



HERODOT  
Network for Geography  
in higher education

# Teaching geography in and about Europe



# Teaching geography in and about Europe

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## PREFACE

*Teaching geography in and about Europe* develops aspects of the issues associated with the promotion of a European Dimension in universities and teacher education institutions under the Bologna Process. It links with the TUNING survey of Geography undertaken as part of the project goals and objectives. This publication examines issues influencing the teaching of Europe in Geography. It reviews different aspects of courses, European issues and bilingual teaching in a number of different universities and teacher education departments across Europe. The research published here will be taken forward in different parts of the next phase of the project. Materials will be available through the network Web page <http://www.herodot.net>.

*Teaching geography in and about Europe* was also the title of the second conference held jointly by HERODOT and EUROGEO. The event was hosted by the Association of Polish Adult Educators in Torun, Poland. The joint activities of these organisations began at the EUROGEO Conference held at Liverpool Hope University in September 2001. This book is the fourth of a series of publications produced by the HERODOT Thematic Network and published under the Socrates Action for Thematic Networks financed by the European Commission.

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# Too late or too early – Teaching Geography in Primary School

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## **Abstract**

Can primary school children think in the abstract? Can they understand the structure of the wide world without having direct and real experiences? From which age will it make sense to talk about foreign countries and the world in school?

The study presented in this paper examines the perception of ten year old primary school pupils about the world and the cognitive map they have. The paper discusses the implications of both ways “from local to global” and “from global to local” into the learning and teaching for the creation of a learning environment which supports the development of children’s spatial representation and perception.

**Key words:** Geography, teaching, primary school, maps, World, mind maps, perceptions

## **Introduction**

Schreier (2005) describes the memories of a teacher about teaching ‘map reading’ in primary school:

“The children drew the school building, the fronts, then – after that measuring with the tape measure – the outlines from above, their own house and their way to school. The highlight was the construction of a model of the whole locality with its four dozen houses, the course of the river, the three roads, the field paths, gardens and trees on a wooden plate of four square metres. The completed work was hung with the north side upwards to the wall. It represented a piece of hard work, related to an accessible and walkable place: the hometown of the children.” (Schreier 2005)

Perhaps this demonstrates a lesson, which is nowadays not commonly found in primary school Geography because of the enormous amount of time and effort. However its relevance regarding the principles “from near to far” or “from local to global” is still on the agenda of many schools.

The ability of people to orientate themselves has been the subject of many studies. These usually seek to establish the reasons, mental conditions and working mechanisms in known and unknown areas. The results of investigations in this area show that for example the development of the ability to understand maps, to be able to deal with them adequately and to orientate oneself is a long-term and a very complex process (Rost 1977).

One of the most important studies is the work of Piaget (1950) who researched how children organise their perceptions in cognitive structures and which stages are to be indicated thereby. An almost undisputed implication of his work is the assumption, that children at the age of ten are still in the process of developing their abilities to represent countries and regions on maps which they have not visited before and from which they therefore have only an abstract knowledge and/or an abstract conception. If we believe this, then children aged between seven and eleven are in a stage of development defined as ‘concrete operational’. For this stage Piaget concluded that children use symbols to represent objects and that they can only solve problems which have a concrete and not an abstract basis.

Thinking about Piaget’s predictions that the ability for “abstract thinking” is not finally developed in this early age, we should raise the questions, “At what age does it make sense to talk with children about distant places? Is it possible to examine foreign countries or even the world in primary schools?” The mental map of the nine year old German girl (Figure 1) seems to suggest that Piaget was and is still right. The girl seems to have only a vague perception of the world and the way to represent it. During the last decades Piaget’s ideas have been taken as the basis for several national and regional school programmes in Geography. As a consequence, the German and the Swiss Geography programmes for primary schools, for example, hardly integrate any geographical skills like working with maps or talking about foreign countries (from a cartographic view) into their approaches (Figures 2 and 3).



Figure 1. Mental Map of the world of a nine year old German girl!  
Source: Schmeinck 2007

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1. The task was: “Draw a world map. Draw and write on your map anything you can think of with regards to the world.” (Schmeinck 2007)

Contents	
1. / 2. year	<ul style="list-style-type: none"> <li>• the new pupils learn to orientate themselves at school</li> <li>• significant points in the environment of our school are important for the orientation</li> <li>• ways to school are places of important experiences for children</li> <li>• the safest way to school</li> </ul>
3. year	<ul style="list-style-type: none"> <li>• people of other countries are living in our town</li> <li>• how people in other countries subsist</li> <li>• from reality to mapping</li> <li>• the changes in and of our town have causes and consequences</li> <li>• looking after history: our town has a past</li> </ul>
4. year	<ul style="list-style-type: none"> <li>• how children in other countries live</li> <li>• organisation of the homeland in “Landkreis” and “Region”</li> <li>• regional distinctions of our landscape</li> <li>• man is using the landscape and transforms it thereby</li> <li>• long time ago people already lived in our home region and shaped the landscape</li> </ul>

Figure 2: Extract of the curriculum for “General Studies” in primary school in Baden-Württemberg / Germany

Source: Ministerium für Kultus und Sport Baden-Württemberg 1994.

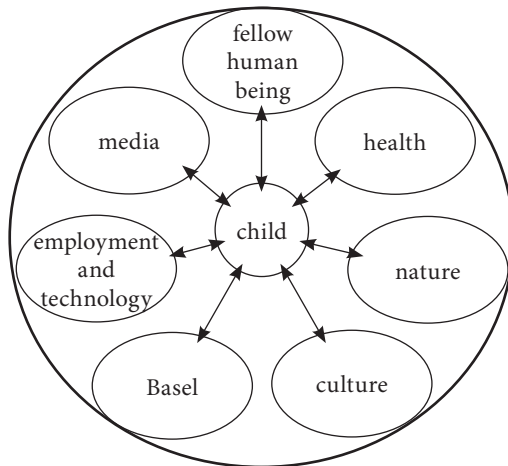


Figure 3: Extract of the curriculum for “General Studies” in primary school in canton Basel-Land / Switzerland<sup>2</sup>

Source: Erziehungsrat des Kantons Basel-Stadt 1991: Sach- und Heimatunterricht 2

According to Piaget (ibid) the opinion is that children are not really able to

2. All of these aspects have to be treated in primary school. Concerning Geography in class 3 and 4, topography, the river Rhine, a border town and the „regio“ is mentioned to be taught.

understand these “abstract” things. However, in the curriculum and in schools an integration of basic skills related to the space they are living in can be found, but this is mostly concentrated on the local area. Thereby the idea of going “from near to far”, thus the idea of so called “concentric circles” (Kirchberg 1997) is that the children can only imagine the spaces far away by perfectly knowing the local space. For German children this is not intended to be covered during their primary school time.

But how can young children deal with information they come across, for example about flooding in China, an earthquake in Turkey, the Tsunami in South Asia, a bomb scare in London or the enlargement of the European Union, without being able to locate these geographical places even approximately? Do we and their teachers really believe that the perceptions and the knowledge of children ends up at the garden fence? It therefore is important to examine children’s spatial awareness of the world and distant regions in order to understand how they develop their cognitive structures of the world. We have to consider that children nowadays live in a world influenced by for example the media, travel activities, children books, the Internet and so on. The school is thus only one factor that influences them (Figure 4).

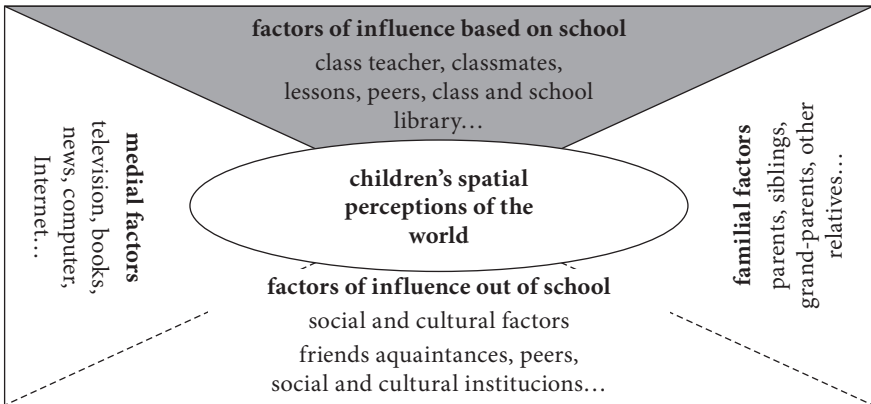


Figure 4: Factors of influence on children’s spatial perceptions of the world  
Source: Schmeinck 2007

The results of an international comparison concerning the perceptions of ten year old children about the world as a map reveals that 95% of the 380 German children, who draw mental maps of the world within the study, had already visited one or more foreign countries (see Figure 5). About 60% of them stated that they had travelled at least four times to a foreign country (Schmeinck 2006). 73% of these pupils made the statement that they used a car for their vacation

trips. More than the half of the children in the study reported that they had taken a plane to reach their holiday destination at least once<sup>3</sup>.

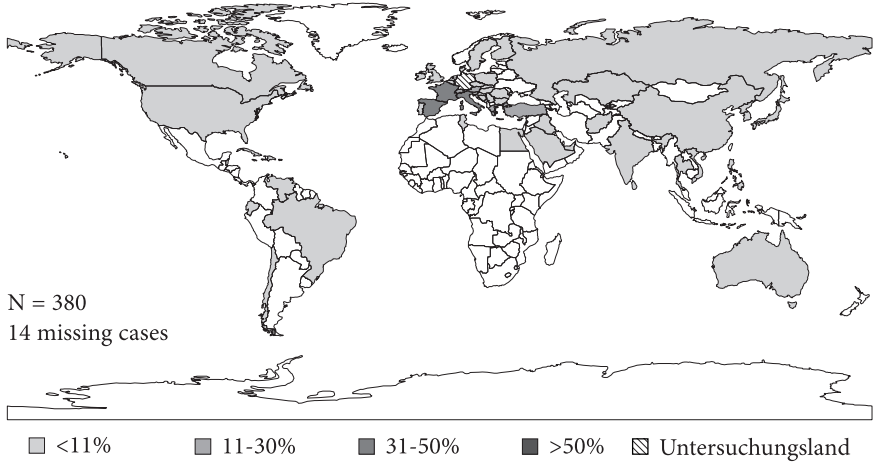


Figure 5: Holiday destinations of German pupils  
Source: Schmeinck 2007

The children in the German survey named in total 55 different foreign holiday destinations (Figure 6). On average, each child mentioned 2.67 countries (standard deviation of 1.69) and a range from 0 to 11 (Schmeinck 2006).

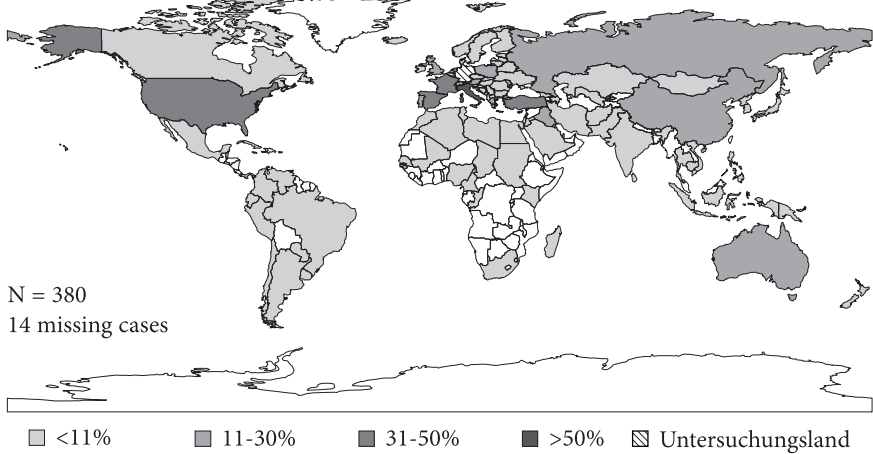


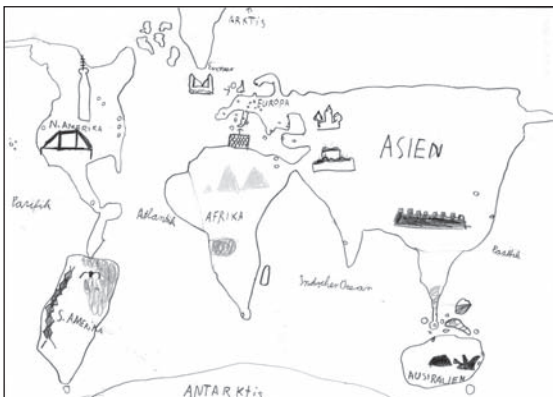
Figure 6: Known countries in the German study  
Source: Schmeinck 2007

3. Children rarely used other means of transport e.g. boat, bus or train.

These results show strong similarities to other studies. Bükler (1998) and Schniotalle (2003) for example evaluated German children aged eight to ten and stated that countries that bordered Germany were most frequently cited as holiday destinations. However it can be seen that the United States of America and Eastern-European countries have grown in their importance as holiday destinations. It can be assumed that this could be due to the growing numbers of cheap flight offers to get there. In fact more than 15 years ago, Wiegand (1992) reported that 45% of ten and eleven year old children in different primary schools in the United Kingdom had visited a foreign country.

Concerning the preparation for a vacation trip, around 20% of the interviewed parents stated that they did no special preparation at all neither for themselves, nor for their children. If they prepared their holiday trip, more than 45% of them used maps from the holiday destination as well as an atlas or a globe (43%). Only one-quarter of the responding parents reported that they used the internet or travel guides. However, if no purposeful cartographic refurbishment processes take place, it is likely to be improbable that the travel activities of the children will make an actual contribution to their spatial orientation competences and/or help them to build an understanding of the world as a spatially structured whole.

