Attention for attention in a CV writing project using the method of Lesson Study in the foundation training part of vocational education and training

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Introduction

An interesting thing about our team, and also one of the main challenges of running it, was that one of our team members joined us from the other side of the country. Already the formation of the team required a lot of effort and even during the completion of the first module of the LS4VET course, the roles that each of us could or could not undertake in the implementation of the project were still taking shape. In planning our Lesson Study, we wanted to focus on a topic or problem that would be of practical value to all of us, in all the different subjects and fields of pedagogy represented in our group, that any of us could "reuse" the research lesson in our own profiles. Thus, we chose the theme of the research lesson from the field of digital competences and focused on studying methods to sustain active attention.

The main goal of our Lesson Study was to apply a method that would help to raise and sustain active student attention in the classroom. The observation and monitoring of the research lesson focused on identifying the dynamic changes and phases of students' attention. Our specific choice of topic was based on the assumption that the sustainment of students' attention can be facilitated by more-than-average student activity, asking more-than-average teacher questions (closed, open or rhetorical, "thinking together"). The validity of our hypothesis was verified by monitoring concrete measurable factors during the research lesson, which were also synchronously recorded on the spot.

The five-member of our LS4VET team consisted of teachers from two schools: the VSZC József Öveges József Technical School, Balatonfűzfő (4 teachers) and the MSZC Technical School, Mátészalka (1 teacher). The team was led by a colleague from the Öveges school. Students and teachers from the two schools were involved in the initial collection of data (opinions). In addition, the manager of Katedra Veszprém Nyelvtanoda Kft. (a private language school) was involved as an external expert. The members of our team included teachers of information technology (IT), digital culture, foreign languages, vocational foreign language and physical education, and all had experience as class teachers. The specific topic of our research lesson was writing a professional CV, both because students would need that skill for their first job market appearance and because a digital culture lesson would give them the opportunity to learn about the digital tools and online environments available for CV writing.

School context

Our Lesson Study involved two secondary education technical schools, with almost identical structures but 400 km apart, so we worked on joint planning and analysis in a mostly online collaborative format - via Webex. The research lesson took place at the Technical School in Mátészalka, where the Öveges team members travelled, and two members of the project

management team also joined online. Three local teachers (the class teacher and two IT teachers) also participated as observers. The lesson was attended by a class of year 10 students - another year 9 class part in the preparation for the lesson - studying in the IT sector. The research lesson was implemented as part of their Digital Literacy subject, which aims to develop students' digital literacy skills needed to learn about and use online applications that are important in everyday life and essential for continuous professional development.

Focus and process

Preparations

There is a widespread perception that it is harder to capture and sustain the attention of today's school-age generation than that of the previous, less "digital" ones. There are many students with attention deficit hyperactivity disorder (ADHD) who require increased attention also in secondary school, and many teachers face the problem that students are unable to pay attention in class or can do that only for short periods of time, whereas that is the basis for successful learning. Students' lack of attention has posed a challenge for most teachers and we tried to find measurable and tangible answers to this issue in order to improve teacher and student effectiveness. Our LS4VET team focused on facilitating and sustaining learner attention through consciously designed teacher questions, and we built the design and delivery of the research lesson and its evaluation on this idea. Our work was supported by using a folder system on a shared drive.

First of all, the quantitative results from the data collection during the research lesson as well as other empirical experiences confirmed that if the teacher asks the students questions during the various phases of the lesson (be it the introduction, practice or summary part), they pay attention more actively, for a longer time and thus more effectively. As a consequence, the learning content is better retained not only in the short-term but also in the longer-term memory, since, for example, with the help of guiding questions, they themselves go through, almost step by step, the cognitive processes that facilitate the organic, logical (i.e. permanent) assimilation of new information. In addition to our own experience, we based our research on, among other things, Meixner's principles (gradualism, triple association, immediate feedback), which are most useful for helping learners with special education needs (SEN), including those with attention deficit disorder, to progress. Our hypothesis on stimulating and sustaining teacher-student cognitive contact through questions was integrated into this framework.

