Classification of Animals – an English lesson for early juniors

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I was asked to give a talk at the local university faculty of education to second year students doing a course in pre-service teaching pedagogy plus English. We'd had a live link during the previous talk I gave there and due to technical problems this time I decided to work with recorded footage of lessons in Anglia School.

Our theme was 'Classification of Animals' and the context was a group of 8 children, 7-8 years of age, visiting Anglia School for English classes and as part of their course, we decided to bring in more science in order to teach English through scientific thinking.

I prepared the lesson in collaboration with a colleague, Diana Dimitrova, who shared my interest in Science as a context for developing thinking skills through the medium of English. Another aspect of the context is that we had acccess to the wonderful tigtagworld CLIL materials that I was privileged to be a part of developing and for which the project was awarded an ELTons award for innovation in teacher materials.

1) The idea of linking language and thinking

There is an important challenge for all teachers to pay attention to the language of learning and its relationship to thinking skills. This is all the more important in language lessons of course because EFL classes, courses, materials can suffer from a lack of any content at all, which also means a lack of concepts (NB – grammar concepts are a different thing altogether!) or cognitive development.

In Anglia School, we develop our curriculum around themes, and within these themes we build language around concepts and activity. We don't HAVE to teach content, but our philosophy is that it is the best context for developing language, precisely because this is what children do in their mother tongue. We'd hardly expect a mother or father to attempt to develop their children's language by practicing words to do with shopping at the supermarket, or words to do with holidaying at the seaside. Rather, while it is true parents do explore themes with their children, they do this not through simple words, but through ideas and thoughts with their children: if certain shapes fit into other shapes, if different shapes belong together because of their colour, texture, size, uses. Exploring ideas and concepts is such a natural pattern of behaviour for parents, it still remains a surprise to me how we can overlook this ideal context for language in much of the foreign language learning in many schools.

So, when we ask learners to sort items according to certain criteria, whether they are shapes, or other phenomena (in the case of our lesson today, we'll be sorting animals), it makes sense for us to think about what 'academic' language is involved in the cognitive activity in which we are about to engage our children.

Some example phrases for classifying, grouping, sorting, comparing/contrasting (similarity-difference) include:

- grouping (belongs to, is part of, comes from, goes with)
- sorting (agreeing and disagreeing!)
- comparing and contrasting (like, not like, different from, same as)
- Similarity and difference (has, doesn't have / has got, hasn't got)

Examples from other areas:

- An example from a Bulgarian university lecture

Figure 1 – a text from a university lecture in Bulgarian language.

We can identify the 'challenge' education faces throughout the ages with some examples. Above, you can see a screen capture of a text from a university subject in the Bulgarian language.

Take a moment to try to identify the subject and content.

The text is actually from a pharmacology lecture composed of some 20 pages like this. The student in question attempted to write down as much as possible. When it came to studying the content for the upcoming exam, our student struggled to actually 'take in' the content. The first thing to do in this case is to try to identify a 'structure' to the content. By this we mean, there is a need to 'see' how the ideas are organized in the lecture content.

This is not difficult and the content can be organized as shown in Figure 2 – a structure for university pharmacology lecture notes in Bulgarian language.

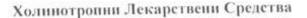




Figure 2 – a tree diagram representing pharmacology lecture content

Clearly, it's a big tree diagram which will be visible to all readers without any knowledge of Bulgarian. The lecture presented medical substances and their relationships to different nerve groups in the human body, as well as names of different drugs, and quantities of dosages.

It goes without saying that a dense abstract lecture at this level, even in the mother tongue, could benefit from some form of visible structure being made accessible (even copied on handouts) to students following the lecture.

- An example from Grade 5 Bulgaria History



Figure 3 – Double page spread from Bulgarian Grade 5 History – Ancient Egypt and Mesopotamia

The same challenge can be seen lower down the education system with the example given in Figure 3 – Double page spread from Bulgarian Grade 5 History – Ancient Egypt and Mesopotamia. The text offers a comparison between the two civilizations, there are descriptions of similar or shared characteristics, of different characteristics, and the significance or importance of specific aspects of these civilizations is highlighted. What we don't have, however, is any visible means for actually 'seeing' any of this information in the text. The headings refer to different aspects for comparison, not the comparisons themselves. What is needed is some form of organization to accompany the content. This could actually entail a new representation of the content on the page, doing away with the linear text completely and offering the content within this new structure or the structure may be given as an instrument for learners to use to make notes of the key ideas in the text, building the structure themselves as they read. As it is we are offered questions like the one in Figure 4 – Question to accompany Grade 5 History lesson.