We must be aware that children nowadays are much more confronted by media and travel experiences as influencing factors. They know much more of the world or at least many more different things about it than we often believe. Therefore the various definitions of the different spaces (“closer living space“ e.g. own house, sleeping- and living room, garden, the “rarely visited areas“ e.g. the neighbourhood, the neighbourhood of the grandparents in another town and the “distant places“ e.g. all those areas one knows by driving through, by watching television or from hearsay) must be reconsidered again. This is illustrated by the



mental map of a nine year old German boy (Figure 7) which clearly shows that primary school children can represent the world as a map. This pupil is even able to locate special characteristics in his map.

Figure 7: Mental Map of a nine year old German boy  
Source: Schmeincck 2007



The fact, that some children (and adults) are not able to represent the world as a map should thereby not be taken as a sign for not existing knowledge or perceptions (Figure 8).

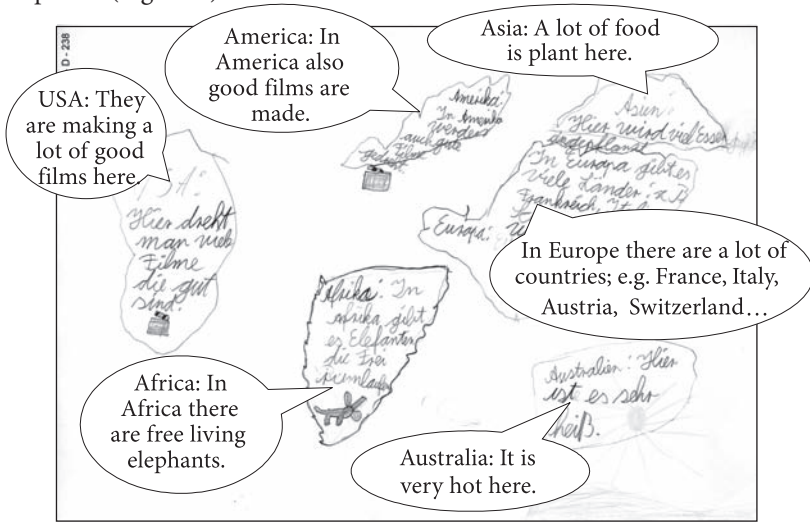


Figure 8: Mental Map of a nine year old German boy  
Source: Schmeinck 2007

Comparing the mental maps of children aged about ten years in different countries worldwide we must notice the wide range of children’s spatial conceptions. They exist from total disorientation to very precise and approximate topographical world maps – the full picture is revealed. Children do not possess a uniform conception of the world as a map. The mental maps drawn within the study represent very different and individual constructs of the world. An age-related development in the form of common map representations could thereby neither be diagnosed in the context of the study nor in the pilot survey with around 600 children from kindergarten to university age (Schmeinck 2004).

Assistance with the development of appropriate spatial concepts is surely a long-term task for teachers and schools and should therefore not be initiated through short instructional units. Periodical contacts or links with as many different experiences as possible should be developed through the curriculum. Topics that do not only have a meaning for boys, but also for girls also need to be embedded within the curriculum. The aim should not be to replace the principle “from near to far” or “from local to global” by the principle “from far to near” or “from global to local”. However topographic knowledge and/or the knowledge about foreign countries and the world should not remain standing in iso-

lation. Instead relationships to world-wide orientation, even if at first only very rough, have to be developed in the early years of primary school. The challenge for teaching and learning Geography in primary school consists of developing cross-linking which combines the respective benefits of these principles. In such a learning environment it should be possible to support the development of the local and global spatial perceptions, even if they lead apparently in opposite directions. This apparently unfathomable problem does not seem as unattainable as might be considered. We have to remember that children can follow these different ways at the same time.

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# **Europalehramt – teacher training for a European future**

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## **Abstract:**

Since 1999, the Universities of Education in Freiburg and Karlsruhe (both located in the South-West of Germany) are offering a European curriculum in teacher training which has contents in bilingual teaching and in European cultural studies.

**Key words:** teacher training, modules, bilingual teaching and learning, European cultural studies

In a multilingual Europe of the late 20<sup>th</sup> century the need for a multilingual school curriculum has become more and more important. In Baden-Württemberg in the south-west part of Germany, the *Ministry of Education, Youth and Sports*, took the decision in the early 1990s to introduce the first foreign language in the first year of schooling. The idea was to offer language learning in at least two foreign languages.

## **Teacher training in Baden-Württemberg and the language policy of the regional ministry**

In Germany teacher training is a task which is not defined at national level but it is the complete responsibility of the different *Länder*. Therefore the following only concerns teacher training in Baden-Württemberg. In this *Land* becoming a teacher in a primary or lower secondary school level requires a period of study at one of the six universities of education, located in Freiburg, Heidelberg, Karlsruhe, Ludwigsburg, Schwäbisch Gmünd and Weingarten. These universities of education are specialised teacher training institutions which lead to the first state examination for teachers. They also offer diplomas in Educational Science and in Social Work in Education. These studies normally last three (primary level) or three and a half years (lower secondary level). Every student has to study pedagogy and psychology and is trained in three different school disciplines. The students also have to successfully complete periods of in-school practice. At the end of their studies they take the first state examination which is the basis of the second phase of teacher training.

This second phase lasts one and a half years and is divided in two major sections, a practical and a more theoretical one. In the first half year the future

teachers are mainly observing lessons and are initiated in the art of preparing and giving lessons. In the last year they will already have their own classes and are responsible for the curriculum of these classes. They also have to follow courses at special teacher training institutions as part of this second phase, the so called *Staatliche Seminare für Didaktik und Lehrerbildung*<sup>1</sup>. In these courses of pedagogy and their three chosen school disciplines, they reflect on their teaching experiences and debate theoretical aspects of teaching. This phase ends with the second state examination which gives the students the title of “teacher of ...”.

Since the opening of the universities of education in Baden-Württemberg in the 1960s, many thousands of students have followed courses of these institutions. And the specified universities have had to follow the politics of the regional ministry of education. The changes occurring in schools were taken as challenges for the institutions of teacher training.

In the 1990s, the *Ministry for Education, Youth and Sports* of Baden-Württemberg decided to reform the school system and its contents. The plan of the afore mentioned ministry was to introduce studying of the first foreign language at primary school.

Since 1960, German primary schools on the French border had already taught French by playing games and singing with the aim to meet with schools from the Alsace region nearby. These positive experiences motivated the ministry to go further and to integrate the language into the whole primary curriculum. The idea was to install an integrated learning module which means that, on the basis of two hours per week for the first four school years, the language should be integrated into the non-linguistic disciplines. Later on, in secondary school, this foreign language should enable the pupils to follow (from the 6<sup>th</sup> year on) complete lessons in non-linguistic disciplines (like for example Geography, History, Politics or other subjects) in that foreign language. This decision followed the general development of language learning in the whole of Europe where terms like “bilingual teaching”, “content and language integrated learning (CLIL)” and others are not only ideas but principles of education which are becoming more and more important.

As the regional parliament could not take a clear decision to adopt one single foreign language in primary school, the “*Rheinschiene*” (which means the parts which are near the French border) should introduce French whereas the rest of the *Land* should introduce English as the first foreign language.

After a pilot phase of four years in about 400 primary schools, the introduction of the first foreign language as compulsory discipline was launched in 2004. This decision was taken after a long discussion and seemed to be very well prepared, but it implied one major problem which had not been dealt with, namely: Where are the appropriate teachers trained for this kind of education?

1. National institutions for didactics and teacher training.

## Developing the future – the creation of a European teacher training curriculum

Until the end of the 1990s, the universities of education offered only a teacher training curriculum for specific school disciplines which included training language teachers. But none of them had developed training for bilingual teaching. Therefore, Freiburg and Karlsruhe Universities of Education were given the task to create a European-oriented teacher training curriculum, the so called *Europalehramt*. In co-operation with the *Ministry of Education, Youth and Sports* as well as with the *Ministry of Science and Research*, both universities created in a very short period of time a new teacher training module which was then integrated into the “normal” teacher training curriculum in order to give future teachers the competence of teaching one or more non-linguistic discipline(s) in one of the foreign languages English or French.

In comparison to the “normal” teacher training curriculum (Figure 1 left) the *Europalehramt* presents some important modifications (Figure 1 right):

- candidates for this curriculum have to pass a **language entry test** (written and oral) in English or French. Only the best in the language are allowed to follow the *Europalehramt*.
- in the main study phase the students following the *Europalehramt* have to study, in addition to their normal courses, **two supplementary modules**: Bilingual Teaching and Learning and European Cultural Studies.
- a **compulsory study term abroad**. The students of the *Europalehramt* must study for at least 6 months in a country of the specialist language they have chosen.
- in addition to the certificate for the first state examination the students of the *Europalehramt* get a **masters degree**.

1. State examination	1. State examination / Masters degree
Main study phase	Main study phase additional contents: European Cultural Studies Bilingual Learning and Teaching
Intermediate Exams	Studying abroad
Basic study phase	Intermediate Exams
	Basic study phase
	Language test

Figure 1: Differences between the regular teacher training curriculum and the *Europalehramt*

## The supplementary modules

In the module about *Bilingual Teaching and Learning* the students follow classes for example about:

- Educational politics and psycholinguistic basics / existing models of bilingual teaching and learning
- Specific vocabulary of the disciplines
- New Media in Bilingual Teaching
- Methodical Aspects of Bilingual Teaching
- Evaluation, conception and development of material for bilingual courses
- Didactics of Bilingual Teaching – Learning for Europe

The main aim of these classes is to give the students an overview about different models of and approaches to bilingual teaching, in order to help them to create bilingual lessons, to make them think about the utility of teaching and learning a non-linguistic discipline in a foreign language.

In the module about *European Cultural Studies* students have classes of the following type:

- History of Europe
- Geography of Europe
- State and Religion in Europe
- Mutual influences in European literature, arts, manufacture and music / History and function of the European theatre / film
- Comparison of media for children and youth
- Traditions and Feasts of European people and nations
- Sports as an element of national identification and international understanding
- Ways to European Integration
- Life and profession in European countries

In this part of the curriculum the idea is firstly to inform them about the most important facts about Europe, secondly to encourage them think in a contrasting manner in order to give them, thirdly, knowledge from multiple perspectives which would be necessary for a teacher teaching in Europe.

As part of the in-job phase after their first state examination students have to follow the “normal” courses (120 hours of pedagogy, 60 to 70 hours of the non-linguistic discipline, the same amount of time in the language, 35 hours of school and civil service law, 35 hours of projects and teaching in classes) plus 35 hours of classes in bilingual teaching and learning and teaching bilingual courses at school.

## Experiences and outcomes

The new teacher training curriculum started in both universities of education in the academic year 1999/2000 with about 120 students. Since then, the number of students has steadily grown. The maximum number of students, because of the very limited places the two universities can offer, is only about 150 students per year. The origin of these students is from all parts of Germany and also the neighbouring European countries. With the introduction of the *Europalehramt*, Freiburg and Karlsruhe Universities of Education have developed a supraregional importance<sup>2</sup>.

Two third of the students enrolled have chosen English as their foreign language, the others French. Three quarters of them are being trained for primary school level, others for lower secondary schools. Concerning non-linguistic disciplines it is interesting to note that not only the “traditional” bilingual disciplines like history and geography or politics are represented but nearly all the non-linguistic disciplines that are taught at primary or lower secondary school level (Figure 2).

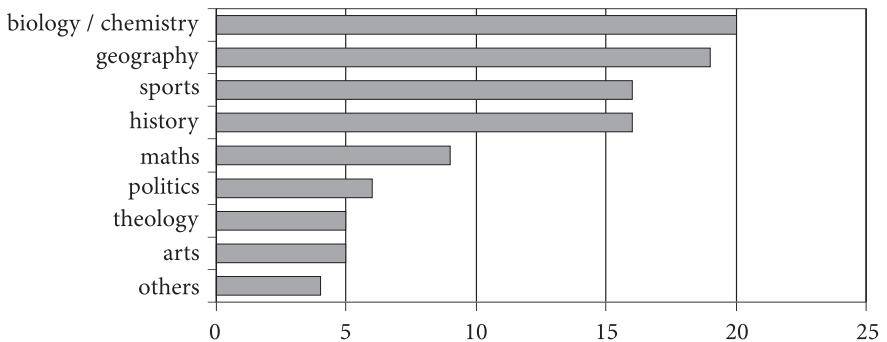


Figure 2: Chosen non-linguistic disciplines for the *Europalehramt* at Freiburg University of Education

The prospective careers of these students is at the moment very secure. This is because of the great need for teachers who are specially trained for bilingual teaching and learning, with a wide European-oriented profile. As a result, every teacher with this degree gets a job. They all evaluated the curriculum as one important part of their teacher training mosaic.

Europe is a model, perhaps the future worldwide model for multilingualism and intercultural understanding. The *Europalehramt* which is offered at the Freiburg and Karlsruhe Universities of Education is one option to reach this aim. It is one model of teacher training for a European future.

2. This seems to be not really important, but one has to know that the “normal“ origin of the students is mainly the region itself.



# Europe Matters! 10 Reasons why school Geography should teach a European Dimension

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## **Abstract:**

Europe is a reality which cannot be ignored at school. In a first step the author of this paper defines various delimitations and definitions of Europe. In a second step ten reasons are developed which explain why school Geography should integrate a European dimension. Finally, the consequence is seen in “European competences” that are shown as a conclusion and which should be part of a European dimension.

**Key words:** European dimension, citizenship, diversity, multi-cultural, multi-lingual, contrasting thinking, identity, individuality, European competences

Europe matters – the slogan of euromove.org (Figure 1) during the period of the voting of the European Constitution in the United Kingdom was the initial point for this paper. The picture shows a young boy playing on the beach and turning a number of sea stars into the sign of the European flag. From the URL address of the website on the poster, the term “get involved” is implied as a symbol for the activity of the boy: For his future he needs to get involved in the building process of Europe.

