

# Developing reading comprehension in grade 9 in the beauty sector using a mind map

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## Introduction

The main objective of our Lesson Study was to develop students' reading comprehension of professional texts and their ability to recognise connections of concepts within texts. We chose this topic because we find that students often enter vocational education and training with poor reading comprehension skills, which limits their ability to master the learning content, apply it in practice and thus experience success. In selecting the text-processing techniques to be tested in the research lesson, we took into account that learning can be greatly facilitated by using pictures, diagrams and coloured graphs in classroom activities. The learning process can be facilitated by a variety of visual aids, which are more useful than teaching simply using a textbook. We aimed to facilitate the development of students' reading comprehension by teaching them the techniques of note-taking, highlighting the main points and visualising connections on a mind map.

## Situation

Our Lesson Study was conducted with students of the 9/A technical class of the Gyula Center of Vocational Training, János Harruckern Technical School, Vocational School and Dormitory, studying in the beauty sector (hairdresser). Our LS4VET team involved members of the school's quality management team, including the school principal, a teacher of vocational theory, a teacher of vocational practice and a developer teacher. Our work was supported by a university expert e-mentor from the project's management team.

Our team had a clear division of labour, sharing all tasks: management, liaison, writing memos, recording developed materials, and preparation of materials for the research lesson. The external expert, a developer teacher, assisted us mainly in methodological matters and in better identifying the unique characteristics and abilities of the students. Our cooperation was implemented through informal discussions and scheduled meetings. We started learning the Lesson Study method as members of the quality management team, and plan to integrate it into our school's long-term quality management process. We would like to introduce the method to as many of our colleagues as possible, promote it among them and encourage them to plan and implement research lessons at our school in the future.

## Focus and Process

We defined goals at three levels:

- short-term student outcomes: development of reading comprehension and the ability to recognise connections of concepts;
- long-term student outcomes: more successful professional exams by increasing learning efficiency;
- institutional goal: to improve the methodological culture of teachers by using more effective pedagogical methods.

In the course of our work, we reviewed several pieces of literature to establish the theoretical basis of our Lesson Study, partly by reviewing methods of developing students' thinking skills (Kagan, 2004), partly by looking for methods related to text comprehension development (e.g. note-taking and mind-mapping, Parents' Journal, 2019).

### *Preparation*

In preparation for the research lesson - which was implemented in the subject of “Beauty sector foundation class” -, we selected the group of students with whom we planned to implement the lesson and collected information to find out what was preventing them from learning effectively (data collection, brainstorming). We analysed previous assessments of their text comprehension skills, which showed that half of the group scored a text comprehension performance below 50%. During the research lesson, we divided the students into three groups (Group A: 4 students, Group B: 4 students, Group C: 5 students).

- Group A students could read words silently or aloud with minor errors. They could read sentences almost fluently. They could understand the content they read with help. After reading a text, they could recognise logical and grammatical connections and global cohesion at a medium level and could abstract at a medium level.
- Group B students could read words correctly silently or aloud. They could read sentences fluently. They could understand the content they read without help. After reading a text, they could recognise logical and grammatical connections and global cohesion at a relatively high level and could abstract at a relatively high level.
- Group C students had difficulty reading words silently or aloud, they could read by saying the letters or syllables only. They could read sentences with difficulties. They could understand the content they read with little or no help. After reading a text, they were unable to recognise logical and grammatical connections and global cohesion and they could not abstract.

### *Planning*

We chose the theme of the research lesson in consultation with the teacher of this vocational subject in which the lesson was conducted, using her specific suggestions: techniques for improving text comprehension and learning, note-taking and mind-mapping. During the planning phase, we discussed several variations of how to conduct the research lesson. First, we discussed the choice of professional text, and then its length. We all agreed that note-taking and a mind map template should be used and that two consecutive lessons should be devoted to testing these techniques. A further dilemma was whether to leave the mind map template completely blank or whether to include a word or two. As the students in the groups worked individually during the lesson, we decided that from their individually written notes uniform notes should be prepared at the end of the first lesson with the help of the teacher. Later, these notes were entered into the students' notebooks and used as a basis for the mind

map. We were concerned that it would still be a big challenge for the students to fill in a completely blank template, so we added a few words to help them. Our ultimate aim was, of course, to enable the students to produce a mind map based on their notes or even without the notes when reading a professional text. From each group, we selected one student whose activities we observed closely during the research lesson. Our observation criteria were as follows:

- how well the observed students understood the task,
- how they participated in the tasks,
- the time taken to complete the task,
- how well they solved the task,
- how actively they participated in the introduction and concluding parts of the lesson,
- how they felt during the lesson,
- how difficult they found the task,
- how unusual they found the task.

### ***Implementation***

A teacher of vocational theory taught the research lesson. In the classroom, the tables were already set up and the students were seated in groups formed according to their abilities. There were separate tables and chairs for the observers in a secluded part of the classroom, from where it was possible to follow the events and the work and behaviour of the students being observed.

