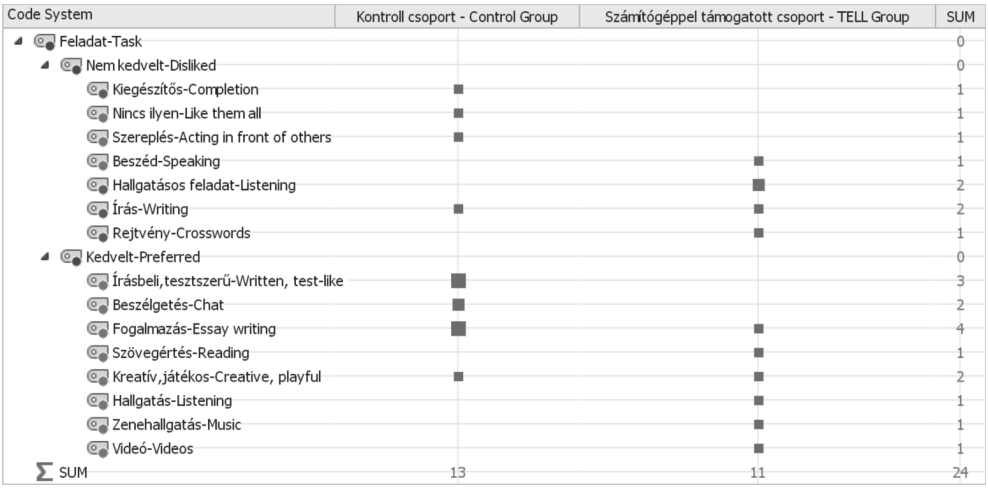


Figure 1. *Preferred and disliked activities*

In the case of the technology-enhanced group, preferred tasks are multi-faceted: compositions, text comprehension ("I like gap filling and text comprehension tasks best."), creative, playful tasks ("word puzzles, playful, creative tasks"), listening to music, and watching videos all appeared. It is interesting that listening to music and watching videos was mentioned by the same student. Speech also appeared among the disliked tasks ("tasks where I have to talk to others because I'm afraid I'll make mistakes") together with listening, writing, and various puzzles. The student who did not like speaking tasks said she liked writing compositions, which shows she is introverted and does not like speaking in front of her classmates.

In the control group, most students set written tests as preferred tasks ("matching, true/false because they are easy to get right"), from which it might be assumed that they practised these types of activities a lot during lessons. Besides tests, students reflected on composition, story writing, and gap filling ("gap filling as it requires creativity and vocabulary"). One student spoke about the equal importance of written and spoken tasks ("I like both written and spoken tasks as both are very important in language learning."). Some members of the control group reported writing and gap filling as disliked tasks ("I don't like gap filling as I always mess up what to put where."). One student said there was no task she disliked ("There is no task I dislike; I must do all of them so as to develop.").

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Language learning: Strengths and weaknesses

Figure 2 shows the code hierarchy of learning strengths and weaknesses.

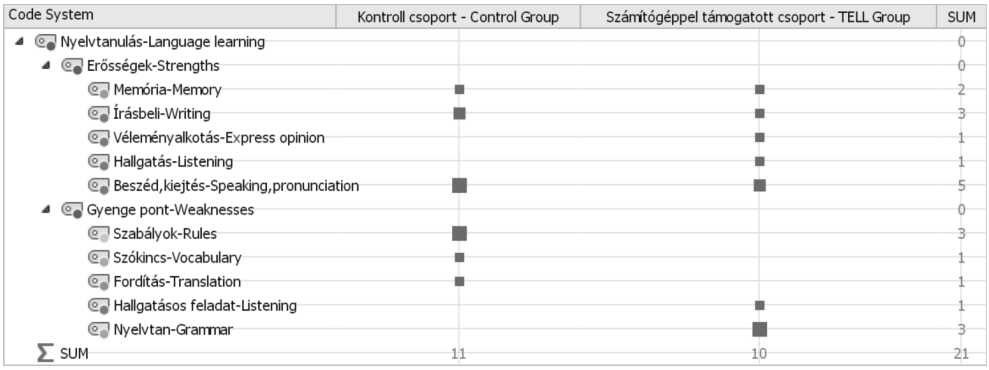


Figure 2. *Language learning strengths and weaknesses*

In the case of the technology-enhanced group, the strengths listed were memory, written tasks, listening, speaking, and expressing opinion. We found interrelation between the preferred and disliked tasks in the previous section as students who did not like speaking tasks involving public speaking marked written tasks as their strength, while those who liked public performance and communicative classes marked expressing their opinion as their strength. The weakest point is grammar for everybody, which might come from the fact that there was little focus on explicit grammar explanation and practice. Grammar structures were embedded in phrases in different communicative activities, and so they could not have been separated and recognized consciously by the students. This might have contributed to their feeling of deficit. Students made an unusual distinction between "grammar" and "rules". "Grammar" as an umbrella term is a more holistic and less definable view of language structure, while "rules" refer to the exclusively explicit norms that should be learnt by heart.