## **Europe Matters!**

An Internet search of the word combination “Europe matters” in September 2006 resulted in about 14,500 hits. This seems to be a small number if we consider the huge number of websites world wide; but the interesting point can be seen in the fact that the word “matters” in this context can be seen and is represented in a double perspective:

1. as a noun, “matters” means the idea that there are aspects in our life which have a European component. These could be laws, politics, subjects discussed on a European level and so on;

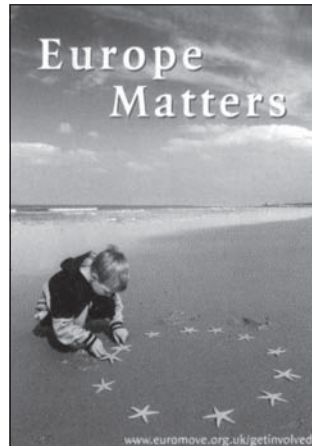


Figure 1: Europe matters  
(source: Göser 2006: 30)

2. as a verb “matters” signifies, that European aspects have to be taken in consideration, that they have an impact in our life, that European things concern us.

### **But what exactly is Europe?**

If we are talking about Europe we always have to ask first of all which kind of Europe is really meant:

- Do we think of the geographical Europe as a continent from the Atlantic Ocean to the Ural Mountains as delimited officially or of Eurasia as one single continent from the Atlantic to the Pacific Ocean, as suggested by the French geographer Yves Lacoste in the late 1990s during the *Festival International de Géographie* at Saint-Dié in France?
- Or do we only talk about smaller parts of Europe like the Schengen community which means the countries who have signed up to the Schengen agreement ([www.schengenvisa.cc](http://www.schengenvisa.cc)), “Euro-Country” in which are unified all the countries of the European Union who have the common currency “Euro” ([www.ecb.int](http://www.ecb.int)), the European Free Trade Area (EFTA) with nowadays only four members left, the European Union which after a period of important growth has now 25 member states ([europa.eu](http://europa.eu)), the Council of Europe which includes all the European countries except Belarus ([www.coe.int](http://www.coe.int))?
- Or do we have in mind by talking about the idea of Europe the concept of a Europe of Regions, a Europe of Nations, a Europe of Fatherlands or a Europe of Communities? (see for example Hrbek & Weyand 1994)
- Or are we talking about dimensions which are delimited far wider than the official boundaries of “Europe” like the Europe of the European Broadcasting Union ([www.ebu.ch](http://www.ebu.ch)) with 74 members in 54 countries of Europe, North Africa and the Middle East, or the Union of the European Football Associations ([www.uefa.com](http://www.uefa.com)) including nowadays 52 countries with for example Kazakhstan, Armenia or Azerbaijan? (see Haubrich 1997 or Foucher 1993)

At a second glance, however, it seems to be relatively unimportant which one of the various delimitations of Europe or which one of the many definitions of it we think about by talking of Europe; the main aspect is that we *are* talking and debating about it. The activity itself of talking of Europe in whatever definition or context we select is the real challenge. For the present paper, the definition and delimitation of the contemporary European Union will be taken as basis for all reflections. If we take this as given we then have to ask why we should introduce a European dimension by teaching Geography in school. I consider that there are ten reasons which would provide important arguments for this.

## Ten reasons for a European dimension in school geography

### Reason 1

*We are living in Europe.* And while living in Europe, we are always confronted with the subject. Europe is all around us, every day, everywhere. In our everyday talk as well as in our everyday work we are used to handling European aspects or things concerning Europe. So it seems to be very important to know where we live, to know what is around us, to understand the world we live in. Therefore it is not enough just to know one's home town, one's home region or one's nation, but to have a profound knowledge about Europe. For example, people living in the Americas should have an American dimension in school subjects or people from Asia should integrate an Asian dimension in their geographical curriculum; in the same way, we as inhabitants of Europe should integrate Europe as an important anchor point into our geographical curricula. This should (and could) be reason enough to treat Europe as a subject in Geography. But there are, in my opinion, still nine other reasons.

### Reason 2

*We are citizens of Europe.* This means that in some way or another we belong to one (or more) of the political (or / and economic) aspects of Europe mentioned earlier. Each of them has an influence on our everyday life and this specific influence includes challenges at different levels, for example at the economic level, at the cultural level, at the political level and/or even at the scientific level.

Concerning the European Union, we must be aware that it is the fastest growing political system worldwide. Between 1985 and 2006, the European Union has grown from then 12 to now 25 countries covering an area today of about nearly 4 million square kilometres. It nowadays has a population of about 450 million people who are speaking more than 20 different languages. And the European Union is still growing. We should be aware of this fact and relate it in our learning and teaching!

### Reason 3

*We live in different landscapes and environments.* As people living in Europe and as citizens of Europe we, and our children, should know about the Geography of Europe. Everybody should have a profound basic knowledge which should allow us to talk about the region we are living in. Therefore the contents of the Geography of Europe should integrate at least the following geographical aspects into the learning process:

- Europe is formed by various kinds of landscapes, each one with specific aspects. Therefore we should teach physical geography (or morphology, geomorphology, geology...) to give our pupils the opportunity to understand the foundations of their lives, to know the ground they are living on.

- Living in Europe means to be confronted with demographic development. We live in villages, towns and cities in which other people are also living. But people nowadays do not stay their whole life in one single place, village or town; they move, get married, have children, move again, migrate... So there is a fluctuation of the population everywhere in Europe. This demographic development has influences on one's life. We have to understand how the evolution of European demography will have an impact on future life. And this impact will mostly concern our young people. Therefore they have to be confronted with demographic questions about and on Europe.
- We are living in a world where economy takes an important part in people's lives and has a special focus for us. Our pupils should therefore have a basic knowledge of how our economy works, where and why corporate groups build up their enterprises and branch offices, why they migrate, what is meant by economic market and so on. So we need to learn about economic geography.
- There is also a political component in Geography which has to be studied by our pupils. The political Europe is changing, and decisions taken in Brussels have an immediate and also an indirect impact on our lives. We have to be concerned in educating our pupils to understand political geography.

Taking into consideration these different aspects of Geography<sup>1</sup>, we need to teach a European dimension in order to give our young people knowledge that integrates the main facts about their home town, their region and their nation state in a wider context, Europe.

#### **Reason 4**

*Europe is multi-cultural.* Europe is like one single country with many different ethnic groups living in it. Introducing a European dimension is only possible if we try to understand the multi-culturality of the continent. Therefore it is not enough to have only geographical dimensions in mind when we try to define a European dimension for Geography teaching.

It is also important to make the educational link to other disciplines like history, politics, religion / ethics, music / arts / physical education and natural sciences. There are many possibilities to link the knowledge in these disciplines and we always should be able to locate things we discuss in one discipline within our European mental or real map.

Geography, as a multi-faceted discipline finding itself in between several neighbour disciplines, could be the "transfer"-discipline which has as its task to educate our pupils to understand the mutual influences between the different

1. In this context I left willingly beside other aspects of this discipline which could also be important.

levels. In some countries this seems to be easier because of the fact that geography is not an independent subject but taught in combination with other disciplines like for example in France with the subject *histoire/géographie* where it is strongly linked to history. But even if there is no institutionalised link to other disciplines we should have the aim to strongly cooperate in a more intensive way with other disciplines.

### **Reason 5**

*Europe is multi-lingual.* The variety of ethnic groups, the large number of nation states belonging to the European continent and world wide mobility leads to a multiplicity of languages spoken within Europe. If we just consider the official languages of the European Union we currently have 20 of them within the 25 member states. And there are far more, also unofficial ones, spoken within the whole of Europe. (see Haspelmath *et al.* 2006)

To understand the multi-culturality of Europe means also to understand the necessity that the various languages exist within Europe to maintain European multi-culturality. This implies the need to work with authentic material in order to understand different perspectives and views of things. This gives a need for working, even in Geography, in other languages and asks for the correspondent skills. (see Hallet 1998, Helbig 2000, Lenz 2002, Mentz 2004, Mentz, Nix & Palmen 2007)

### **Reason 6**

This leads us to the next reason: By doing this (working with other disciplines, perspectives and languages) we are *building up geographic thinking based on contrasts*, an approach which is necessary for life in Europe. To understand the visions of other people, to be open to other opinions and visions is one main contribution to peace in (and for) Europe.

Contrasting thinking is also necessary to understand why it is worthwhile to do certain things, for example to make a concerted effort to reduce inequality within the European Union and to promote development across the whole region. The European Union has funded and is already continuing to support poorer regions of the Union with very significant results. Ireland, Portugal, Spain and Greece for example have experienced an impressive economic growth (cf. [epp.eurostat.ec.europa.eu](http://epp.eurostat.ec.europa.eu)). Regions that received development funding from the European Union grew at a higher rate than the average of the Union. So, because of this support, Ireland has become one of Europe's richest countries and democracy and stability in the eight former communist countries that recently joined the Union can be ensured. (cf. European Commission 2003; Bornschier 2000)

For geographers, thinking about contrasts includes the work at different

scales and levels. To be open to other perspectives should therefore be one main point to consider for our pupils as future actors in our growing and globalising world. They have to live in a European (and even world) wide job market. Mobility is an important aspect in this context, and to be mobile people need to be open to new things, to be open to new perspectives, to be open for others. And this leads us to reason number seven.

### **Reason 7**

Talking about a European dimension, we have to be aware that Europe cannot be understood without a global perspective. *The European Union is a global player*, an actor willing to assert its agenda regardless of other partners – in order to realize the best for its members without destroying the relationships with other countries and communities. Europe has become a solid and powerful economic union in which the economic potential of the different nations are bundled and are thereby creating an economic power that has to be taken seriously. (see European Commission 2003; also Bornschier 2000)

Countries worldwide are increasingly orientating themselves towards the European Union. European and non-European countries outside the boundaries of the European Union have shifted their focus towards Europe since the Union has expanded physically and grown economically. For example, immediately after the various, mostly peaceful, “revolutions” in Central and Eastern parts of Europe the different governments declared their desire to join the European Union as quickly as possible. (see European Commission 2003)

Introducing a European dimension allows our pupils to understand the influence of Europe world wide and *vice versa*, the influence of the world on Europe. And this is an important competence for young people who will become mature citizens of Europe so that they may live as protagonists, as active participants of their own future in a more and more unified Europe.

### **Reason 8**

If we manage to give life to these seven aspects it should be possible to *create a European identity*. But what is this for? A European identity is necessary for our young people to build up a mature way of thinking. A European identity does not mean that Europe alone is the challenge. A European identity always includes at the same level a national and/or regional identity. However, it is rather important to have a European vision, to be aware of the European dimension in order to be able to act locally in a mature way of thinking.

The economic, political and democratic process of the European Union has become one model to many other regions in the world, like for example the Caribbean Community, the Association of South East Asian Nations or the African

Union. These regions have tried to imitate its successes and attempted to realize the political and economic integration that the European Union has accomplished. In a very complex process of harmonisation of nations, cultures and philosophies or views of life, Europe has developed into a sustainable model of society in which the aim is no more only a joining of economic potential. Therefore it is worthwhile to be continued. Our young people should know that their home country is hardly able to afford alone the challenge of the future but that a Union like the European Union is necessary to find supranational common solutions for contemporary problems. Geography considers that action has to start at the local scale. By knowing this, the future active citizen will be able to think of a nation as a component of Europe, to perceive European by acting locally.

### **Reason 9**

*Europe starts the earlier the better.* Therefore we have to start to teach and learn about a European dimension in a very early stage of schooling, this means already at the primary school level. So, it is not enough to integrate Europe and European questions in higher education, but that it is important to have a thread that continues throughout the time of learning, that is a life long. It is thus never too early to start with learning about Europe.

### **Reason 10**

And finally: *Europe is individual.* This seems to represent, at first glance, a contradiction to the other nine reasons. But in its global function the union of nation states is not just influencing economic relations but also cultural, social and political affairs. Europe is an active protagonist and represents a model in which heterogeneity or “difference” is approved and appreciated. Difference is seen as a potential to afford supranational challenges.

Europe is a subjective construct and perception. Therefore we must be conscious of the fact that everybody has another, a different vision of Europe. To be aware of ones own perspective, to know what Europe means to me is one important thing and this is needed if we take seriously the idea of having competences associated with contrasting thinking.

Europe is the framework, within which each individual has (and may have) their own perspective. All visions, all opinions are possible, everyone can and may see something else in it. In this way it is possible to consider just the legal component (for example common laws) or only the option of a trouble-free border crossing, or to see the advantages of the common currency, but also to see the summary of (possibly only assumed) problems. Everybody is free to have his or her own idea about and attitude towards Europe. And with this individuality Europe gets stronger.

## **Conclusion – What is a European dimension like?**

If we take these 10 reasons seriously, and probably we could find many more to add to them, it should be possible to define what a European dimension should be like. In my opinion it covers a kind of “European competence“ which includes at least seven aspects:

### **1. to know the geography of Europe**

This means to integrate factual knowledge about the most important geographical aspects of Europe (e.g. knowledge of topography of Europe, about the most important landscapes, about aspects of physical geography; aspects of European economic geography, of demography and so on) and to learn about them through thinking about contrasts. In other words, not just to learn the facts of Sweden for example but to compare these facts to other European countries and to understand the differences and similarities.

### **2. to understand Europe and its worldwide importance and influence**

With this geographical knowledge and the competence of thinking about contrasts one may understand the role of Europe in a globalising world. Europe is a global player, and European enterprises have a worldwide influence. Europe is concerned with the things happening on earth. This includes an ability to give shape to the European space and to have the wish to construct Europe. (see for example Dahrendorf 1996; Giolitto 1993; Foucher 1993)

### **3. to be aware of political aspects of Europe**

It is also important to be familiar with political aspects. This signifies for example to know the different European institutions with their functions and tasks. Every citizen of the European Union should be acquainted with its institutions, should understand how they work, how they are built and in which way the citizen him- or herself is able to take an active part in the democratic process and in the development of the European Union as a global player. A mature citizen of the European Union will be able to conceive the role of the individual national states, the regions and the local authorities within the growing European Union. (see Gasser & Mentz 2004; Foucher 1998).

