

# DESCRIBING PATTERNS

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Having pupils learn about patterns was one of the aims of the curriculum framework. But even to us as student teachers describing patterns didn't seem to be an easy task. So the question arose how we understood the patterns offered in the assignments and how we explained them to the pupils.

As every group taught a different assignment, we decided to develop a more general questionnaire that would help us to understand what each group member thought about patterns and what experience the different groups had when teaching patterns.

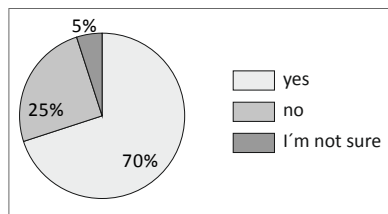
## WHAT COMES TO YOUR MIND WHEN YOU THINK OF 'PATTERNS'?

For students, patterns generally meant a kind of model or a theoretical structure which can be used to explain the regional distribution of one item, by finding similarities to the distribution of another item. The advantage is that one does not simply describe what one obviously sees, but that the description becomes more focused and thereby more accurate and more appropriate to use for further investigation. Thus patterns can be used to give reasons for why a certain aspect is the way it is and to draw conclusions by using, for example, reasons which are valid in one country to explain a similar aspect in another country. From this point of view patterns can be seen as a way of generalizing things and they are also considered to be some kind of basis for the development of deeper understanding.

Students also think that there is a strong connection between using patterns and good teaching, because the use of a proper structure can help to prepare a better lesson. The teacher should always have some idea of the patterns underlying the topic he teaches, so that he not only presents the bare facts and information, but also some logical background of the matter. Of course it is more convenient if the pupils were encouraged to find the patterns themselves instead of simply presenting them to them. As a result, patterns are important because they give a broader insight into a certain problem or subject.

## DOES YOUR ASSIGNMENT INCLUDE PATTERNS?

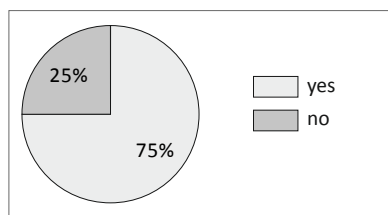
The outcome of this question was that 70% of the students said that their assignments did include patterns. A quarter of them couldn't find any patterns at all. And only a small group of the students was not sure whether there were some patterns or not. So, most of the students were able to identify patterns in their assignments.



Graph 1: 'Does your assignment include some patterns?'

## DID YOU DECIDE TO USE SOME OF THE PATTERNS?

With the help of this question we wanted to find out, how many students actually used patterns in their lessons in Slovakia. The result showed, that 75% of the students, when planning their lessons, made use of the patterns offered. A minority of 25% prepared their lessons without using any patterns.



Graph 2: 'Did you decide to use some pattern in your lessons?'

## IF YES, WHAT PROBLEM DID YOU EXPLAIN WITH THE HELP OF PATTERNS?

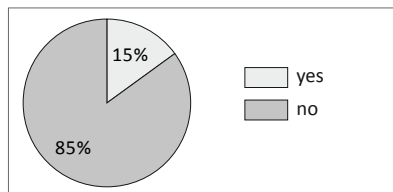
According to the student teachers there were many different problems that they explained with the help of patterns: religious tolerance in European countries (particularly the tolerance towards Jews and Muslims), the connection between lucky charms and religion and between football and religion (which do not seem to be very connected to each other at first glance), diversity and differences among countries, for example the question, why people in some countries believe in God and while people in other countries choose to believe in telepathy. For instance, in one school pupils were wondering why Italy is not the most religious country in Europe since it is the place of residence of the Pope. The students tried to explain this seemingly contradictory outcome of the European Values Survey by referring to the concept of modernity. In modern countries there are less religious people, and northern Italy is rather modern, so that can be one of the possible reasons why religion plays a minor role there. Another group of student teachers explained the relationship between devotion to religion and active citizenship using patterns. The Atlas of European Values was a very helpful tool for explaining these patterns, because the included maps are very detailed. Almost every group of students used some patterns and the atlas as assistance to get better explanations to the original problem.

## DESCRIBE WHICH PATTERNS YOU USED AND HOW YOU USED THEM.

The student teachers mostly used patterns based on the maps where pupils could see certain structures (for example the relation between believers in God and believers in telepathy, or the connection between believing in God and lucky charms). These structures can be either described as organized by regions (Western Europe versus Eastern Europe or countries in the north versus countries in the south), or by other aspects, for instance big countries versus small countries or more developed versus less developed countries. One group of students assumed that more homogeneous countries are more tolerant than more heterogeneous countries, but, of course, there are also some exceptions. Certainly, patterns are usually not absolute and valid in all cases, so for every identified pattern you can also find examples which do not fit in. Another group used a pattern making up a relation between how religions people in a certain country are and the dominant religion in that country. This implies that some religions are considered to be stricter, while others are seen as religions with more freedom.

