

Seminararbeit

"The Brazilian
Rainforest/Logging in
Amazonia Legal"

von Gisela Weih
und Birgit Kühn

A bilingual geography lesson featuring "The Brazilian Rainforest/Logging in Amazonia Legal"

Seminar: Stefanie Lamsfuß-Schenk, Tagespraktikum mit Begleitseminar: Lern- und Arbeitstechniken im bilingualen Unterricht /Summer term 1999

Done by:

Gisela Weih (1. Fachsemester Studiengang Bilingualismus, 1. Staatsexamen LA SI/SII Geschichte/Englisch) / Birgit Kühn (9. Fachsemester LA SI/SII Anglistik/Theologie)

Content:

1. Introduction
 - 1.1 Setting of the lesson
 - 1.2 Previous knowledge of pupils
2. Learning targets and methods
 - 2.1 Content-oriented
 - 2.2 Language-oriented
3. Course of the lesson
 - 3.1 Outline
 - 3.2 Report
 - 3.3 Reflection
4. Appendix
 - 4.1 Reading list
 - 4.2 Material

1. Introduction

In the course of a seminar on bilingual teaching we held a geography lesson in English. The class consisted of 25 pupils, aged 12 years, who had been taught English for two years. In addition to their ordinary language lessons they had been attending a geography course held in English for one year.

Their proficiency in the foreign language was on a higher level than is usual at this age. Their motivation had to be above average, because taking part in this bilingual programme is not compulsory.

Initially our seminar-group attended one lesson held by the regular geography teacher in order to get an idea of her approach as well as the pupils' ability and knowledge of words and content.

According to Thürmann/Otten teaching geography in a bilingual section can rely on interpersonal communication skills which the pupil acquired in his or her language lessons, so that in content subjects the teacher lays the emphasis on supplying new vocabulary and helping to develop content-based communication skills. Consequently tasks have to be conceived in a way that they challenge the pupil by giving a "meaningful input just at or above the learner's level". A third requirement is the development of geographic skills.

These requirements were difficult to meet for us, as none of the students (nor the authors of this paper) study geography and therefore lack knowledge of the subject itself, which accounts for some deficiencies in arguing the choice of topic and methods relating to the subject matter.

1.1 Setting of the lesson and choice of topic

Birgit Kühn and Gisela Weih had the task to plan and hold a lesson of 45 minutes within a series about the rainforest. We decided on team teaching for practical reasons (firstly, not enough lessons available for each of us to hold an individual lesson, secondly we thought it would be more lively to change teaching person in line with new method or aspect) As we only saw one lesson before we had to hold our own and only had a very rudimentary knowledge about the general outline as followed by the regular teacher, we chose a topic, that could stand alone. Therefore we agreed on talking about logging in the Brazilian rainforest. The focus should lie on the global demand for timber triggering the exploitation of the Brazilian rainforest by national and international logging companies with fatal consequences for the unique biodiversity of one of the world's few intact rainforests.

1.2 Previous knowledge of pupils

Previous lessons had dealt with the different layers of the tropical rainforest, its nutritive circle, the fact that the rainforest does not grow again and the sustainable use of the rainforest by indigenous people for thousands of years. So much for contents. In view of vocabulary we could assume that they knew the respective terms and were able to lead small discussions using the present tense.

2. Learning targets and methods

2.1 Content-oriented

As cognitive leaning targets we set:

- pupils should be able to realise the world wide demand for timber and the Brazilian urge to exploit their rainforest
- the destruction caused by logging and farming in the rainforest
- the possible sustainable alternatives for an economic development in the Brazilian rainforest

Educational targets (*German*: affective Lernziele):

- pupils should understand their own and the industrial nations' shared responsibility for the exploitation of the rainforest
- gain derived from a sustainable use of the rainforest's biodiversity (i.e. drugs for curing illnesses, fruit for nutrition, resources for new materials etc.)

It was neither necessary for our purpose nor did we feel competent to introduce new methods. As far as geography as a subject was concerned pupils were used to the interpretation of charts and maps.

2.2 Language-oriented

Pupils should be acquainted with new vocabulary around the word fields logging, infrastructure and sustainable forestation/agriculture.