### **4. to be familiar with European history**

We must be aware that we have to build up an understanding of European history and actuality. It should be the content of education to notice that Europe has been the basis of the world’s main development, in the negative (“invasion of the barbarians” on the European continent between 375 and 568; “discovery” of the “new” continent(s) by Columbus and others in the 15<sup>th</sup> century; starting



point of colonialism and the exploitation of other regions worldwide; starting point of the World Wars) as well as in the positive (in the meantime for more than 50 years as a very peaceful continent; with influence as a “peace-maker” worldwide). (see for example Schäfer 1993).

### **5. to build up a European cultural “literacy”**

This means to be able to “read” European culture. This includes several different things which mainly concern aspects of general education, of general knowledge about the European culture. Geographers have also to deal with cultural aspects. To be able to deal with them needs a competence to interpret things. This can only be achieved through learning with cultural products like such as literature, cinematography, music, arts and so on. This aspect also contributes to a thinking about contrasts.

### **6. to know at least two European languages**

In the context of Geography this implies integrating into learning the use of sources in their original language and to teach also through bilingual courses. This helps us to put ourselves in the position of somebody else and to interpret cultural values, it seems to be very important to be confronted with such authentic material. This is a valid action for learning Geography as well as it is for History. Therefore our courses must integrate not only teaching in foreign languages but also the work with, perhaps sometimes, unknown languages. So it should be possible for example to talk about Spanish material even if our students at first sight don’t understand the texts. (Helbig 2000; Mentz 2005; Language Policy Division of the Council of Europe 2006; Müller-Schneck 2006).

### **7. to perceive a European identity**

The earlier mentioned diverse knowledge about Europe and its worldwide role and influence, the acquaintance with at least two European languages, the awareness about the duties and responsibilities of European citizens, all these aspects must be part of a geographical education at every level of the learning process. By combining them and making relationships between the different aspects of knowledge, it will be possible to speak of a European identity. This cannot be to see Europe above all or even Europe alone, but rather to learn to perceive the importance of Europe and to be aware of being part of this continent and construct.

Europe matters! Therefore, let us give to Geography the purpose of being a matter of and for Europe.

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# Spain on the Web: A GIS way of teaching

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## Abstract

The Internet increases GIS possibilities in Geography learning in many ways: research in statistics, using maps on line published on the Internet with a GIS tool (for example ArcSMDE), etc. The main aim of GIS is in solving territorial problems, but Geography teachers should try to take advantage of Internet GIS to incorporate spatial skills into their classrooms. This paper illustrates some of the new Internet possibilities for Spain and some practical uses for Geography classes with its advantages and disadvantages.

**Key words:** GIS, the Internet, Spain, teaching Geography, fieldwork, ICT, Urban research, Web sites, GI-tools, learning Geography, Aerial Photographs.

## Introduction

The nature of ICT and the Internet nowadays means that access is ubiquitously available and it is used as a normal part of the daily life in training centres, universities, schools and Geography lessons. Teachers are often worried about how to introduce technologies and are concerned about the usefulness of the Internet in learning and teaching their subject content. Web-GIS is one of these technologies which deals with the use of space and territorial planning. This paper demonstrates its usefulness in learning geography in schools.

Many authors have explained what GIS is and also how it can be effectively used in Geography lessons (Zerger *et al.* 2002; Lázaro 2000; 2003; García Marchante and García Clemente, 2003; Freeman 2003; Kersky 2003; Donert and Charzynski 2005). Some of them have created their own GIS lessons on-line as for example by Melbourne University and Alcalá de Henares University (<http://www.geogra.uah.es/gisweb/>). So opportunities to use GIS has been demonstrated and some resource materials are available for others to use.

The ways that territory is used can be easily shown with GI-tools. There are also a number of virtual learning spaces available to help in explaining geo-

graphical concepts. These tools allow us to promote different ways of learning geography. Geographical concepts can be more easily explained and understood with GIS tools than without them. For example, GIS can present database information visually, make relationships between the data and produce accurate and up-to-date maps. GIS allow us to create customised maps from scanned images, to work with topographic maps, with aerial photographs and so on. Concepts like scale and key interpretation are relatively easy to address with GIS. The information on the map can facilitate orientation and we can use a GPS to add information to the map. All these GIS advantages can help learners to develop an understanding of spatial problems, for example, through a chosen case study the factors of location and distribution patterns can be analysed. However it is disappointing that the use of GIS and GI-tools is still not common among teachers or learners in schools. There are barriers which prevent access to geoinformation as many authors have tried to illustrate (Mcinerney 2002; Lázaro 2004; Donert and Charzynski 2005).

WebGIS provides access to extremely powerful geographic solutions and makes them available online. For example, if the Internet is combined with tools from powerful GIS software (ArcGis, Autocad Map, ER Mapper, Idrisi, Manifold, MapInfo, MapMaker, MapPoint, Miramon, etc.), many different and complex types of analysis can be completed by anyone and anywhere, for example proximity/adjacency location analysis, buffering and overlaying. However to achieve this, local, regional and national Spatial Data Infrastructure (SDI) needs to be organised and made available. Issues like interoperability need to be addressed. The rest of this paper examines the developments and outcomes that have recently taken place in Spain.

### **GIS on the Web: information about Spain**

This section will explain the Spatial Data Infrastructure (SDI) and other Web-GIS developments that have taken place with Spanish data. It then examines the possibilities of those web-sites, how it is possible for teachers to work with them and some classroom examples.

There are many Web sites with GIS data about Spain. There has been an international initiative to establish a Spatial Data Infrastructure (SDI) in different European countries. In Spain it has been called “Infraestructura de Datos Espaciales de España (IDEE)”, <http://www.idee.es>. It has collected a large number of statistics and geo-spatial information about Spain in order to make Geographical Information readily accessible so that can be used for different purposes. In addition to national information, some autonomous communities have established their own Spatial Data Infrastructure (Andalusia: <http://www.andaluciajunta.es/IDEAndalucia/IDEA.shtml>; Catalonia:

<http://www.geoportal-idec.net/geoportal/IDECServlet?idioma=cas>; Navarre: <http://idena.navarra.es/busquedas/?lang=>; Galicia: <http://sitga.xunta.es/>; Rioja: <http://www.iderioja.org/>). The aim is that in the future all Spanish Autonomous Communities will have an SDI.

As a result of the above initiative, information for the whole Spanish territory is available for use through a WebGIS application (<http://sigpac.mapa.es/feqa/visor/>). It is the central portal that deals with information from the whole country published on the Internet for the Common Agrarian Policy subsidies from the EU. Additional information for each of the particular autonomous communities is also available here. The site uses 1:5.000 scale aerial photographs. In some cases this aerial photo is in black and white and in others is in colour. The SIGPAC WebGIS adds digital topographical maps at 1:50.000 and 1:25.000 scales that can be used to help identify and locate places. The initial use of GIS as a monitoring tool can be turned into a very effective resource for learning about the Geography of Spain.

MAPA (<http://www.mapya.es/es/sig/pags/siga/intro.htm>) is another important WebGIS for Spain. It includes maps with crops, land use and other the cadastral maps (<https://ovc.catastro.minhac.es/CYCBienInmueble/OVCConsultaBI.htm>) which can also be easily used in teaching Geography.

Many other geographical units such as the autonomous communities, provinces, cities and towns also have developed their own WebGIS capability. The following examples can be highlighted as being particularly important:

- Guipúzcoa (<http://b5m.gipuzkoa.net/web5000/>);
- Balearic Islands (<http://www.sitibsa.com/>);
- Navarre (<http://sitna.cfnavarra.es/>);
- Rioja (<http://www.larioja.org/sig/ctop.html>);
- Madrid (GeoMadrid, <http://www.trescantossa.com/navegar/>) and
- the map server of Castile and Leon (<http://www.sitcyl.jcyl.es/sitcyl/infodloc.sit?infoParams=codcontenido%3A100&mantoParams=>).

There are some major WebGIS initiatives such as Google Earth (<http://earth.google.com/>) and NASA's World Wind (<http://worldwind.arc.nasa.gov/>) that can be integrated into learning about the Geography of Spain. They can be useful as they provide interaction opportunities to explore any place on the earth from space. The Spanish Cadastre has created an application for visualising any real state in Google Earth by using the cadastral reference: [http://www.ideo.es/show.do?to=pideep\\_pasarela\\_google.EN](http://www.ideo.es/show.do?to=pideep_pasarela_google.EN).

When using such tools, it is important that the difference between the satellite images used in Google Earth and the aerial photographs used in the SIGPAC are carefully explained to students. In spite of the similar appearance of the image they are very different in the way they have been taken. The first one has

been built up from the radiation of the earth and the second one is a direct image from the objects as we can see. Generally we can have a lot of environmental information from a satellite image depending on the way we correct it.

The maps from a WebGIS can be combined with data, for example from the main Census. This Census data can be obtained from maps and diagrams produced with the free software PC-Axis and PC-Map (<http://www.ine.es/prodys-er/pcaxis/pcaxis.htm#4>). To support this, there is an interesting data set available for any Spanish municipality (Figure 1) produced by the research services of Caja España ([http://www.cajaespana.es/corporativo/infocajaespana/estudioscajaespana/datoseconomicosmunicipales/form\\_DatoseconmicosymunicipalesdeEspaa.jsp](http://www.cajaespana.es/corporativo/infocajaespana/estudioscajaespana/datoseconomicosmunicipales/form_DatoseconmicosymunicipalesdeEspaa.jsp))



Figure 1: Data from Caja España

There are many other useful Spanish initiatives, some of which include:

- interactive map of historical Madrid ([http://www.madridhistorico.com/section6\\_plano/index\\_plano.php](http://www.madridhistorico.com/section6_plano/index_plano.php));
- cadastral atlas of Spain (<http://www.catastro.minhac.es/estadistica/atlas-carto/atlas.htm>)
- Andalusia atlas (<http://atlas.andaluciajunta.es/>),
- the Electronic Atlas of Catalonia (<http://www10.gencat.net/ptop/AppJava/cat/actuacions/territori/hipermapa.jsp>), and
- Climatic Atlas of the Peninsula: <http://opengis.uab.es/wms/iberia/index.htm>.

Virtual flights are extremely useful in getting an overview of a region. While less interactive they are of value in teaching about places and regions. The number of virtual flights available on the Internet has increased, these include those of:

- Barcelona (<http://www.bcn.es/volvirtual/english/welcome.htm>) and
- Soria (<http://www.soriaglobal.es>).

Some other useful initiatives combine maps, streets, inner city plans and images, example include for the whole of Spain (<http://engcallejero.paginasamarillas.es/home.asp?src=spa> and <http://www.qdq.com>) or some regions, for example: Madrid (<http://gestiona.madrid.org/nomecalles/>) and Álava (<http://carto.alava.net/cartografia/inicioCallejero.htm?Idioma=0>).

### **Working with WebGIS**

It is important for Geography that we encourage teachers and learners to take advantage of these initiatives in a geographical way. In order to do this, we must ask some key questions about the data that we can obtain from these WebGIS portals. Teachers have to navigate carefully in order to identify useful activities for students to do. The selected materials could be used to create a virtual trip, a map, or to debate an issue.

Software could be used for making presentations to others, creating reports with graphs for example. The free software called Hot Potatoes (<http://hotpot.uvic.ca/>) enables teachers to create several basic types of interactive Web-based exercises (multiple choices, crosswords, gap filling). The students work can also be organised through Web Quest (<http://www.webquest.org/>), Web Log (Blogger) or discussion via a Forum. Using a virtual learning environment can also be a great help in providing student activities and support. Moodle (<http://moodle.org/>) is an example of a system for course management that is a free Open Source software package designed to help educators create effective online courses.

### **Two classroom examples**

Relatively recent phenomena such as urban sprawl can be seen from aerial photographs and satellite images from the Web (Figure 2). This can be demonstrated through an activity on urban space (Figure 2 and 2)

Figure 2: Class activities

Aim: To compare differences between the urban expansion of Madrid and Barcelona in the 19<sup>th</sup> century.

Key Work for students:

1. To find in SIGPAC, Google, etc. the streets that run perpendicular near to the old city in Madrid and Barcelona.
2. To compare these key points:
  - a. Size and shape of the streets.
  - b. Other personal observations.
3. To look up the respective growth projects in books. Some clues: the urban expansion of 19<sup>th</sup> century Madrid was planned in 1860 by Carlos María de Castro (Real Decreto 8 abril 1857). The Barcelona one was planned after 1860 by Ildefonso Cerdá.



4. To explore the city plan these cities and compare with others in order to try to pick up an example for each part of Dickinson plans classification in 1950. Material: navigation with SIGPAC of the Madrid and Barcelona photographs, Google Earth satellite images are also useful.

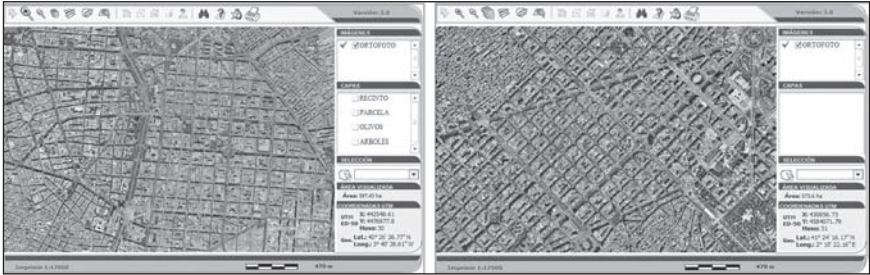


Figure 3: SIGPAC images for use with urban sprawl activity

Activities to investigate rural landscapes can also be undertaken (Figure 4)

Figure 4: Rural classroom activity

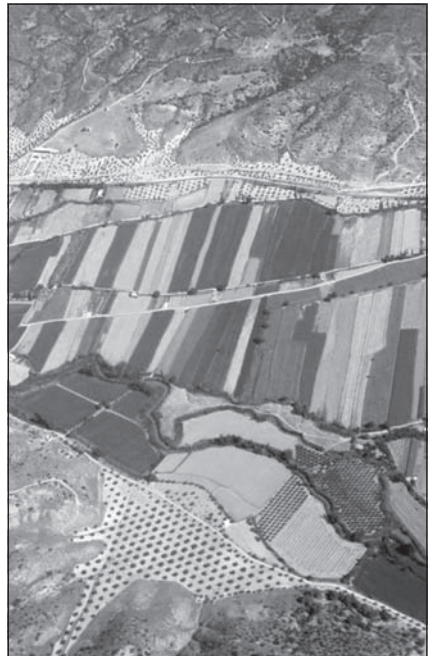
Aim: to spot the differences between rural aspects.