Research lesson

The objective of the research lesson was to familiarise students with the formal elements of a CV, to make them recognise its importance and to apply it in a job search. In addition, the lesson aimed to practice the use of a graphical interface (Canva), exploiting its potential to create a visually attractive document. All this had to be achieved by constantly maintaining students' active attention and its dynamic changes, by alternating student work forms to enhance and maintain student activity, and in particular by the assertive communication of the teacher. In the class, 11 students were observed. Three teachers observed three selected case students and one observed the whole class. The teacher asked a total of about 70 questions. The work forms alternated between frontal class work, pair work and individual tasks and exercises. The students were able to follow the teacher's instructions and each step and

responded in a disciplined way. At the beginning of the lesson, there was some uncertainty regarding the formation of groups, but they managed to form the necessary work form. The lesson lasted 55-60 minutes instead of 45 minutes.

The observation of the research lesson focused on eye contact, posture, continuous work resulting from following instructions, asking questions and other motivational characteristics of the students and the quantification of these aspects. The teacher and the student were observed synchronously and our results showed that, in addition to the usual factors that facilitate student attention (e.g. audiovisual effects), the most active periods of student attention were those when the number of teacher questions was the highest. In addition, we completed our data collection by collecting online student feedback at the end of the research lesson and post-lesson student interviews. For this, we used Classroom Screen at the end of the lesson and Google Forms for feedback at a later time.

After the research lesson

Nearly everything went according to plan during the research lesson, the previously set learning objectives were almost completely achieved. Students' knowledge, skills and abilities improved, including their digital and cross-cultural skills. There was some delay in time, mainly because more time was needed to recall students' prior learning in the first lesson after the winter break. From a research point of view too, the lesson was judged to be a success, as all the planned parts were implemented and the observation of the pre-defined aspects allowed for the adequate monitoring of the course of the lesson.

Response

Research on methodology as well as our classroom experience confirms that by sustaining the attention of the receiver for as long as possible the knowledge-acquiring and learning processes are initiated and sustained, making the learning process productive and effective. Of course, attention is not static but changes along multifactorial dynamics, so we assumed that active classroom attention can be sustained if the teacher asks more questions than the average. Some of the findings from the research lesson observations are presented below.