Their working knowledge of words for the description of maps, for discussions and for defining their own point of view should be repeated or trained.

In respect of methods we would start off with a brainstorming, that should end in a mind map (structured brainstorming) aiming at the activation of their previous knowledge. This method leaves room for learner activity and should convey self-assurance - a kind of warm-up.

Moreover it presents pupils with a tool for their individual method of going about a new topic. In the sense of "find out what you already know, which words you can fall back on, and what you need to acquire".

Another methodical aspect was our intention to confront them with a scrambled text. The idea was to let them find their own way of decoding an unknown text. In order to lay the emphasis on structure as a starting point in the decoding process, we destroyed the original structure by cutting the text into stripes of main and subordinate clauses or half clauses and gave them the hint to look for links first. A link was defined as a conjunction like "because". The text itself did not contain new words, so that the task should have been easily fulfilled as soon as the links were identified and the halves of the sentences put together. This task was to be completed in small groups of two to three members, who would be encouraged to use the foreign language in bargaining about sequence and meaning.

The choice of two letters, representing two individual points of view on logging, should help the pupils to see the different aspects. Putting arguments in relation to people/persons is an often practised presentation method, but we think it is nevertheless justified for that age. The next step of listing the different arguments was intended as a preparatory activity for a later discussion.

The method of "intelligent guessing" as a strategic tool for analysing an unknown text would finally be implemented in a web-text, an authentic text from a group of environmental activists which fulfilled two aims, first repeat all arguments in a new text setting and envisage alternatives while introducing new words, the meaning of which can be interpolated.

3. Course of the lesson

3.1 Outline

Wherever possible we chose a task-oriented approach, which should leave enough room for learner autonomy. In order to activate the pupils' vocabulary around the word "wood" we intended to start the lesson with a mind map. This should lead to the use of wood for house building and industry. The word "timber" should be introduced. In a next step we would look at a map of Brazil, which had already been part of former lessons. In this lesson it should show that half of Brazil is covered with rainforest, where timber comes from. In the developed South you can see that clearances leave behind deserts and that the government had to enforce preservation areas. In a further step pupils should receive two scrambled texts which will be presented as two shredded letters found in a waste-paper-basket of a big Brazilian logging company. They represent two diverging points of view on logging in Amazonia Legal. One is written by a ecologist and addressed to the PR manager of the logging company, the other is a report of an engineer working on site. These texts are meant to be dealt with in small groups. This is a task evoking strategies to make the text understandable by finding key words and links and by intelligent guessing as

well as foreign language communication between the group members. When the text is arranged in the correct order, its implications should be extracted, i.e. pupils should be able to summarise the text in their own words. In order to gain insight into the content problem all pupils together should make two lists on the blackboard, using the new words and idioms. One list will mention what sort of work is done in cutting down the rainforest and which tools are needed.

Another list will show the devastating short- and long-term effects of the logging on the environment and the people who live in and of the rainforest.

At this point the lesson could stop and a homework could be: "Go to a do-it-yourself-market and find out which products are made of timber. Name alternative materials that could be used instead."

In case there is time left we prepared an authentic text from the internet. As the vocabulary and the main problems are dealt with meanwhile, an authentic text could be another challenge. To avoid frustration we slightly simplified and shortened the original source. This text gives ideas on how the rainforest could be exploited without being destroyed. It shows economic alternatives, such as the exploitation of renewable resources (plants, oils, rubber, drugs). Summarising the aforementioned arguments of destruction and shortlived profit and giving an outlook on alternatives the text serves as a solid basis for a discussion among the pupils on rainforest logging vs. sustainable harvesting.

For homework we would set the task: Make a list of everyday products /medicine /fruits that are harvested in the rainforests of the world. Name some major illnesses for which cures still have to be found.

3.2 Report

We wrote "wood" in the centre of the blackboard and put the following questions:

- What do you need wood for? Among other answers furniture and building were mentioned.
- What sort of wood do we need for these purposes?

Answers: Hard, solid wood.

- Does this wood grow fast or slow?
- How long does it take for a European oak tree to grow fully ?

Guesses: 30-40 years.

Summary of teacher: Hardwood grows very slowly. The longer this process takes the harder and more valuable this wood is. It is called timber. A special sort of timber grows only in rainforests.