Key Points for identifying differences:

1. Dry and irrigated agriculture (flow irrigation, irrigation channels, trickle irrigation and sprinkle irrigation, for example, by a pivot).
2. Intensive and extensive use of the land
3. Big, medium-size and small properties. Usually dry crops use more extension of land.
4. Other methods of farming, for example growing crops under plastic in Dalías (Almería) at the South of Spain.
5. Visit the Web page of the INE: [http://www.ine.es/daco/daco42/agricultura/meto\\_censoag99.doc](http://www.ine.es/daco/daco42/agricultura/meto_censoag99.doc) and gather some rural terms from the Census: plots, farms, etc.

Resources: several images of contrasting land uses for example Figs, 5,6 and 7.

Figure 5: Dry and irrigated agriculture in Madrid province. Source: M<sup>a</sup> Luisa de Lázaro.



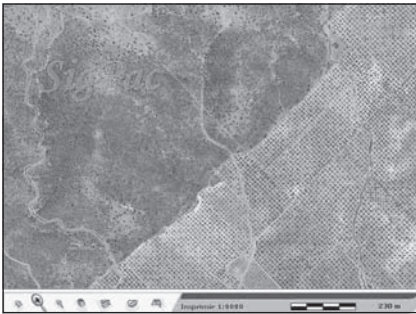


Figure 6: Aerial photograph showing oak trees (*quercus ilex*) and olive trees in Jaén province. Source: SIGPAC.



Figure 7: Pivot irrigation in Aranjuez, Madrid. Source: SIGPAC.

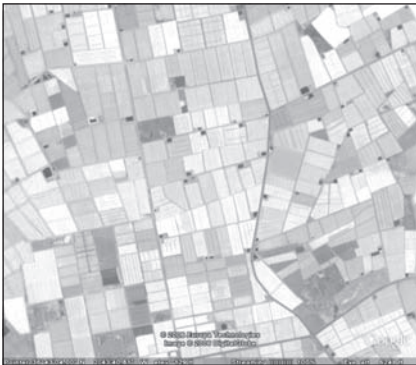


Figure 8: Crops under plastic in Dalías, Almería province. Source: Google Earth.

## Conclusions

Perhaps these possibilities can make GIS a popular tool for teaching the use of the Internet and ICT in general as well as in learning Geography. Geography would be far more interesting for pupils if these technological tools can be applied in a meaningful sense.

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# Pattern and environmental determinants of perception during experimental fieldwork in different landscape conditions

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## **Abstract**

The ability to think, feel or act during fieldwork is connected with the process of perception which, according to Jałowicki (1988), involves noticing together with recognition, comparison, classification, assessment, and evaluation of reality. The results of the field experiment and survey research with the participation of pupils of the lower secondary level confirmed that not all the components of a landscape play the same role in the process of perception. The most interesting to them were the surface waters, the soil with its vegetation cover, and the relief. The combination of natural and man-made elements offered by the environs of the Gosławice reservoir had a favourable effect on both, their perception process and the results of their later work. Out of the total of 62 pupil groups, 20 groups scored more than 80%. That is why a successful perception process is possible in areas with a high geodiversity, especially on geographical didactic trails (Cichoń 2006).

**Key words:** perception, fieldwork, landscape

## **Introduction**

The solution that best achieves the goals and tasks of geographical and regional education is fieldwork. In terms of the kind of activities carried out by pupils, we can distinguish field exercises and field studies. An example of a field study is preparing the cross-section of a river channel and analysing the processes that control it, or constructing questionnaires and performing a survey research on the structure of employment in selected areas. Field exercises, in turn, involve a multiple repetition of tasks in accordance with an algorithm, work cards, or maps, tables, profiles and indicators provided. Typical examples are determining a direction, e.g. the north, reading the highest point of an area on a map, determining the physical properties of water, or calculating the intensity of road traffic at a given site. The most effective is the combination of those types of fieldwork, with a predominance of the one that best satisfies the needs of the pupils and teachers.

Learning to know a geographical environment consists in direct observation and measurements associated with the pupils' thinking process, like analysis and synthesis as well as inference. Fieldwork prepares the pupils for applying theoretical knowledge in practical situations, that is why it rests on active effort on their own. Crucial during field exercises is their activity, mental, practical and emotional (Okoń 1996), which leads to the formation of skills. In the field, the basic skill is direct observation. The ability to think, feel or act is connected with the process of perception which, according to Jałowiecki (1988), involves noticing together with recognition, comparison, classification, assessment, and evaluation of reality. In the process of perception of the geographical environment, one can employ two independent spatial scales: a landscape scale (a distance greater than 500 m from the observer) and an intimate one (a distance smaller than 20 m from the observer). Between them stretches a neutral (orientation) area which is too far from the observer to see details but too close for him to get a general picture. In the opinion of Krzymowska-Kostrowicka (1999), this tripartite division of the observed space follows from physiological controls of the reception of stimuli.

What can be a set of signals and stimuli generated for the observer in the field is the geographical environment and landscape. Because the literature offers too precise but also too diversified an approach to landscape, for the purposes of this study the definition proposed by Richling (2001) will be employed. It describes landscape as an integrated system consisting of a relief and rocks, atmosphere and water bodies, and vegetation and soils, unique in its structure and internal links. It embraces natural elements and man with the effects of his activity.

### **Effect of landscape on the results of field observation during a pedagogical experiment**

In the years 2002-2003 a pedagogical experiment was carried out to see if there were relations between the perception by pupils of elements of various types of landscape and the results of their observation-based fieldwork. One type of landscape chosen, with the Warta river valley at Wartosław, occurs along the border between the Warta-Note\_ Interfluve and the Oborniki Warta Valley (Kondracki 1998). It features a wealth of aeolian landforms and remnants of a natural pine forest complex. The other, man-made, type of landscape found in the southern part of the Gniezno Lakeland at Konin Gośławice is a result of brown-coal open-pit mining. The participants of experimental fieldwork were 319 pupils of the lower secondary level from Wielkopolska. At Wartosław there were pupils from Środa Wielkopolska, Pniewy, Poznań, Ryczywół, and Konin, and at Gośławice, those from Kamieniec, Krobia, Kalisz, Suchy Las, and Słupca

(Cichoń 2004). Following didactic trails prepared in advance (Cichoń 2006), the pupils performed observations and measurements of elements of the geographical environment and made inferences concerning cause-and-effect relations holding among the elements.

In terms of observation skills, the efficiency of fieldwork treated as the ratio of knowledge absorbed to goal sought, or 100% (Gnitecki, Mościcki 1978), was very high. The results varied between 40% and 100%. Out of the total of 62 pupil groups, 20 groups scored more than 80%, the leaders being those from Słupca, Suchy Las, Kalisz, Krobia, and Kamieniec (Fig. 1).

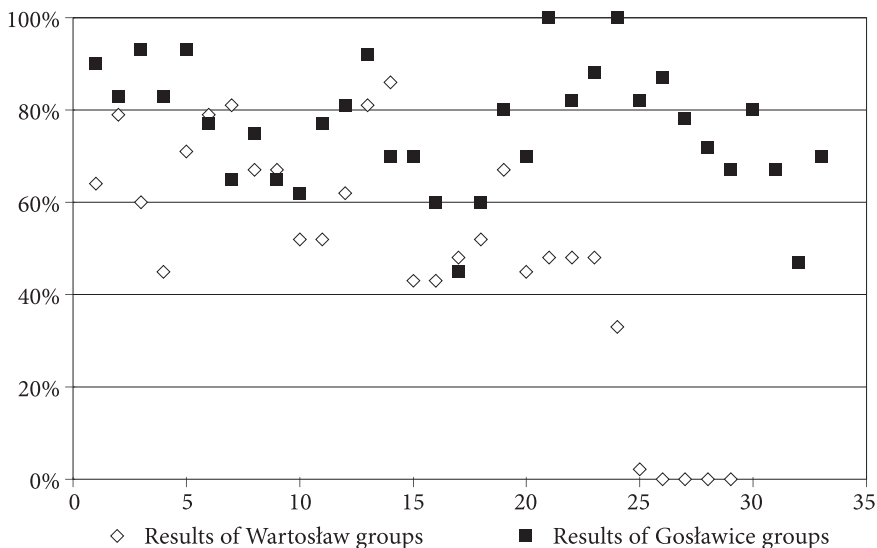


Fig. 1. Distribution of the results of the Wartosław and Gosławice groups in terms of observation (%).

A preliminary analysis confirmed that the skill of observation was displayed chiefly by the groups working at Gosławice. The contrast and disharmony of elements forming the landscape there inspired the pupils to observation. The co-occurrence of natural and man-made, even degraded, elements in a small area was favourable to the development of their observation skills. What additionally stimulated landscape perception was the whole spectrum of colours, from the white ash on a spoil heap through the turquoise water of a worked-out pit to the greenery of many species of man-planted vegetation.

In the opinion of the pupils, the combination of natural and man-made elements offered by the environs of the Gosławice reservoir had a favourable ef-

fect on both, their perception process and the results of their later work. This is corroborated by eight results of correlation at a significance level not exceeding 0.05 (Table 1).

Table 1. Results of the correlation between the pupils' evaluation of the perceived elements of the geographical environment and their fieldwork efficiency during an experimental fieldwork at Wartosław (W) and Gosławice (G).

Towns/ Factors	Konin (W)	Poznań (W)	Pniewy (W)	Środa Wlkp.(W)	Ryczywół (W)	Kalisz (G)	Słupca (G)	Krobia (G)	Suchy Las (G)	Kamieniec (G)
Attractiveness of area	0.053			0.095		0.041	0.088	0.041		0.064
Perceived landscapes	0.040		0.093		0.021					0.027
Man-made elements							0.088	0.018		0.012

What also decided the results obtained by the Gosławice groups was the order of the perception scales applied. Surrounded by degraded elements, mostly the relief, water bodies and vegetation cover, the pupils at Gosławice employed inductive thinking in the process of perception (Kruszewski 1992; Piskorz 1995).

Fieldwork on the geographical didactic trail started with the intimate scale. The distance of an object from the observer was under 20 m, hence all senses were involved in landscape perception: sight, hearing, smell, and touch. Of basic importance in perception were the colour, texture, and shape of objects (Krzyszowska-Kostrowicka 1999). In accordance with the definition of perception by Jałowicki (1988), at the first sites the pupils started with *noticing* man-made landforms, like a pit and its scarp, or the foot and slope of an inner spoil heap. They also *recognised* basic species of soil-fixing trees and shrubs. At the successive sites they *compared* individual soil horizons of the soil lessivé on the basis of such characteristics as the lithology, pH reaction, and colour. At sites four, five and six use was made of the features of a neutral area. The intermediate zone played an important part, because it helped the pupils to orient themselves in the geographical space and to choose a resting place. By performing observations from distances of 20 to 500 metres, they could draw conclusions as to abiotic factors controlling the growth of mid-field plants near the Gosławice reservoir.

At the last two sites of the Gosławice didactic trail, the pupils observed the



entire post-mining landscape from selected vantage points from a distance of more than 500 m and performed tasks connected with the landscape scale. From a farther perspective they observed man-made elements and *assessed* the degree of transformation of the individual elements of the geographical environment: the air, soil, water, and vegetation cover. They also made a *classification* of areas in terms of pollution sources, e.g. pipelines with the pulp, power-plant chimneys, roads, or farms. Finally, they *evaluated* a chosen element in terms of the attractiveness of the area (Cichoń 2004).

The elements of the geographical environment perceived by the pupils reflected the interests of persons at the lower secondary educational level. The most interesting to them were the surface waters, the soil with its vegetation cover, and the relief. Their high fieldwork efficiency also resulted from close observation, which in the opinion of 90% of them was the basic method of work in the field.

The results of the field experiment and survey research with the participation of pupils of the lower secondary level confirmed that there were certain relational patterns operating in the human mind. First we perceive and assess distinctive elements, then the whole, and finally the component parts (Krzyszowska-Kostrowicka 1999). The Goślawice fieldwork corroborated this pattern of perception and proved that this sequence of perceived elements made it easier for the pupils to grasp basic terminology, distinguish the leading features of an area, and develop many skills, including observation and measurement taking.

## **Conclusions**

The landscape assessment performed by the pupils shows that the operation of its particular elements is as complicated as the mechanism of their perception. Not all the components of a landscape play the same role in the process of perception. Observation carried out by a pupil of the lower secondary level focused largely on its energetic-dynamic sphere, mainly changes in the level and properties of water in the reservoir or the Warta river valley. The field activity of the pupils was also stimulated by the relief and the soil with its vegetation cover. However, the effect of the individual landscape components follows primarily from the co-occurrence and characteristics of the natural and the man-made environment that are decisive for the attractiveness of the given area. That is why a successful perception process is possible in areas with a high geodiversity.

When analysing the problem of perception during fieldwork, one cannot ignore the man-made structure of a landscape. Artificial elements like open pits, spoil heaps, or drainage ditches are also an object of direct observation. By taking into consideration the man-made factor the pupils were able to analyse the



degree of environmental degradation and identify threats and conflict areas in the man-nature relations.