#### *Research lesson part 1:*

At the beginning of the lesson, an introduction was given, the topic was introduced and the text to be worked on was distributed. The task was to read the professional text and then write notes.

- The observed student in group C started slowly with the task. She used a highlighter, marking almost every sentence. Her notes were very long, so the time was short for her and she could not finish her notes.
- The observed student in group B performed as expected. She always knew the answers to the teacher's questions and indicated this by continuously raising her hand. Her notes were concise and accurate, showing a clear understanding of the connections.
- The observed student in Group A was particularly active in the first part of the lesson when students summarised ancient hairstyles based on the teacher's questions. As she often gave good answers, the teacher often called on her. Her notes showed that she had gathered too much information and that they were not sufficiently structured. Her notes were more like a two-page university 'textbook' than notes.

Based on our prior agreement with the teacher who taught the lesson, the observed student from each of the three groups was asked to present her notes. The teacher indicated to each student if any of the points were missing or redundant. At the end of the first lesson, the students recorded uniform notes in their art and fashion history notebooks.

### *Research lesson part 2:*

At the beginning of the second lesson, the teacher handed out a mind map template and reminded the students not to use their previous notes in the notebook. The students filled in the mind map based on the text. They completed the task in a much shorter time than writing the notes in the first lesson. All three observed students achieved similar results, which they presented independently to the class on the blackboard. It is to be noted that the observed student in group C was the first in the whole class to complete the mind map. At the end of the lesson, the new learning content was summarised together, new knowledge was taken stock of, using projected learning material with pictures.

### *Reflection*

Immediately after the research lesson, we conducted interviews with the observed students and the teachers who observed the lesson about their experiences, based on pre-defined questions.

### *Student feedback*

- The feedback from the observed student in group C was very positive, she found note-taking a bit difficult, but in the second lesson, already knowing the text and the notes, she was able to fill in the mind map template very easily. By using these two techniques together, she understood the text very well and was able to actively participate in the recall of the content of the professional text in the summary and review at the end of the lesson. She would like to continue learning using this technique in other lessons in the future.
- During the interview, the observed student in group B said that she was familiar with the use of mind maps from her primary school studies and that she liked to use them when learning different subjects. She enjoyed the lesson throughout and highlighted the possibility of working independently as a positive aspect. The student said that this technique was a great help in understanding and processing professional texts and that she would like to use it again.
- The observed student in group A said that she did not mind using the mind map, although she preferred note-taking and highlighting main points when working on professional texts. She also said that she considered the use of the mind map useful for visual learners, but did not consider herself to be one. The lesson was very enjoyable for her and she was satisfied with the activities of the teacher, although she said she always found vocational theory lessons enjoyable.

### *Teacher feedback*

The research lesson went as planned with the following changes:

- The groups were set up before the lesson, which saved us time.
- The groups did not prepare together a group mind map from their individual work, but the observed student presented her individual work.
- The time spent by the students in completing the mind map was significantly less than expected, leaving time for a summary of the lesson.

## Response

Our most important finding was that it is definitely worth using a variety of techniques and methods to develop students' reading comprehension. In the research lesson, it was clearly seen that all three groups of students performed the assigned task constructively, so they would most likely be motivated to do so in other subjects. In addition, we concluded that improving reading comprehension can and should be developed not only in humanities classes (such as Hungarian literature or history) but also in vocational subjects. Students do not refuse to use new techniques. Teachers in the school who did not participate in the research lesson may also benefit from sharing our experiences, as many of them struggle to maintain the attention of their students, and it is therefore the task of our LS4VET team to introduce the Lesson Study process to other members of the teaching staff and to encourage colleagues to participate in this kind of teacher collaboration, in Lesson Study.

## The Lesson Study journey

The teachers involved in planning and delivering the research lesson got to know each other better professionally, as this required a different kind of collaboration. The benefits of teamwork were clear, with team members working together for the benefit of the students, relying on each other and helping each other. Teachers from the vocational and the general education department became close working partners during the Lesson Study. Indeed, it was an advantage to have teachers of different subjects and thus different competences working together (literature, IT, foreign languages, economics, beautician). An external expert from the services was in constant contact with the hairdressing teacher to discuss the professional content. The research lesson in a practical subject was taught by the external expert in the school's hairdressing workshop, thus ensuring regular coordination with her and her indirect support for our work.

As teachers, we have learned to listen to each other, and to recognise, appreciate and value each other's competences. We also learned the technique of lesson planning in a team. A difficulty was that we had to work through the LS4VET course material on our own schedule before the group tasks, so we were not always in sync with each other. The expectations of the course tasks to be done were not always clear to us. We did not have any prior expectations of the Lesson Study programme because we did not know what the outcome would be. Learning about the LS4VET programme has shown that this method can be used in vocational education and training and is worth promoting in our own institution and in the other schools of our vocational centre. We have agreed to continue to participate in projects which will help us in our own work. Our institution considers it important to prepare students to learn the techniques of the new interactive vocational examination tasks: single choice, multiple choice, grouping, completion. It would be exciting to explore this in a research lesson using the Lesson Study method.

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