

# DEVELOPING CRITICAL THINKING

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## WHAT DOES CRITICAL THINKING MEAN?

A famous saying by René Descartes goes ‘Cogito, ergo sum’<sup>1</sup> (meaning: I think, therefore I am). Descartes can be described as an important founder of systematic doubt. Nothing can be certain in this philosophical approach of thinking once there exists any doubt. Systematic doubt is an extreme way of reflecting the apparent reality and of finding an answer to the question ‘Am I?’. The significant achievement of the systematic doubt concept is the usage of doubt as a methodological instrument. In comparison, critical thinking does not mean that one doubts everything, but it rather entails asking questions and therefore trying to get ‘to the bottom of things’.

There seems to be sufficient evidence that an inherent necessity of human beings is to understand their environment. In this context, the environment includes all political, technical, economic, social, cultural, historical and religious aspects that people relate to. Things often seem to work in a certain way or for a certain reason and facts are facts because somebody, perhaps our parents or our teachers, told us that certain things are a fact. But are things or facts the way they appear? It is nearly impossible to find a general answer to this question. However, good examples demonstrating the consequences of a lack of reflection or of thinking processes, especially critical thinking, are the existence of prejudices and stereotypes.

## CRITICAL THINKING IN SCHOOL

The curriculum framework used for the assignments is composed of four stages in total. One stage is critical thinking. With the help of critical thinking one is able to scrutinise obvious facts and to ask questions. Therefore, critical thinking is a basic instrument to develop critical citizenship which should be a main aim of school education according to the curriculum framework of the European Values Education project. At first, it is thus necessary to take a closer look at critical thinking as a process and at how pupils

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<sup>1</sup> Source: Hollendung, 2001.

can benefit from critical thinking. Secondly, it can be assumed that critical thinking or elements of critical thinking can be found in the assignments and lessons. Hence, it should be researched how the students developed critical thinking during their lessons and whether the pupils were used to it.

## CRITICAL THINKING AS A PROCESS

According to Stella Cottrell, critical thinking includes:

- » *identifying other people's positions, arguments, conclusions*
- » *evaluating the evidence for alternative points of view*
- » *weighing up opposing arguments and evidence fairly*
- » *being able to read between the lines*
- » *being able to identify false and unfair assumptions*
- » *recognizing techniques like the argumentative/logic structure*
- » *reflecting on issues in a structured way*
- » *deciding or evaluating whether arguments are valid/justifiable*
- » *presenting a point of view in a structured and convincing way*
- » *identifying and evaluating reasons and conclusions.*

As shown, critical thinking '[...] is a complex process of deliberation which involves a wide range of skills and attitudes'<sup>2</sup>. This wide range of skills and attitudes can be summarised as the ability to analyse and build up argumentative structures and thus detect strengths and weaknesses in discussions as well as in final conclusions.

One of the most interesting questions is how pupils can benefit from critical thinking. According to Elaine Jackson '[t]he thinking skills approach attempts to address underachievement, low self-esteem and limited social interaction skills.'<sup>3</sup> Furthermore, pupils can benefit from critical thinking skills through the improved ability:

- » *to read a text/book/message with a certain focus*
- » *to identify the key points/important facts/arguments in a text*
- » *to analyze a situation/text/message*
- » *to form and represent a position/point of view/opinion.*

Moreover, critical thinking skills have a positive influence on the attention and observation of pupils. Therefore, one can expect critical thinking to be an important skill that pupils will definitely need for the rest of their lives. It is a necessity for critical citizenship, metacognition and reflection.

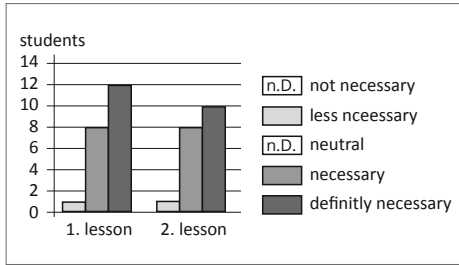
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<sup>2</sup> Source: Cottrell, 2005, p. 2.

<sup>3</sup> Source: Jackson, 2002, p. 34.