The interaction of abiotic, biotic and man-made elements plays an important role as a set of factors affecting the psyche, behaviour pattern and way of perception of the human being, and in the case of fieldwork, especially on geographical didactic trails (Cichoń 2006), the kind of skills developed and the results obtained.

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# Cognitive and application aspects in the bilingual teaching of geography

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## Abstract

People taking interest in bilingual education are usually teachers and parents in frontier cultures, ethnic minorities, or users of several languages themselves. This new dimension of interest in the subject is connected with advancing globalisation and the emerging tendencies towards an interdisciplinary type of research on the intercultural aspect of the phenomenon in question (Strachanowska, 2002). Of special significance among non-linguistic subjects in bilingual teaching is Geography, which develops the skills of perception, evaluation and explanation of processes and phenomena occurring in the geographical environment at a variety of spatial, temporal and cultural scales (Piotrowska, in press).

**Key words:** geography, bilingual teaching, methods of bilingual instruction, schools with bilingual classes, interculturalism, e-Twinning, evaluation.

## Introduction

Education, which underlies the operation of Europe today, is the most important domain leading to a higher level of literacy in society and a knowledge-based economy (Tarkowski 2003). Hence, there are constant advances in education, culture and science. An important place in this development is assigned to learning about Geography, both as a scientific discipline and as a subject of instruction at a variety of educational levels. Modern Geography is a system of sciences exploring and explaining the causes and effects of natural and socio-economic differences in geographical space. It focuses on describing and elucidating the relationships and interactions holding among the particular elements of animate and inanimate nature as well as between those elements and those of human activity.

A further phenomenon highly relevant to Geography is the linguistic diversity that occurs in geographical space. Today it is estimated that 53% of Europe is practically bilingual (Poluszyński 2002). This situation poses yet another challenge to the educational systems of many countries, including Poland. Bilingual

education is a system of instruction in which particular subjects, e.g. geography, are taught using two languages: native and foreign. Pupils thus attain better linguistic skills in many important fields. Bilingual linguistic competence also opens up an opportunity to continue education in other countries. That is why this conception of instruction should be a priority and should meet the requirements of reality (Piotrowska, in press).

### **Bilingual education**

Bilingualism can be considered in terms of social, linguistic, psychological and pedagogical aspects. A bilingual person understands the speech of other people using the given language and is understood by them (de Greve and van Passel 1968). According to Piegzik (2002), we can speak of bilingualism when a person who knows two linguistic systems uses them alternately and at the same time, but to a different extent. Studies by American psycholinguists have made it possible to distinguish two types of bilingualism: two linguistic systems are correlated with each other, but remain independent (*parfait bilingu – perfect bilingualism*); or two linguistic systems overlap, which leads to interference (*complex bilingualism*) (Piegzik 2002).

Formally, bilingual education was introduced in Poland from the 1991/1992 school year. The first to appear were bilingual classes with French established in secondary schools with a tradition of teaching this language. Next came English, German and Spanish classes. The basis for the establishment of bilingual classes was the agreements signed by the Polish Ministry of National Education and proper institutions in co-operating countries.

The bilingual mode of teaching relies on the use of two languages as equivalent tools of instruction. The effect of this process is the acquisition of broad communicative and intercultural competence. In the light of the law in Poland (Multañska 2002), bilingual education means the teaching in Polish and in one of the target languages of subjects listed in the syllabus for the given educational stage. Bilingual education involves at least two or three non-linguistic subjects, the most popular among them being mathematics, physics with astronomy, chemistry, biology with hygiene and environmental protection, elements of general history and geography, and information science. On graduation, examinations in those subjects can also be taken in the given language of instruction. Bilingual instruction does not apply to lessons of Polish, the history and geography of Poland, and another foreign language. In public general secondary schools, lower secondary schools introduced by an educational reform, and sporadically in primary schools, there are classes with English, German, French, Spanish, and Italian as the second languages of instruction. This type of instruction has so far been absent from vocational schools. At present there

are some 80 schools in Poland with bilingual classes, and their number keeps growing from year to year (Figure 1). There appear new bilingual primary and lower secondary schools, usually with English as the second language.



Figure 1. Schools with bilingual classes in Poland - English, German, French, Spanish, Italian (Multañska 2002, actualized)

As follows from international studies, pupils in bilingual classes display:

- a stronger motivation for learning and a higher level of activity,
- a more extensive vocabulary,
- more confident and correct use of the vocabulary,
- an ability to formulate their thoughts in alternative ways,
- a skill in using dictionaries and lexicons, and
- higher self-reliance and perseverance in their work (Iluk 2000).

### Geographical education as a basis of knowledge about the natural environment

Of special significance among non-linguistic subjects in bilingual teaching is Geography, which develops the skills of perception, evaluation and explanation of processes and phenomena occurring in the geographical environment at a

variety of spatial, temporal and cultural scales. Taught in a general secondary school, geography is of great cognitive, practical and pedagogical merit. Geographical instruction helps the pupil answer the question about the meaning and role of objects and phenomena found in the environment, and about possibilities of their rational use. An exceptional value of this discipline is a holistic approach, both to the geographical environment and to human activity. In turn, the perception of natural and cultural elements of a landscape makes it easier to account for changes taking place in the selected space.

The effect of the process of bilingual teaching is the acquisition of broad communicative and intercultural competence. The main goals of the bilingual teaching of non-linguistic subjects, including Geography, are for the pupils to:

- master two languages at the same level,
- master the subject's substance and skills,
- achieve competence in the target language, and
- achieve bi-cultural and intercultural competence (Iluk 2000).

This kind of teaching should lead to the extension of knowledge about the actualities of contemporary life in the countries speaking the language and about the geographical conditions of human activity in them, their culture and history. As a rule, people taking an interest in bilingualism are teachers and parents in frontier cultures, ethnic minorities, or users of several languages themselves. This new dimension of interest in the subject of the present study is an effect of the globalisation process. There are also tendencies towards an interdisciplinary type of research on the intercultural aspect of the phenomenon in question (Strachanowska 2002).

As a basis of knowledge about and protection of the natural environment, geography teaches the pupils:

- to perceive, observe, understand and evaluate natural and socio-economic phenomena and processes occurring in a local, a regional and the global environment in their interrelations,
- to explain the causes and effects of differences in nature and human activity,
- to locate objects and phenomena and to assess them from a variety of perspectives,
- to diagnose the usefulness of the natural environment for human needs and to anticipate changes (positive and negative) that occur in the natural environment as a result of man's economic activity,
- to recognise the qualities of nature and its inherent value, and to feel obliged to use the Earth's resources prudently and to protect them,
- to take decisions concerning the solution of local, regional and global problems, and

- to act in the geographical environment on their own and to engage in the problems of their own region.

An effect of education carried out by creative, competent and reflection-inclined teachers, or generally teachers-constructivists, should also be the pupils' ability to gather and consolidate the knowledge necessary to describe phenomena, and to appreciate the natural and cultural attractions of their region.

The necessary information is supplied by perception, or observation of geographical objects, phenomena and processes taking place in a selected space. The research procedure consists in seeking and uncovering facts, and the research itself includes description, registration, analysis, and interpretation. In Geography, observation is the basis of acquiring knowledge about the environment. Its main goals are to develop observation skills and the ability to perceive and learn about phenomena, and to help pupils to form geographical ideas and notions on the basis of cognitive processes (Piskorz 1997). It is also an important intellect-developing factor through independent thinking and inference as well as through attempts at explaining the operation of geoecosystems.

An awareness of the diversity of the geographical environment and its attractiveness may furthermore lead to measures taken to protect it together with landscapes whose dynamics (the appearance or disappearance) is determined by human activity. Geography as a discipline employing a holistic approach also indicates a way of protecting an area that is combined with anticipation.

### **Bilingual teaching of Geography**

To test the above theoretical assumptions concerning the role of Geography in acquiring knowledge about the geographical environment and possibilities of practical application of geographical knowledge, an attempt was made to investigate the actual approach to bilingual education by pupils of the Higher Secondary School No 1 in Poznań. A research survey was carried out among 80 pupils of selected classes in which Geography was taught in two languages: Polish and French. The questionnaire contained a variety of questions about the importance of geography in the teaching process, the bilingual instruction methods employed, the didactic means used, difficulties encountered in learning, skills acquired in geography classes, and an evaluation of the teaching of geography in a foreign language. The pupils were also asked to give their reasons for choosing bilingual classes, as well as weak and strong points of this kind of instruction.

An analysis of the questionnaires showed that:

1. A decided majority of pupils treated geography as an important subject in the teaching process.

2. The choice of bilingual classes by the pupils was justified by the following reasons:
  - expanding their use of French and acquiring a vocabulary from a variety of disciplines,
  - learning about the French culture,
  - qualifying for participation in school exchanges,
  - preparing for the international graduation exam, and
  - being able to enrol in a study in other countries.
3. Mentioned among the methods employed in geography classes were: a lecture, a discussion, a talk, work with a geographical text in French, preparation of posters, work with a map, and indirect observation (of phenomena or processes in a film or on didactic charts).
4. Among the most common difficulties encountered in learning geography in a foreign language were:
  - having to master a great number of geographical notions,
  - a difficult geographical vocabulary,
  - remembering and using notions,
  - explaining phenomena and processes in a foreign language, and
  - formulating descriptions of phenomena.
5. The skills formed during geography classes included:
  - using the French geographical vocabulary in practice,
  - combining phenomena with geographical notions,
  - using notions in two languages,
  - quicker retention of notions by repeating them in two languages,
  - ability to perform an analysis of geographical phenomena,
  - understanding of the surrounding world,
  - ability to construct explanations and definitions of phenomena in a foreign language,
  - orientation in space and on a map,
  - searching for geographical information, e.g. in the Internet, and
  - ability to understand TV broadcasts.

Despite the difficulties and a decidedly greater workload for pupils engaged in bilingual education, one can still observe a lot of interest in education through this type of school. With reference to the skills being developed, Geography is indeed a very important subject which can help a young person to understand the environment and the world.

Having joined the European Union, over the next few decades Poland may not merely become a country showing an intercultural tendency, but change into a multi-cultural state (Strachanowska 2002). In 1989, at a conference in Palermo three tasks were stipulated: 1. an intensification of the teaching of (modern) for-

eign languages, 2. geographical instruction that accounts for the changed situation in Europe, and 3. syllabuses emphasising the common past of Europe and the process of transformation of the European civilisation (Ryba 1992). Thus, geographical bilingual education is intercultural, exceeding the scope of the discipline as such. There may be great value in this type of approach. Especially issues in socio-economic geography provide an excellent occasion for an expansion of intercultural elements.

Geographical bilingual education can also be important and useful in international projects like e-Twinning, or a long-term virtual co-operation of twinned European schools. This type of education is especially appropriate for twinned schools and pupils participating in the exchange. e-Twinning consists in common inter-school /inter-pupil /inter-teacher ventures using Internet links to exchange experiences. The pupils working on a common project improve their linguistic skills and the knowledge of their geographical and cultural environments. Depending on the kind of project, they correspond, publish papers, or carry out scientific research.

## **Conclusion**

Current discussions and considerations of the role, significance and value of geography in the cognitive and educational systems employing bilingual instruction confirm the important place that this discipline occupies in them. Geographers, both researchers and teachers, who adjust geographical knowledge to the school level make a great effort to ensure that its fields of study and ever-more-perfect instruments offer an increasingly deeper insight into the operation of the geographical environment. The application of GIS techniques puts geography among the disciplines that develop their research tools while improving the reliability of the results obtained.

Undoubtedly, an important asset of the discipline is the possibility of an interesting presentation of its observational and research results (Piotrowska 2005), on the assumption that learning the skill of presentation is treated as a fundamental factor of man's professional competence and a condition of his personal development (Łasiński, 2000).

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# The role of intercultural education in preparing Polish pupils to functioning in the United Europe – results of research in Northern Ireland

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## **Abstract**

The article presents the role of Polish educational system and geography subject in preparing pupils to be effective citizens in united Europe. Some ideas of intercultural education in Poland before the accession to European Union approached to schools mainly by geography teachers through European dimension. It included teaching about the European continent, its citizens and about the integration processes. Since 2004 when Poland became member of the EU it is indispensable to strengthen intercultural conception aimed at improving the quality of intercultural contacts, which depends to great extent on developed attitudes and language competence.

The main place in this paper belongs to results of verify these theoretical assumptions of intercultural education with the practical requirements of everyday life. The author shows the results of conducted research in Belfast among Polish citizens living in Northern Ireland with children of school age.

**Key words:** European dimension, integration process, intercultural education, migration, multiculturality

Intercultural education can be understood as all the actions aiming at getting to know and becoming open towards other cultures, serving mainly to establish tolerance, understanding and an appreciation of groups of people differing from us in respect of race, nationality, sex, religion, as well as acquiring the ability to coexist and cooperate with others. All these aspects should nowadays be an especially important element at all the stages of education. (Ardens 1995).

It is commonly known that many Polish citizens have gone abroad to work. Poland is the leading European country in respect of the scale and diversity of international migration due to financial reasons. A major importance from the point of view of the size and the nature of foreign migration was the collapse of communist system in 1989 which led to lifting of the “Iron Curtain” (Mydel and Fassmann 1997). The new social, economic and political conditions after Poland joined the EU and the partial opening of the European labour markets

to the citizens of the new countries initiated a big wave of permanent and temporary foreign migration. At present there are especially strong migration movements to those countries in which there is the potential of legal employment, for example to the UK.