Vocabulary introduced: timber, hardwood, purpose, valuable

Pupils were presented with a map of Brazil (textbook). They were asked to study this map considering the following questions:

- Is entire Brazil covered by rainforest?
- What happened to the rainforest in the South?
- What do you think the Brazilians will do with their rainforest in Amazonia Legal?

Pupils' answers: In the South we find major cities, many people live there, we see big areas of heavy clearances and few areas of prime forest. Many roads cut through the forest that is left. In the North there is the rainforest with only few roads and rivers running through. There are hardly any towns. Brazilians will try to sell the rainforest timber for a better living.

Vocabulary introduced: prime forest, heavy clearances, forest reserve, industrial sites, transport, major cities, major roads

Pupils received two kinds of envelopes, one contained scraps of a letter written by an engineer who asks his boss from the logging company for heavy machinery and reports on his everyday work in the forest. Another letter, cut in pieces as well, is a report of a Greenpeace activist, who collects evidence of the destruction caused. This task had two aims: first to find the links between the pieces by searching for syntactical connectives, such as because, in order to, when, therefore, but, which. This should train a means of going about an unknown text. It is strategic tool of text analysis.

Another aim was content-oriented: in finding the logical order one cannot help following the line of argument. Therefore the students acquire the knowledge to argue for one point of view. This task turned out to be rather challenging. It took considerably longer than planned. Obviously students had never before worked with a scrambled text. In one of the texts there were two versions of sentence order possible, which seemed to confuse them. As soon as the plausible order was settled on the board, the lesson was finished. Unfortunately there was no time left to list the arguments on the board or to deal with the authentic web text.

3.3 Reflection

As expected brainstorming/mind map was no problem for the pupils, whereas the scrambled text turned out to be a rather difficult task. One reason for this may have been the fact, that in one of the letters there were two possible solutions. Pupils do not like ambiguity. The teacher should have declared one solution as correct. We did not foresee this problem, which anyhow was only marginal. There is some other aspect which would have been interesting to look into: What effect did the puzzle-approach (scrambled text) show in respect of the pupils' grasping of content or acquiring new strategies of coping with an unknown text? As there was no time left we could not test their understanding by making them collect the arguments in a list on the board. As for responses we had the impression that they liked the task and eagerly discussed the sequence of sentences within the groups.

A reflection of this process together with the pupils would have been necessary in a following lesson in order to ensure the learning effect. David Little argues that it is an essential part of learner autonomy to evaluate the extent of one's learning. Although Thürmann/Otten refer acquirement of and reflection on skills to L1-German lessons, we think they could well be discussed in geography lessons, too, promoting a general language awareness.

4. Appendix

4.1 Reading List (in the order of appearance)

- Thürmann, Eike & Otten, Edgar. (1992). Überlegungen zur Entwicklung von Lehr- und Lernmaterialien für den bilingualen Fachunterricht. In: *Zeitschrift für Fremdsprachenforschung*, 3 (2), 39-55
- Little, David. (1994). Learner autonomy: A theoretical construct and its practical application. In: *Die Neueren Sprachen* 93:5, 430-442
- Gienow, Wilfried & Hellwig, Karlheinz. (1996). Prozeßorientierung – integratives fremdsprachliches Konzept. In: *Der Fremdsprachliche Unterricht*, 1, 4-11
- Frank, Andrea (1997). Clustering and Mindmapping. In: Horst, Uwe & Ohly, Karl Peter. *Lernbox*. Friedrich Jahresheft 1997, 14

4.2 Material

1. Map of Amazonia Legal, in: Tropical Rainforest, Reihe Bilingualer Unterricht, Stuttgart, Ernst Klett Verlag 1997, page 13
2. Fabricated letters by Gisela Weih:

Letter 1

In a waste-bin in an office of the „Amazonia Legal Logging Company" a cleaning lady found some paper scraps. Some pieces belong to a letter from Pedro Gilvaro, an engineer who works in the rainforest for the „Amazonia Legal Logging Company", to his boss in Manaus (Mr. Julio Hernandez).

Other pieces belong to a letter from a Greenpeace activist (Judy Miller) to Mrs. Mercedes Mendez, responsible for Public Relations at the „Amazonia Legal Logging Company".