ПОМИСЛЕТЕ, ОБСЪДЕТЕ, ПРОУЧЕТЕ

 Посочете прилики и разлики между месопотамските и египетските храмове във формата и строителния материал.

Figure 4 – Question to accompany Grade 5 History lesson

This question instructs learners to indicate the similarities and differences of Mesopotamian and Egyptian temples in terms of form and building material. It's a classic comprehension question which has learners read and find an answer in the text. Actually organizing the information for retaining, reusing is left to the learner themselves.

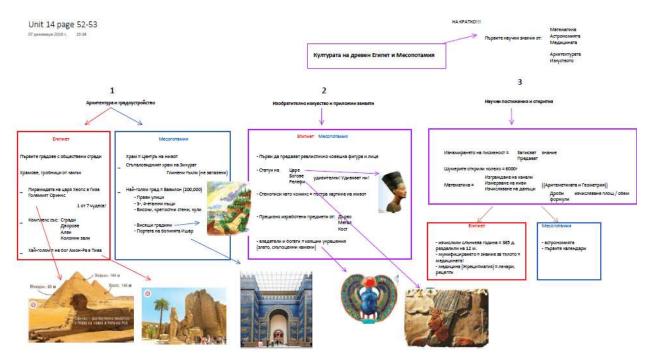


Figure 5 – Visual map of content comparing Ancient Egyptian and Mesopotamian culture and civilization.

Figure 5 offers a colour scheme with boxes to indicate similarity and difference covering a number of aspects of the civilizations in question. It gives an example of how the content might be presented in a textbook format. It could also be used as a separate instrument with an instruction for learners to read the lesson and note the key information in the correct places. Lastly, it is important also to consider the 'academic' language involved and demanded by such material. In this case, our focus is on classifying, describing similarity and difference, highlighting significant aspects or characteristics.



Figure 6 – Language for describing similarity and difference between two civilizations.

The language presented in between the two aspects of Egyptian and Mesopotamian civilization contains the following phrases: one one hand, ... on the other, ... / ... are similar in that ... / ... differ from each other in terms of ... / what is common between ... and ... can be seen in ... / of significance for ... are ..., ..., and

The above examples are offered simply as examples to form the context for our lesson and also to represent the challenge that faces educators at all levels, in mother tongue as well as foreign language medium education. A fuller discussion is beyong the scope of this article, but it is recommended to research the issue further, namely what are the 'ideational frameworks' (or diagrams of thinking) that can be identified in curriculum subjects, and what is the general academic language that is demanded by such simple lessons that compare, classify, contrast phenomena?

One aspect of this filmed lesson which I particularly appreciate now I get the chance to look back at it and consider from some distance what is actually going on, is the repetition of this academic language. Albeit fairly simple in form, after all we are talking about 7-8 year olds, it offers the beginnings of scientific thinking 'talk', or 'doing it like a scientist' which is at the heart of a lot of what we do at Anglia School.

2) The idea of 'activity' versus passive learning

Another fundamental issue in our methodology at Anglia School is 'activity'. A piece of advice to all future teachers – beware of talking too much yourself, the point is getting your learners to talk! The secret then, is to identify the dynamics of activity which enable, engage, cajole, force! your learners to speak.

One simple example is to get learners working in small groups where they are tasked with sorting a collection of items according to specific criteria. This can be as simple as deciding 'which is the odd one out – and why?' where learners are given groups of terms from the day's theme with a random added word to identify and say why it doesn't fit. Expand this to the theme of animals, and animals can be sorted according to various criteria including how they look (fur, feet, teeth, legs, wings, feathers, preypredator, among many others). It is worth pointing out that once we have identified 'structure' in content ideas, they can easily lend themselves to setting up 'activity', 'interaction', 'communication' in lessons.

3) tigtagworld.com and the CLIL versioning (ELTons)

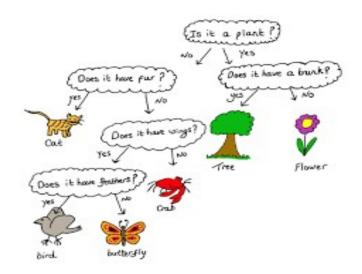
A wonderful example of a visual curriculum is the platform tigtagworld.com, the CLIL versioning of which won an ELTons award for Innovation in teacher materials. Already a fabulous resource, tigtagworld offers teachers and learners a world of short, educational videos focusing on aspects of the content curriculum. The CLIL versioning did many things, one of which was to provide accompanying resoures to the videos which aimed both to highlight structure in ideas in the films, as well as to develop communication during the lessons in which the films were being used. In this case, the lesson used was 'A new arrival at the zoo' where a new animal has arrived without any paperwork and a 'classification key' is presented to help workers at the zoo decide what the animal is. This clip involves the asking of a number of specific questions, which are used in the accompanying lesson to get learners working with classification keys themselves, asking questions themselves and classifying animals (and other objects too) themselves.