The patterns used in the classroom were always chosen depending on the age level of the pupils, so that they can fully understand the explanation.

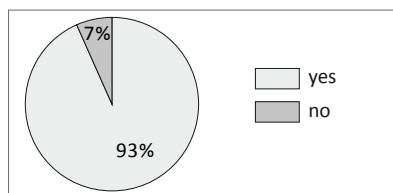
## DID YOU EXPLAIN THE CONCEPT OF A PATTERN TO YOUR PUPILS?



Graph 3: 'Did you explain the concept of pattern?'

The result of the question was absolutely clear. Only 15% of the students explicitly told the pupils what patterns are. Most of them, that is 85%, thought, that it was not necessary and helpful for the pupils to know it.

## FROM YOUR POINT OF VIEW – DID PATTERN OFFER A HELPFUL STRUCTURE TO PREPARE YOUR LESSON?



Graph 4: 'Was this helpful to use patterns for preparing a lesson?'

The outcome of this question was completely clear: 93% of the students who used patterns for preparing their lesson thought that it was very helpful and useful. Only 7% had a different opinion and thought, that they did not need patterns for the preparation of their lesson.

## TO WHAT EXTENT WERE PATTERNS USEFUL FOR THE PUPILS TO UNDERSTAND THE MAIN TOPIC OF THE LESSON?

There are different answers about the usefulness of patterns.

Four students did not consider patterns as being important to understand the main topic of the lesson at all.

More often than not patterns were considered useful for a better conceptualisation and understanding of the main topic of the assignment. In addition they help to show differences and to understand the theories that could help explain different examples. Because of using patterns, the topic seemed clearer to the pupils.

In general, patterns are always useful to understand that geography is a complex science. It's easier to connect the different topics with the use of patterns.

## HOW WOULD YOU IMPROVE TEACHING PATTERNS IN YOUR ASSIGNMENTS?

It's important to know how to improve teaching patterns in the assignment because there were a lot of questions and discussions about patterns before the student teachers had to plan their lessons. Some of the student teachers were not satisfied with their assignments because there were no clear instructions on whether you should use patterns or not.

This is why some of the students think that the whole assignment needs some revision. Furthermore it would be helpful if the concept of patterns could be explained to student teachers more clearly and in their native language. This would help all student teachers to be feel confident in their understanding of the topic.

## IF YOU DIDN'T USE ANY PATTERNS, EXPLAIN WHY.

Some of the student teachers didn't use patterns because of technical problems. For instance, some pupils couldn't work with prints of the maps. So the student teachers thought it would be easier to present the patterns to the pupils because the lesson only lasted for 45 minutes and it would have taken too much time to have pupils do it by themselves.

In some assignments there weren't any good tasks for using patterns or so there was no need for using them.

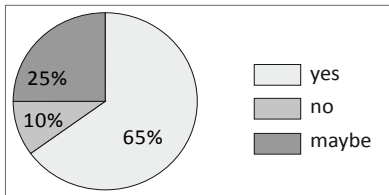
## WHAT DO YOU THINK ABOUT USING THE CONCEPT OF PATTERNS IN GENERAL?

The main opinion of the student teachers was that patterns can be useful, necessary, good and helpful to get a better understanding of a certain matter. Thus pupils should be enabled to generalize findings on the topics. Furthermore it would be helpful if they used it in their spare time to create their own patterns on other subjects.

One of the student teachers thought that patterns are only necessary in a certain part of the lesson. Another student teacher had the opinion that patterns are easy to understand. In contrast the different view is that patterns are rather difficult to understand.

As a result of one lesson experience, patterns seemed to be a good idea for teaching for most of the student teachers, but they also think that patterns are difficult to implement. They might be helpful, but you need a lot of time to be able to explain them properly. Another problem is that pupils normally don't generalize too much and it would be difficult for them to understand the correlation.

## WILL YOU USE PATTERNS IN OTHER LESSONS IN THE FUTURE? DESCRIBE WHY OR WHY NOT.



Graph 5: "Will you use patterns in the future?"

By posing the final question we wanted to find out, whether the student teachers involved in this project would like to use patterns for planning lessons in the future.

The results showed that most of the student teachers think they will use this concept in the future. 65 % think that patterns are very helpful

for pupils to get a better understanding of topics and problems discussed during lessons. Furthermore they get the opportunity to develop their critical thinking skills, which is quite important. 10 % of the student teachers however think that they will not use the patterns in the future. Most of them can't imagine that this is necessary for teaching a class. A quarter of the student teachers were not sure, whether they will use patterns in the future or not.

## CONCLUSION

Finally it was a big success for all participants to use patterns in EVE. All student teachers heard about this kind of model for the first time and most of them used it for preparing and creating their lessons. Now they think that patterns are very helpful and necessary tools to reach a better understanding of spatial distributions. It speaks for itself that almost all student teachers think about using patterns in the future.