Statistical data collected by Department of Social Development shows that between April 2003 and June 2005 as many as 31,421 people who were not citizens of the UK or the Republic of Ireland applied for a National Insurance Number<sup>2</sup>, including 11,606 people coming from the countries of so called A8<sup>3</sup> and 6,710, (21.35%) of these people, came from Poland. In the meantime ECAS<sup>4</sup> says that between May 2004 and the beginning of September 2006 most Polish citizens left to be in Germany (534,900), Great Britain (264,000) and Ireland (100,000) (Czerny 2006). These people are very often unprepared to live and function efficiently in their new location. As shown in the report of Komisja Rodziny i Polityki Społecznej (Family and Social Policy Committee) and Komisja Spraw Unii Europejskiej (European Union Affairs Committee) the main problems encountered by Polish citizens migrating to other countries in search of employment are: insufficient knowledge of foreign languages and connected with it incomplete use of available information on possibilities of legal employment, lack of knowledge on conditions of work and life abroad. The above mentioned barriers and limitations reduces the chances for integration of migrating people with preservation of their own culture and tradition. These aspects apply not only adults but also to their children of school age, who should be given special consideration, as they are not the ones who decide on their new place of permanent or temporary residence, but they do take part in the migration process.

According to Nikitorowicz (2001, 2005) migration movements with a strong growth can have both positive and negative consequences on the migrants. Which of these is experienced may depend to a great extent on previous effective intercultural education. In this case, the collision of different mentalities, traditions, histories, cultures and experience can open to people new horizons of thinking, acting and existing. Without the creation of such attitudes as part of the process of intercultural education, their coexistence may lead to strengthening negative stereotypes and even to antagonism. In some countries of Western Europe multiculturalism causes problems concerning the rights of communities of immigrants. Sometimes children of these immigrants live exclusively in their own cultural group, have very poor knowledge of the 'new' language and show limited interest in getting to know the culture of the country of residence

2. National Insurance Number; each person beginning employment in the UK has to have NIN

3. Countries that joined European Union in May 2004

4. European Citizen Action Service.

and in assimilation with its citizens. Meanwhile according to Sadowski (1999) “multiculturalism is not co-occurrence but coexistence”.

Preparing to live in a changing location should be part of the educational system whose main aim is to prepare pupils to adult life. Nowadays adult life is often combined with shorter or longer stays abroad, for example for employment or for tourist reasons or cooperation with citizens of other countries, and thus this reflects the significance of using a foreign language and learning to function in different cultures or traditions. Hence education authorities and individual teachers should ask themselves the question, “how can we optimise preparation of pupils to be effective and mobile citizens in a united Europe?”.

A utilitarian and intercultural approach to school education in Poland before the accession to EU was provided mainly by geography teachers through European education studies also known as the *European dimension* or *Europeanization* (Rabczuk 1994) which meant the entirety of activities taken by schools and other institutions responsible for education. The studies were about the European continent and its citizens in order and they were developed in order to prepare pupils so they can participate optimally in all the spheres of life in an integrated Europe. (Butryn 2001). It includes teaching-learning about the integration processes, such as the political, economic, social and cultural effects in Europe and developing open and tolerant attitudes towards other people.

The term the European dimension has many meanings. Rabczuk (1994) understands *European dimension of teaching* as activities aimed at strengthening young people’s feeling of European identity. It attempts to appoint new roles for school and teachers in respect to immigrants, ethnic minorities and searching for a new intercultural education model. Banach (1993, 1999, 2001) treats the European dimension in terms of the types of tasks needed to broadly understand Polish integration with EU, this is said to be on three levels:

- educating people so that they correctly realise integration tasks in their life;
- “education teaching about Europe” by means of school subjects and optional classes;
- “education by Europe” which means acquiring experience by associating with other nations.

On the other hand, Sielatycki M. (1993a, 1993b, 1999, 2000) thinks that within *European education* four different elements should be present. These are learning about Europe, learning about European integration, “European thinking” and “European competences” (computer literacy, knowledge of foreign languages).

According to the results of curricula and school book analysis, European issues in Polish education appears at junior high school and high school level. In junior high school European issues appear in a wider form and were established as a valid component for geography, history and social knowledge classes

as well as for the interdisciplinary education pathways (międzyprzedmiotowych ścieżkach edukacyjnych) ‘European education’ and ‘Polish culture in comparison with Mediterranean civilization’. According to *the national curriculum* in junior high schools, European issues should be most broadly discussed during Geography classes, within the framework “Contemporary economic, social and political changes on continents and in selected countries with special attention paid to Europe”. Here the characteristics of selected countries in Europe should be studied. Additionally in the third form of junior high school, the Geography of Poland is discussed in comparison with the European continent and the whole world. This is a new approach to our home country, as it offers the opportunity to deal with it as an integral part of the continent, which rejects the approach which was popular in postwar years, where Poland was discussed in artificial isolation from other countries of Europe. Separate regulations allow discussions during Geography classes about the issues connected with broad integration processes, including integration in Europe. Pupil should get to know the adaptation requirements of the Union, with which Poland was struggling with during the negotiations on integrating its local and national structures.

In higher schools in Poland European issues should be discussed during Geography, Modern Foreign Languages, History and during the Introduction to Enterprise classes. In profiled high schools within the framework of Geography classes these issues include:

- processes involved in going from isolation to integration;
- cooperation between societies;
- integration and disintegration processes in Europe;
- Euroregions and “twin” towns (communes) as an example of international cooperation on regional and local level

The issues directly connected with European education were also included in the regulations for vocational schools in their socio-humanistic segment. At vocational school level pupils should get to know contemporary political and economic changes in Poland, Europe and the whole world with special attention paid to these issues. The national curriculum here also provides for the discussion of such issues as the EU and the way it functions, NATO and other international organisations that Poland is a member of.

Both at junior high and high schools two interdisciplinary education paths, ‘European education’ and ‘Polish culture in comparison with Mediterranean civilization’ constitutes a very important aspect of the European dimension. The European Education path is entirely devoted to European issues with a domination of issues connected with the EU and integration processes. (Rozporządzenie Ministra Edukacji Narodowej i Sportu z dnia 6.11.2003)

Now, since Poland became members of the EU, apart from information on

the integration processes, EU countries are also taught to Polish pupils during Geography classes, it is indispensable today to strengthen intercultural conception aimed at improving the quality of intercultural contacts, which depends to great extent on developed attitudes and language competence.

In order to verify the theoretical assumptions of intercultural education with the practical requirements of everyday life in the new, culturally different environment, the author of the present article in cooperation with Magdalena Rainer<sup>1</sup> in July 2006 conducted research in Belfast among Polish citizens living in Northern Ireland with children of school age. The author realizes that the research sample is meagre and that conclusions derived from it cannot be regarded as decisive. Nevertheless, reaching even such a small number of people required lengthy negotiations and requests. Furthermore, the author did not find scientific publications based on empiric research on this issue. For this reason the research results are presented here bearing in mind their introductory character.

The research method was to use a diagnostic opinion poll, which meant conducting an interview comprising 21 questions. Research was undertaken among 20 parents (16 women and 4 men), the youngest of whom was 27 years old and the oldest was 44. Exactly half of the parents were aged between 31 and 35. So, the respondents were mainly a group of young people in productive age, mainly with a 2+2 family model (12 families, 60%), the other respondents had one child. In general the parents interviewed had a total of 32 children, with 17 girls and 15 boys, among whom the most numerous group were children aged 8-10 years (11 children, 34%) and aged 5-7 years (10 children, 31%). Among the older children 7 were aged 11-13 and 4 aged 14-16 years.

Almost all those interviewed came to Northern Ireland after the accession of Poland to the EU, which means after 2004. One family had emigrated to Belfast in 2003. Six families came to Ireland in 2004 and in 2005 and 7 families in 2006. This indicates the high tendency for migration of Polish citizens. This phenomena is a result of high unemployment in Poland, causing difficulties in obtaining basic family living conditions. Economic reasons were stated by 70% of the young Polish citizens as the main reason for their migration from Poland (Figure 1). Others gave family reasons, as (these were exclusively women, whose husbands had already been working abroad. For one family, migration was accidental as a branch of the spouse's employer was located in Northern Ireland.

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1. Polish citizen, a translator working in Belfast in institutions registering foreigners to legal work

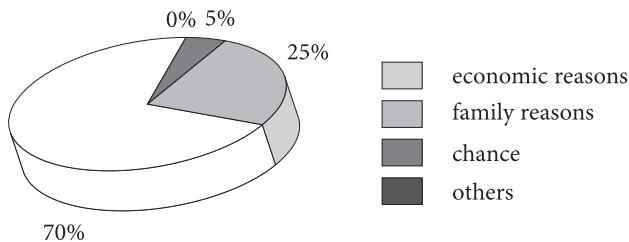


Figure 1: The reasons for migration to Northern Ireland given by interviewed Polish citizens

Before departure the respondents were mostly afraid of how their children would adopt to their new country and also their linguistic incompetence (30% each), in addition they were also anxious about problems with finding a job and accommodation (see Figure 2). Such parental anxiety about the adaptation of their children seems to be completely natural. Worryingly however, was that a large group of those interviewed declared almost complete lack of knowledge of the language of the country they were relocated to, which would appear to indicate the need for some improvement in the quality of language teaching in Poland, not only to children and teenagers, but also to adults in the frame of continual education.

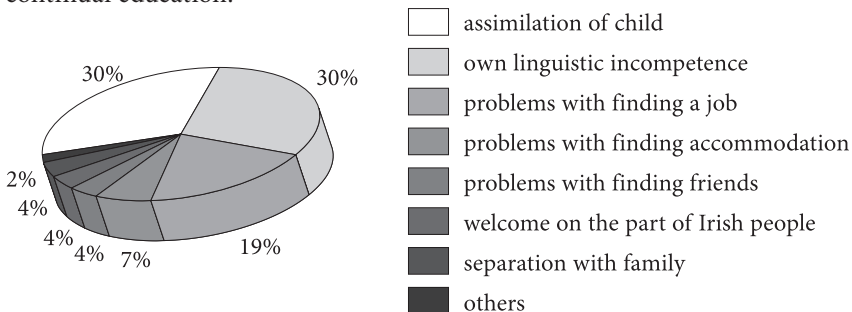


Figure 2: Respondents' concerns before departure to Northern Ireland

Many of the people interviewed, despite their concerns, had been living in Northern Ireland for a period of 2-3 years, so the interview included a question about how, in their opinion, their children had adapted to living abroad. Their answers indicated that majority of their children felt happy in the new country (12 parents claimed that the children have rather adapted; 5 parents chose the answer hard to tell and 3 declared that their children have not adapted). As indicated by Figure 3, the assessment of adaptation depends on duration of family's residence abroad: the longer they stay the greater the level of comfort and adaptation of the child to the new environment. There was obvious anxiety and worries concerning this area among families who had only recently arrived in Belfast.

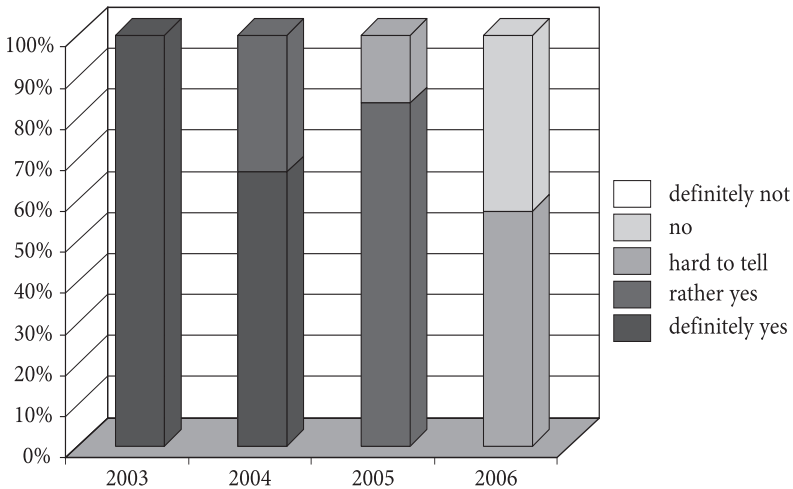


Figure 3. Degree of children's adaptation abroad according to their parents.

In order to maximise the participation of children in school life, all the children were placed in Irish catholic schools and took part in additional remedial language classes. They additionally profited from the help of special teachers who were specialised in adapting foreign children at school. In their parents' opinion the children did well or very well at school, and finding new friends was the easiest task (but to a great extent they were also foreigners) and school duties. Children functioned well and fulfilled themselves also in after school classes (mainly additional language classes and sport) (see Figure 4)

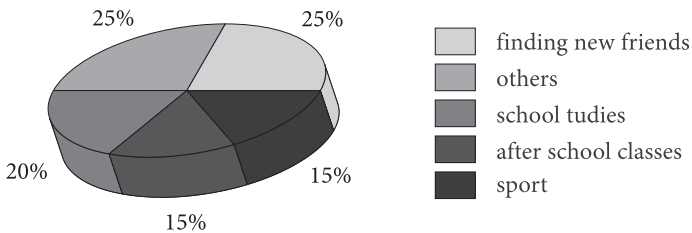


Figure 4. Areas of children's activities

The adaptation of the children to the new school environment is not easy. At school children have difficulties with the language and to some extent associated with it is the assimilation with other children. Only 15% of the interviewed parents declared, that their children did not have any problems at school. (Figure 5).



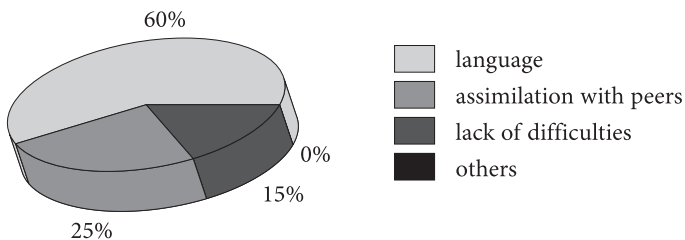


Figure 5: most frequent difficulties encountered by children

Despite a shortage of linguistic competences and other inconveniences, parents almost unanimously said that after graduating from a school abroad their children will have better chances in adult life. Only one parent did not agree with this attitude basing his decision on poor, according to him, teaching standards in Northern Ireland. The majority of the interviewed group declared that they were willing to stay permanently in Ireland (4 families definitely declared that they did not intend to return to Poland, another 6 families do not want to go back, 3 families are not sure and 7 interviewed families want to return to their homeland). The responses differ significantly depending on their length of residence abroad (Figure 6). The shorter the respondents have been abroad the more they are likely to return to Poland. As shown by this research results there are two reasons for such an attitude, the lack of socialising and feeling lonely, as well as the difficulties in finding a well paid job due to increasing competition and saturation of labour market by other immigrants arriving in large quantities.