## ANALYSING AND EVALUATING THE QUESTIONNAIRE

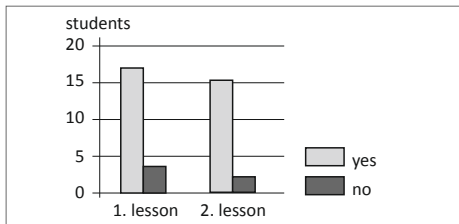
To find out whether the students used critical thinking in their tasks we developed a questionnaire<sup>4</sup> to be filled in after each group held their lessons. The results will be the focus of the following section.



Graph 1: Developing critical thinking in school

the first and the second lesson. Less students thought that critical thinking was definitely necessary after their second lesson. The reason for that could be that some students generally answered only for one lesson and did not consider the second one as important to this question.

The second graph shows that the majority of students developed critical thinking in their lessons. Those students who answered with **'Yes'** gave examples of how they developed it.



Graph 2: 'Have you developed critical thinking in your lesson?'

The first graph shows the results for the question, whether students think developing critical thinking is necessary in school. It can be seen that developing critical thinking in school is seen as necessary or definitely necessary by the vast majority of the interviewed students. Only in one case was it considered to be less necessary for both of the lessons. What is astonishing in these results is that there is a difference between

Students developed critical thinking:

- » *by developing a theory with the help of the Toulmin scheme*
- » *with the help of methods such as brainstorming, discussion and comparing maps*

- » *by talking about differences and similarities which they can find in maps*
- » *with the method of discussion, because this method is very good for critical thinking*
- » *with the maps by making pupils think about, why Protestants, Catholics... live in certain well defined parts of Europe*
- » *by asking them 'why?'*
- » *by making them find some arguments for the reasons they stated.*

Nevertheless, one person answered with **'No'** and gave the following reason:

- » *'I tried but the students were not used to it.'*

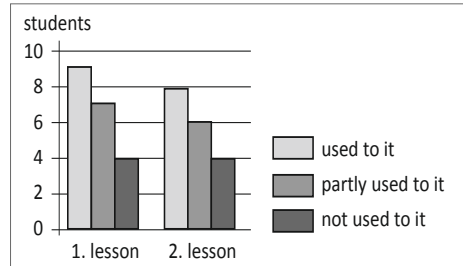
Generally, our students tried to include critical thinking in many different ways.

<sup>4</sup> A blank copy of the questionnaire can be found in the end of this chapter.

The third graph shows a similar trend like the previous two graphs, which means that the majority of pupils were at least partly used or used to critical thinking. Only in four cases pupils were not used to it, which correlates with the previous ‘no’-answer in the second graph. It is astonishing that in four cases pupils were not used to it, hence, it must have been difficult to actually develop critical thinking in those classes.

## INTERVIEW WITH ONE OF THE STUDENTS

The questionnaire gives us a general idea of the students’ results. It shows whether and how they used critical thinking in their lessons. To get a more detailed description of a lesson we interviewed one of our students to get some information about one sample lesson.



Graph 3: 'Where the students used to critical thinking?'

**Interviewer:** Hello Stanley, can I ask you some questions about developing critical thinking?

**Stanley:** Hi, yes of course.

**I:** So first of all, do you think that developing critical thinking is necessary in a school?

**S:** I can say that it is definitely necessary because pupils should know not only basic information but they should give some arguments why they think so. They must think about the reasons and causes. For example if we have a map and it is possible to see some patterns here, it is not enough to say yes I see them but we have to find some arguments and think about the reasons.

**I:** Have you developed critical thinking in your lessons?

**S:** Yes.

**I:** What was your assignment?

**S:** Is football as important as religion?

**I:** Ok. So try to describe how you developed it.

**S:** This assignment focuses on religious people in the UK and the relationship between being religious and supporting certain football teams. We used two teams from the UK as an example. Then we asked the pupils whether there were any other reasons except religion to choose a football club. They had to write down the reasons on file cards. Afterwards, they tried to develop a theory for one reason.

**I:** How satisfied were you with the result of this task?

**S:** I think that for Slovak students it is not so complicated to find other reasons than religion because in my opinion in Slovakia there aren't any relations between football and religion. But I thought that it was a bit complicated for them to be developing a theory. However, I was positively surprised because they gave us really good arguments for their suggested theories.