4) The lesson and materials

In this particular lesson, our aim was to introduce our group of 7 and 8 year olds to the concept of a classification key and to get them ulimately using one themselves to group animals according to specific characteristics.

Figure 7 – a simple classification key

The classification key in Figure 7 was used as a poster on a white board to get volunteers to come to the front and place objects in the correct places by asking and answering the questions.





We looked at names for different types of skin covering, focusing on 'fur', 'skin' and 'feathers'.

Figure 8 – animals skin and fur



Materials from tigtagworld CLIL version were used to show similarity and difference between a number of animals, here the white tiger and other animals gave the opportunity for learners to look for similarities and differences between the tiger, a zebra, a ringtailed lemur and an American badger. One obvious similarity is the stripes that appear with all the animals. Differences include the type of feet they have, with toes or hooves.

Figure 9 – A white tiger



The children were given a laminated sheet with the four animals. They received some red and some blue plasticine and instructed to put small pieces of plasticine on characteristics of the animals they see in the pictures, blue for same, red for different. An valuable aspect of this pair work is that it allows the children to talk to each other about the task they have to carry out, while teacher moves round and facilitates. It also gives them thinking time while they focus on their task.

Figure 10 - identifying similarities and differences

5) Tigtagworld clips

After the activity identifying similarities and differences, we moved to the film from tigtagworld.com 'A new arrival at the zoo' and asked the children to imagine finding an animal and not knowing what it is. We explained that scientists use the same techniques we'd been using this lesson, by asking questions.

During the film, we stopped to ask questions and elicit answers at appropriate moments as follows.

'Does the animal have feathers?', 'No' 'Does it have scaly skin?', 'No' 'Does it have fur?', 'Yes' So, it's a ... ? 'mammal', what kind? 'Does it have hoofed toes?' It belongs to 'ungulates' 'Does the animal have a snout?' 'It has a snout'. So, it's a ...? 'tapir'.

The video is short, factual, interactive and interesting, as they all are in tigtagworld! And it gives the children a good experience of following a step by step scientific approach to identifying an animal according to specific characteristics. What we needed next was to get the children working with their own classification key.



At this stage, we handed out a classification tree with 'odd' animals (wearing roller skates, wearing glasses) and have the children group the animals according to questions.

The children worked in pairs to place the animals in their classification key by asking and answering questions in their key, see Figure 11 – Classification game.

Questions included 'Does it have ...?', 'Is it wearing ...?'

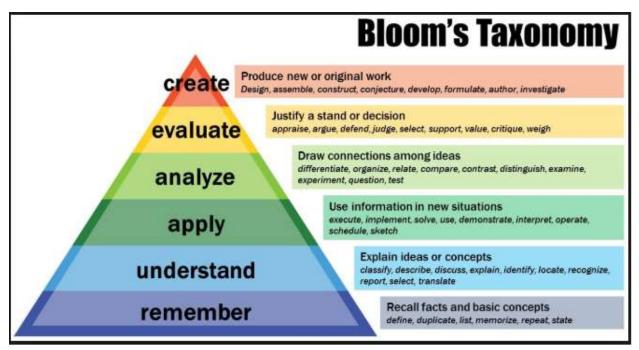
Finally, the colleague went through the 'answers' so the children had the opportunity to share their results with the group.

Figure 11 – Classification game

6 Conclusions and thoughts

It's important to see this lesson on a background of a long-term approach to developing 'thinking skills' and 'academic language'. This lesson is one of many we have introduced into our language curriculum at Anglia School, firmly believing that to marry language learning with thinking skills is the best way for us to teach our learners.

Bloom's taxonomy of thinking skills gives an indication of what layers of thinking were dealt with in this particular lesson:



classification, compare-contrast, group discussion (agreeing-disagreeing), sorting

Figure 12 – Bloom's Taxonomy of thinking skills

There are clearly a number of contact points with Bloom's taxonomy and the next step for us at Anglia School is to prepare and coordinate new lessons with other thinking skills where the (academic) language is carefully prepared in interactive activities.

Think of this lesson as a small step on the journey through juniors school where children are asked to describe similarities and differences of civilizations in History in Grade 5, to studying at university where they are asked to follow a professor talking about pharmaceutical substances being classified in an hour-long lecture. It is all connected, even if we don't connect these thinking skills and this language. It should be connected and coordinated.

The earlier we start, the better.