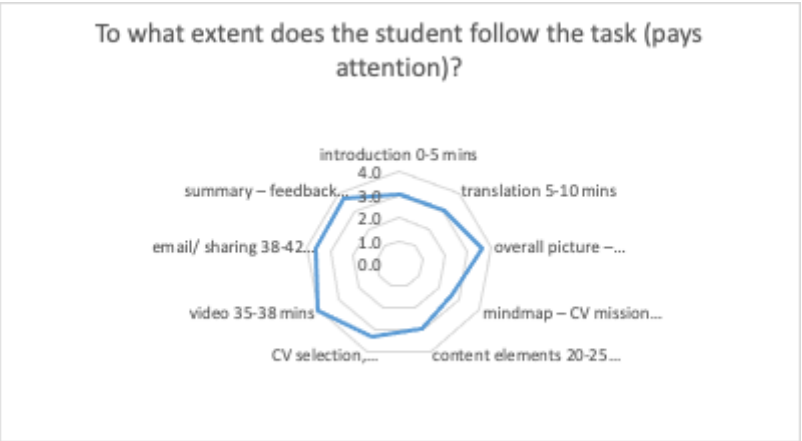

Figure 1. Attention of the 3 case students – average

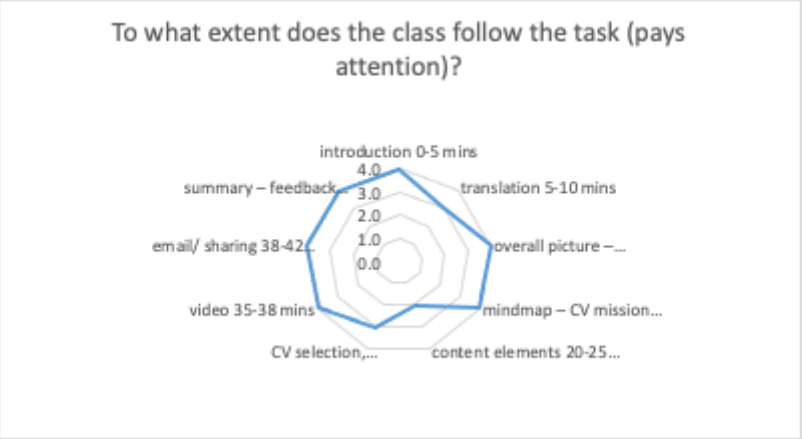

Figure 2. Attention of the class

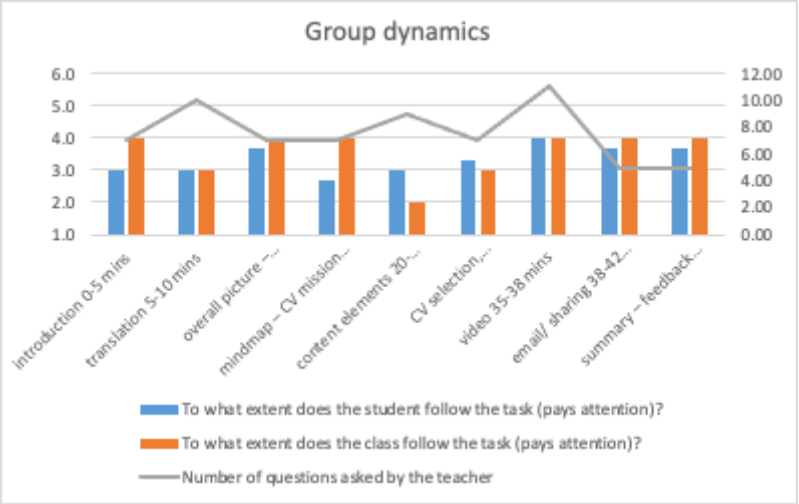

Figure 3. Change of attention and number of questions

The data show that students' attention was at its maximum (for both the class and the case students) when

- the teacher asked the most questions and when the teacher played a video;
- the students' attention was attracted and enhanced by a practical task linked to real life (students visited the website of the company that had announced a search for mentors, where they were given a comprehensive overview of the job announcement and of the company itself);
- a practical activity was implemented (editing a CV using Canva).

Feedback was also requested from the students about three weeks after the research lesson, the results of which are shown in Figure 4. This showed that students considered the practical part as the most interesting. The student interviews and feedback confirmed that the lesson had achieved its objectives. The students became fully familiar with writing a CV. They appreciated most the videos, the online feedback and the many useful questions and help they received.

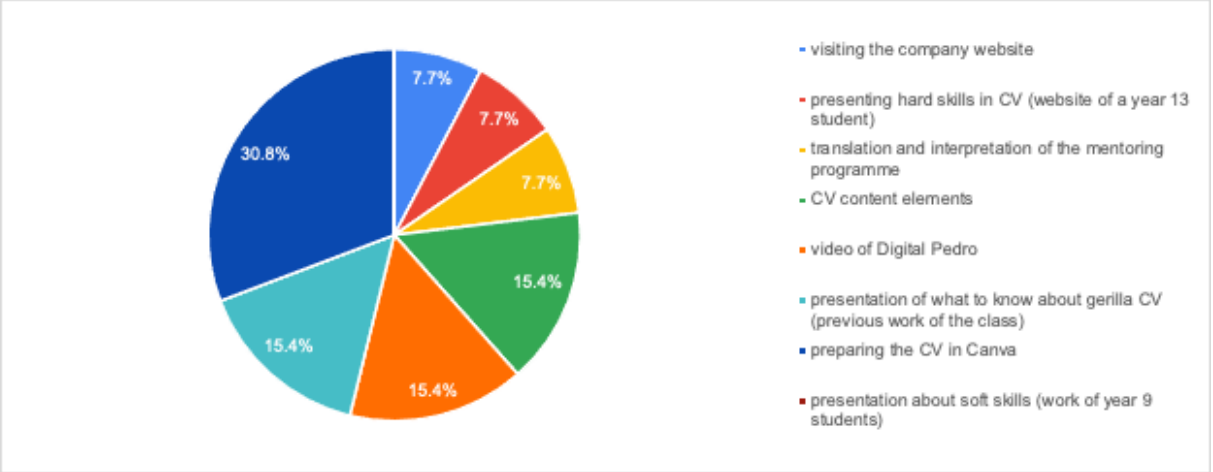

Figure 4. Which part of the lesson was the most interesting?