If you want to find out what their problems are you have to arrange the pieces in the correct order. Pay attention to little words like „because", „in order to" They will help you to find your way through the puzzle.

Dear Mrs. Mendez,

but the roads you built for logging, attract farmers, who burn it down for agriculture. What is left over will be washed away by the rain within a few weeks. when I visited „Amazonia Legal" last month, I used the tracks, However after two years the land will not yield enough crops for the settlers to survive. That is why they will have to leave it again, in order to look for new land. Most of the young trees in the clearings are also cut down, It was a depressing sight. Your heavy machinery destroyed most of the thin humus layer. Therefore there is hardly any vegetation left and the habitat of hundreds of birds, insects and last not least the Jaguar is gone. so that the rainforest will not be able to regenerate in many years to come. You said, that you do not burn the forest down, which your company cut into the forest.

In the end Amazonia Legal will be a desert - no place to live in for people.
Most of the young trees in the clearings are also cut down,
Yours sincerely
Judy Miller

Letter 2

In a waste-bin in an office of the „Amazonia Legal Logging Company" a cleaning lady found some paper scraps. Some pieces belong to a letter from Pedro Gilvaro, an engineer who works in the rainforest for the „Amazonia Legal Logging Company", to his boss in Manaus (Mr. Julio Hernandez).

Other pieces belong to a letter from a Greenpeace activist (Judy Miller) to Mrs. Mercedes Mendez, responsible for Public Relations at the „Amazonia Legal Logging Company".

If you want to find out what their problems are you have to arrange the pieces in the correct order. Pay attention to little words like „because", „in order to" They will help you to find your way through the puzzle.

Dear Mr. Hernandez,

The reason for this is, that the giant trees are often linked to other trees by lianas. It will be very difficult to send you the 20 tons of timber per week you asked for, For these heavy tracked vehicles we must build bigger roads. because many the trees we cut are too small for timber production. In order to work faster we have to solve some problems: first of all, we need bigger vehicles to transport workers, heavy machinery and felled trees in shorter time. When we felled a giant tree last week it brought down several smaller trees with it, Therefore please send us more bulldozers and chainsaws. But we have to cut them for making tracks. which killed two workers.
Yours sincerely
Pedro Gilvano

3. Exploiting the rainforest, shortened and simplified by Birgit Kühn, source: www.raintree.com

Exploiting the rain forest

Rainforests once covered 14% of the earth's land surface but today they cover only 6%. Over 200,000 acres of rainforest are burned every day in the world. That is over 150 acres every minute of every day.

Experts say that at this rate of destruction, the last rainforests could be gone in less than 40 years. Experts also think that we are losing 130 species of plants, animals and insects every single day (= 50,000 species a year).

The problem of rainforest destruction is economic: People make a lot of profit by harvesting timber, breeding cattle or using the land for agriculture. Logging companies argue that their work is alright because they practise "selective logging", i.e. they don't fell more than 10 trees per hectare. They do not cut or burn down the forest. And above all, they say that the tropical countries need the money they get from exported timber to develop their standard of living.

But there exists an economic alternative: medicinal plants, fruits, nuts, oils and other resources like rubber and chocolate could be harvested sustainably. Many drugs (like cancer drugs) are already found in these plants. But even more important are the drugs that could be found soon: drugs for AIDS or diabetes.

Harvesting of these types of resources provides income and profits not only today but also year after year. Example: Rainforest land used for cattle yields the land owner \$60 per acre. Harvesting timber makes the land worth \$400 per acre. But if these renewable resources are used, the land will yield the land owner \$9,400 per acre.

Vocabulary:

to exploit - ausbeuten.....
to cover-
1 acre ~ 1/2 football field..
at this rate -
economic - ökonomisch, wirtschaftlich
to harvest - ernten.....
to breed -
cattle - Vieh (hier: Rinder).....
agriculture - Landwirtschaft ...
logging - Holzeinschlag.....
logging companies -
selective logging -
to develop - entwickeln.....
resources - Vorräte; Naturschätze
rubber -
sustainably - nachhaltig, erhaltend.....
drugs - Medikamente
to provide - verschaffen; liefern.....
income-.....
to yield - einbringen
renewable -