In the control group, students listed fewer strengths concerning language learning. Besides memory and written compositions, the majority mentioned speech as well ("I really love speaking, so I find a way of expressing myself in English as well."; "I speak English fluently."). As opposed to the TELL group, however, control group students enumerated more weaknesses. Besides translation and vocabulary, all of them mentioned the difficulty of applying rules in English ("There are so many rules, so we really need to learn them."). The distinction made between "grammar" and "rules" makes sense here since the emphasis on deductive teaching methods (such as the simple projection of rules and their mugging instead of constant application in various contexts) can be clearly detected.

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Beliefs about the teacher and the lesson

The efficiency of language learning is closely related to the teacher's activity and personality. These also affect the atmosphere and the methodological culture of the English class. In the following section, we are going to analyse the issue of what students would have done differently during the teaching and learning process if they had been the teachers. The results are shown in *Figure 3*.

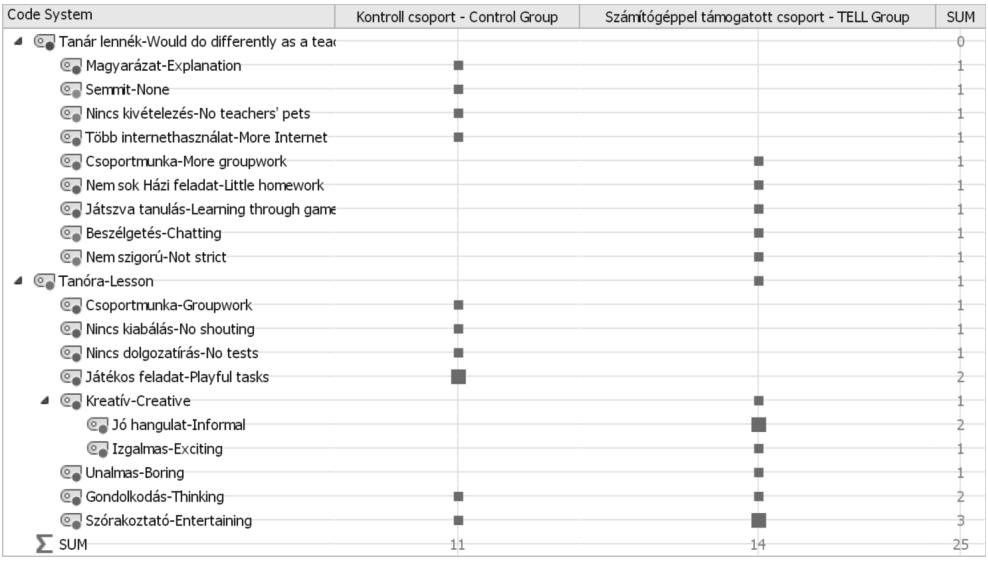


Figure 3. *Teacher–lesson code hierarchy*

In the case of the technology-enhanced bilingual group, we had very few answers to the question what they would do differently as teachers. One student said there should be more group work, another student said there should be less homework, playful learning and talking should be emphasized, and the teacher would not be too strict. These demands correspond to the characteristics of the age-group. It is worth noting that teaching and learning can be most efficient if teachers use diverse activities based on playing and movement, corresponding to the characteristics of the age-group.

The students of the control group had more remarks and more details about how they would change the teachers' activities. They would give up traditional methods and would also change the explanation as it does not fulfil its main objective ("I wouldn't just put the book in front of them to read and learn, but I would explain it clearly."). A new generation of methodological culture could also integrate a more courageous use of the Internet ("I would do more online

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tasks."), and students would do away with favouritism as well ("I wouldn't be biased just because I don't like a student.").

In the technology-enhanced group, one student said: "The classes are mostly enjoyable because they are diverse, but in some cases teachers don't really get what we're interested in." In these thoughts, we can find the fact that the efficiency of teaching and learning depends on both parties, who know and accept each other. During lessons, a good atmosphere and creativity are important ("not boring but intense"), but monotonous activities are not (instead "funny, colourful, playful tasks, watching movies").

The control group also wanted more group work and playful tasks ("We don't just need difficult and dry stuff."). Other ideas about class atmosphere also surfaced, demanding a facilitating type of teacher ("We like if we laugh and we're not shouted at.").

Conclusions

The study looked for answers using mixed methods to questions concerning technology-enhanced dual-language education. In the study, the authors focused on questions like how senior section students of a primary school taking part in content and language integrated classes think about the English language, how they learn the language, and how they would change the teachers' activities.

Students of the TELL group saw learning as a process and not merely as a succession of isolated activities. In their case, speaking was a central element, whereas the control group hinted at the interaction of thinking and speaking, showing a complex way of thinking. Being speech-centred is also a function of teaching style, and as the students were taught by two teachers this can also account for the fact that tests were a preferred activity in the case of the control group. As for teaching activities, it was found that there are differences between problem-centred and activity-based technology-enhanced teaching and traditional methods based on a classical methodology (illustration, explanation, frontal instruction), where interactivity is not so much in focus. Reflections also show that – irrespective of teaching style and methodology – students think it is important that teachers do not have favourites and treat students as partners.

The mixed methods research methodology used during the study – including verbal fluency test and structured interview – is capable of discovering the deep layers of the issue as the methods used facilitated the exploration and interpretation of students' subjective ideas and views.

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