Based on the observation and analysis of the research lesson we can conclude that active attention is highest when the student is interested in the task (finds it useful) and is focused and active. Media content and teacher questions assist to a great extent to sustain active attention.

The Lesson Study journey

Group reflection

The research lesson went as planned. The observers followed the lesson according to a previously agreed set of criteria. There was some uncertainty in the initial group formation, and students had some difficulty answering the teacher's questions based on their prior learning (softskill, hardskill...). After the initial uncertainty, group order and steady work were established. The number of observers was large in relation to the class - 11 students and 8 teachers -, which may explain the uncertainties of the students.

Individual teacher reflections

- As a practicing teacher, especially as one in a SEN-supportive school, my most important pedagogical principle is the motto "I hear-I understand, I see-I remember, I do-I understand". During the research lesson, I monitored the change of student attention and activity regarding the whole class, and in each part of the lesson, I could clearly observe the fluctuation of class activity depending on which of the above-mentioned factors the ongoing task required. It is also evident from the quantified data that the audiovisual stimuli had a higher response, and the practical tasks also almost completely fulfilled their expected role of stimulating attention and activity. Already during the post-lesson discussion, I suggested that, following this line, the structure of the research lesson could be modified in such a way that the students would reach the expected outcome almost from the beginning by means of practical tasks. This of course raises the question of whether or in what way the themes of the preceding lessons should be adapted to such a mainly practice-oriented lesson.

- For me, this project has so far provided the biggest plus in terms of awareness and planning, as I have not only had to observe with analytical precision the lesson

management etc. of the colleague who was teaching the observed lesson, but it also worked as a mirror showing my own good or not so good practices. In addition, by rediscovering the theoretical background, I also gained a deeper insight into the nature of learning processes, which I will use in practice, i.e., in my teaching.

- I joined the LS4VET project and got involved in Lesson Study as a school leader. From this point of view, I see it as (another) method in which teacher collaboration is the key. This aspect is completely in line with what we think and should think about education, i.e., acting together and setting an example. Not incidentally, Lesson Study integrates into the pedagogical planning the methods, the project approach and the development of transversal skills that are at the forefront of vocational education and training. This is what I have experienced in practice, from the planning of the research lesson to the post-lesson discussion.

Recommendations for further development

Suggested changes related to the research lesson

- More preparation and less recall would have been needed because many elements aimed at recalling previous learning were added at the beginning of the lesson, which did not fit into the planned 45 minutes. Perhaps the number of tasks was more than could be done in 45 minutes, but it would have also helped if the research lesson had not been held as the very first lesson after the long winter break (of three weeks).

- The topic of the lesson could be further generalised. Here one topic, a mentoring program was covered, which fitted well the IT sector in which the students were studying. Students' interest could be better captured if the topics were optional to choose from (e.g. applying to a football class, applying for a summer job etc.).

- Movable desks would be more suitable for this lesson, because the placement of IT equipment means that students sit with their backs to the board or the projector, which is a disadvantage when working together, as the student is either looking at the teacher or the monitor.

General conclusions, ways forward

- The learning content was strongly focused on IT but it was also related to the subjects of worker skills, financial and entrepreneurial knowledge and skills and project work in the IT sector. However, the inclusion of further general subject areas might also be considered (e.g. Hungarian and foreign languages, classroom teacher, etc.).

- In the planning step, fewer tasks should be planned in order to allow more time for the implementation phase. Other priorities should be followed. Learning attitudes should also be measured to serve as the basis of planning the sequence of tasks in the research lesson, thus increasing motivated concentration.

- We teachers also need to change our self-awareness as to why it may be important for our students to complete a particular task.

- Teachers' methods of lesson management and questioning culture should be improved.

- We also need to modernise the learning environment, we would need mobile furniture and teacher computers on which the teacher can monitor the work of individual students.