**I:** Ok, this is all. Thank you for your time.

**S:** Bye.

Through this interview we got an insight into one particular lesson. As the student pointed out it is important to develop critical thinking, especially in school. Obviously Slovak students did not have difficulties finding reasons, but developing a theory seemed to be more problematic. Although the student was more or less positively surprised about the result of the lesson, it also demonstrates how important it is to develop critical thinking all the time, and not just in one lesson.

## ANALYSIS AND EVALUATION OF THE ASSIGNMENTS

The analysis of the tasks in the ten assignments will be the focus of the following section. As the results of the questionnaire show, the majority of students actually developed critical thinking, according to their answers. Hence, one could expect that some of the tasks in the assignments must have helped them doing so. This section will only deal with meaningful assignments in order to avoid repetition.

In the assignment 'Devotion to Religion and Active Citizenship' the pupils have to open up their minds to what it means to be an active citizen, thus in this assignment the thinking process is built up quite a lot. The final task, the discussion, helps students to scrutinise what they have learnt during the lesson. The teacher's task is to make pupils aware of the role of an active citizen. They have to reflect on their own opinions and compare them with the views of social scientists. Judging from the tasks in this assignment the pupils must have developed critical thinking.

Another good example for developing critical perspectives is the assignment 'Is football as important as religion?'. Although the assignment in some parts seems to

be a little confusing, the two students who had to teach it developed critical thinking very well by using a scheme, the so-called Toulmin scheme, to help pupils finding arguments to support their thesis.

In the assignment 'Is there a Place for every Penguin in Heaven?' the tasks are well structured and it logically develops critical thinking in the way that pupils are asked whether 'homosexuality should be discussed in school'. Here they have to confront themselves with their own views and those of their classmates. They need to tolerate the opinions of the others and find arguments that support their own position towards the topic at the same time.

Dealing with the opinions of others, whether it is a scientist or experts, needs a critical perspective of the pupils which should make them aware of the fact that not everything experts say must necessarily be the one and only correct explanation for a given fact. As already mentioned in the introduction, with the help of critical thinking one is able to scrutinise obvious facts and one is able to ask questions. All tasks that ask for reasons open up the thinking process of the pupils.

In task seven of the assignment 'Religion and its Influence on Politics and Policies' pupils are expected to discuss the topic critically and develop an argument by questioning the degree to which the idea argued for by the author is harmonious with the data in their own country.

However, when analysing the tasks, it was very difficult to find any critical thinking in the assignment 'Secularization in Europe'. It asks for many explanations but pupils never really have to dive deeply into the topic. It contains a lot of text which might make it hard for the pupils to question the given theses. The assignment definitely includes explanations. Pupils are asked for them in almost every task but without having to deal with the topic that much.

Some of the assignments had some remarks in the end that described in detail where pupils were obliged to develop critical thinking. But unfortunately some of those descriptions did not meet the requirements of what critical thinking means, according to the introduction paragraph of this chapter. Finding arguments for one's opinion is very important in all fields of life not only in school, so pupils must be trained to be able to do that.

## CONCLUSION

Concluding the analysis of the assignments and the results of the questionnaire it can be said that there were only a few opportunities to develop critical thinking. If there were some tasks that did ask for opinions of the pupils they were either used as a starter to relate to the pupils or to make them more interested in the topic. In those tasks that were supposed to start a discussion critical thinking could possibly be developed but that depended on the teachers and on the students. At least open discussions gave them the chance to develop an opinion and find arguments to support it. Furthermore in such discussions they had to relate their own opinion to that of their classmates

or to that of a scientist or other experts. To conclude from our own experiences while teaching in German as well as Slovak schools, it has to be added that students are not really used to such tasks, probably because it is not practised very frequently. This realization should make us aware of how important it is to teach critical thinking in order to make our pupils understand the world better. A good way to do that is to give teachers as well as pupils a frame or a scheme in order to work with arguments and opinions. As seen in the example of the Toulmin scheme, this method of scaffolding was very helpful for the pupils to get their arguments structured. Not only when teaching values but also in quite general terms it is important to teach our pupils the awareness that they do not take each fact for granted and learn to ask questions and hence develop their own thesis.