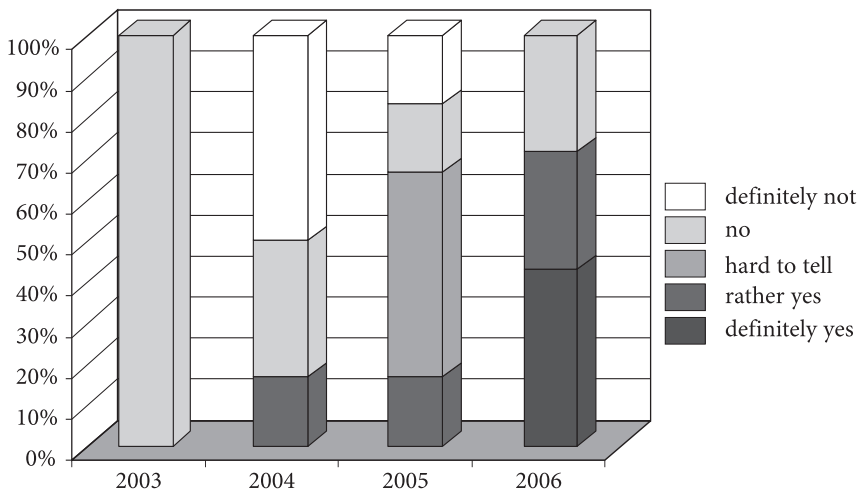


Figure 6: Declaration of return to Poland according to the year of arrival in Northern Ireland

The interview concluding by asking what advice the interviewed parents would give to potential people planning to go abroad with their children. In response to this all the parents decided that the most important advice was to leave with children who are as young as possible, as they stand a better chance for a more natural and fuller assimilation with their peers. In addition they considered crucial at least some elementary linguistic preparation of both adults and children including basic information on the culture, mentality and customs of the country of emigration.

The above listed advice of those interviewed should not only be a reasons for propagation of intercultural education at all the teaching stages but it should also lead to a more profound reflection and discussion on both the socio-political situation of Poland and the importance of education. In the end it should be underlined that, in the light of this conducted research, Geography cannot be omitted at school, as the subject has considerable potential to become a subject not only of general education but also in developing skills and the application of knowledge for integrating Europe.

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# How much English teaching in Geography teaching

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## Abstract

This paper presents the position of bilingual teaching within other methods of ESL/EFL/other language teaching; it explains what countries use this method of instruction, why and with what result; what the opinions on bilingual teacher qualifications are; what the EU programme for popularising the method of Content and Language Integrated Learning (CLIL) is. It also characterises bilingual teaching of Geography in School Complex number 10 in Toruń, Poland and shows areas for future concern.

**Key words:** bilingual teaching, Geography and English teaching, EFL/ESL, CBI, CLIL, CLT, integrated skills

## Introduction

Teaching various school subjects through the medium of a foreign language, widely known as bilingual teaching, has recently become a popular trend in numerous European and non-European countries. The language of instruction employed can be German, French or other languages, but English is the most popular in Poland. The aspect of bilingual teaching in the immigrant countries, again mainly English-speaking ones, makes this method an important element of teaching English as a second, foreign or other language (TESL/TEFL/other language teaching).

## ESL/EFL/other language teaching methodology

For centuries of foreign language teaching, methodology specialists have designed a number of methods employed in the teaching process. The oldest method, called the *Grammar Translation Method* (GTM), concentrated on reading texts, studying grammar rules and translating sentences from the mother tongue of the learner (L1) into the target language (L2). The method was originally designed for studying dead languages, such as Greek or Latin. However, it became popular in teaching other languages too.

Other methods stressed different aspects of language acquisition. The *Direct Method*, concentrated more on spontaneous communication, the *Audio-lingual Method* (ALM), focused on listening and speaking skills, while *Community Language Learning* advised the teachers to treat their students as 'whole persons' and

to consider their students' feelings. In the *Silent Method* the teacher remained silent most of the teaching time to facilitate and stimulate the learners, while *Suggestopedia* tried to teach the language while the learners remained in the relaxed state of mind. The *Total Physical Response* (TPR) combined teaching and learning the language with physical activities, while the *Natural Approach* tried to teach a foreign language in the same way as people learn their mother tongue, i.e. include a 'silent period' when students only acquire the language, but are not ready to produce it.

The above mentioned ESL/EFL/other language methods finally resulted in developing the most modern and currently most widely used method of teaching languages, namely *Communicative Language Teaching* (CLT). Its main goal is to create a communicative competence in the learner. Thus, it is not only important to teach the language itself, but also to teach how to use it in terms of social and cultural norms. Teachers should be aware that their major task is not to make students solve the classroom tasks, but facilitate their lifelong language learning.

The method of Communicative Language Teaching has developed a number of concepts, one of which is *Content-based Learning* or *Content-based foreign-language teaching/instruction* (CBI). It combines learning the content, i.e. a selected school subject with language learning. It is already treated by some methodology papers as a method that can stand alone and is the one expected to gain growing acceptance among foreign-language teachers. In this mode of instruction it is the content which determines the language used and mastered, not the other way round. It is expected that this is the way to motivate the learners to acquire more language.

The CBI enables the teachers to integrate all the skills students of foreign languages need to master. The basic skills include *listening* and *reading*, i.e. the *receptive skills*, and *speaking* and *writing*, i.e. the *productive skills*. Other skills include knowledge of vocabulary, spelling, pronunciation, syntax, meaning, and usage (Oxford 2001). This is known as the *integrated-skills approach*.

### **Content-based foreign-language instruction (bilingual teaching)**

Numerous articles have been written addressing the issue of content-based foreign-language instruction, or just content-based instruction for short (CBI). Yet, in spite of the attempts undertaken to generalise and summarise the problem, CBI specialists find it difficult even to decide on a definitive name for the method. Among teachers it is most common just to refer to this method as bilingual teaching. Other names, however, vary considerably not only in terms of the name itself but also in terms of the contents. The most closely related to what is accepted as bilingual teaching, no matter what the language of instruction

is, include *Bilingual Integration of Languages and Disciplines* (BILD), *Languages Across Curriculum* (LAC), *Problem Based Teaching*, *Cognitive Academic Language Learning Approach* (CALLA) (Chamot and O'Malley 1994 [in:] Oxford 2001) or *Content and Language Integrated Learning* (CLIL) which is advocated for by the European Union.

Other terminology, however, refers solely to English as the language of instruction, i.e. *English Across Curriculum* (EAC), *English as a Medium of Instruction*, *English as a Language of Instruction*, and *Englisch als Arbeitssprache* (EaA) (*English as a Working Language*). These methods seem to be close to other widely used teaching options, especially at universities, i.e. *English for Specific Purposes* (ESP) or *English for Academic Purposes* (EAP), where the main goal is to acquire the ability to read and write scientific papers by gaining vocabulary and an academic writing style.

*Content-based foreign-language instruction*, as an option to the integrated-skill approach, includes three general models of teaching (Oxford 2001, Davies 2003). A *theme-based model* integrates the language into studying a carefully selected theme or topic, such as the world terrorism, wild animals or cultural differences between countries. This kind of content-based language instruction is widely approved and used all over the world and numerous modern ESL/EFL coursebooks introduce themes to arouse the students' interest. A theme based CBI can be taught entirely by an EFL/ESL/other language teacher or in a team with a content specialist. The teacher, or teachers, can create a course of study based on their own students' interests.

In an *adjunct model* of CBI the language course is taught separately from the content course, but they are carefully designed. These classes are usually taught by ESL/EFL teachers, and they aim at preparing students for 'mainstream' classes where they will join native speakers. Adjunct classes may resemble EAP or ESP classes where target vocabulary is the most important. The course may include specific classes to instruct the learners with the skills necessary for active participation in content-only 'mainstream' classes, such as listening and taking notes, as well as skimming and scanning texts. Classes of that type are often organised during summer holidays before regular college classes, while others are conducted simultaneously with regular lessons.

A *sheltered model* teaches the content, but the language used is simplified in order to meet the level of students' language proficiency. Similarly to the adjunct model, the aim of the sheltered model is to enable learners to study the same content material as regular native speaker students. In sheltered CBI students get special assistance to help them understand regular classes. In order to achieve this goal two teachers, i.e. a language specialist and a content specialist, work together to give instruction in a specific subject. They either teach the

class together or the time of the lesson is divided between the two of them. For instance, the content teacher might give a lecture on a specific topic, followed by a language teacher who will check whether the listeners have understood the basic elements of the lecture. Such team teaching, however, means the teachers have to co-operate closely to plan and evaluate classes. A sheltered model of the CBI has proved to be successful at the bilingual University of Ottawa, where the classes are taught in English and French (Briton 1989 [in:] Davies 2003).

Content-based foreign-language instruction proves the language is not only an interesting issue for grammarians or linguists, or something compulsorily tested during school exams. The language becomes an important tool of interaction and communication between people. Learning a language in this way makes it more interesting and motivating (Peachey, date unavailable). Fulfilling a real purpose makes students both more independent and more confident. Getting and evaluating information from various sources develops thinking skills, also useful during other school lessons. Group-work or pair-work develops students' collaborative skills, which are of great social value. The CBI is also useful for the teacher as it makes it possible to observe the development of the students' language skills. Last but not least, this method enables teachers to teach and students to learn the real content, such as Geography or History, not just the language forms. There are, of course, potential problems, such as automatic use of the native language during parts of the lesson or difficulties in finding materials for students with lower levels of language proficiency. These drawbacks should not, however, restrain us from integrating language skills in content-based instruction.

## **Bilingualism**

Various methods of bilingual teaching are employed in countries with high level of immigration in order to facilitate the students' gaining a decent education. Numerous countries, however, are involved in discussions on how to treat bilingualism, which is so widespread in multiethnic and multicultural societies, such as in the USA or Canada. The very idea of bilingualism poses a number of issues to be considered. First of all, bilingualism is a *linguistic issue*. The questions asked here are whether bilingualism is a divisive force or a natural phenomenon in a multicultural society. Is it a drawback when acquiring an academic education or an advantage in learning when language and literacy skills are fully developed? What should be the age of second language acquisition: the earlier the better or should the age range for acquiring bilingual proficiency span throughout all the years of elementary education?

Bilingualism is also a *cultural issue*: should assimilation of immigrants be rapid and complete or is it a complex process of new cultural values and life styles

being adapted and integrated? Do ethnic minorities stay segregated or are the patterns of immigration different in modern multicultural societies?

Additionally, bilingualism is a *teacher training* issue: is there no need for special training for teachers or should teachers be qualified in L2 instruction?

Bilingualism, thus, can be viewed from two angles: either as a must if you move to a society which speaks a different language from your own mother tongue (here referred to as *immigrant countries*), or a result of a conscious decision taken during regular education in your homeland to master another language in order to use it proficiently and fluently both in and outside your country (here: *non-immigrant countries*).

### **Bilingual teaching in immigrant countries**

In the USA the most troublesome educational issue is a growing Latino population, especially in California and Texas. At the beginning of the 19<sup>th</sup> century, in California teaching was carried out solely in English to move later to the so called *transitional bilingual* education. This meant teaching school subjects with assistance in the learners' mother tongue (L1) to form a bridge to English-only instruction (L2) (Krashen 1999). Only recently, however, have parents of Mexican or other Central American pupils faced the idea of coming back to the 'English immersion' approach. It makes children spend a year studying English intensely and then move to the main-stream English-only classes (Artiles, Valadez 1997, Mora, 1999, undated a, b and c).

Properly designed immersion programmes, which can be labelled as one of the models of bilingual teaching, are found in Canada. Numerous papers and reports have been published on *Canadian French/English Immersion* programmes. During such programmes, students master conversational French/English in 1-3 years, while the language necessary for abstract and complex academic tasks needs 5-7 years to develop within a school context. Canadian immersion programmes aim at full bilingualism and biliteracy with the two languages valued the same (Johnson, Swain 1997, Mora 1999, undated a, b and c).

Is the American or Canadian experience with bilingual teaching useful to those countries for which bilingual teaching is just an option for students to choose from? Do Polish students taking Geography, Biology or History classes face the same problems as young Mexicans who have just crossed the border and have no basic command of English? There is no doubt these countries' experience with bilingual teaching and bilingualism is of great value to other countries who are experimenting with content-based foreign-language teaching. Language skills acquisition, teacher-training necessity and other numerous aspects of bilingual education are a valuable source for all those who design bilingual courses in non-immigrant countries. For instance, the idea of bilingualism



should be a key issue to all the parents who have just emigrated from Poland to start a new life in the UK or any other country. Their children are the ones who are already facing the problem of a command of English inadequate for joining mainstream classes at school. And let us face the future in Poland – the country has got a growing immigrant population. Have we developed programmes to help the children of Chechen or Vietnamese origin? In doing so our Ministry of Education should use the experiences of other immigrant countries.

### **Bilingual programmes in non-immigrant countries**

The conclusions drawn from immigrant countries which have been using bilingual education for decades prove to be useful in reviving the languages of minorities. They include Welsh and Irish taught to these countries' populations who have ceased to use their first languages at home. Other examples include Inuit minorities in Canada, as well as Hawaiians or Lapps reviving their local languages.

South-East and East Asiatic countries, with the leading position taken by China, are introducing intensely bilingual teaching to both their primary and secondary schools. For China, the main goal in doing so is to meet a skyrocketing demand for people with a good command of foreign languages, mainly English, following the country's entry to the World Trade Organisation. It is expected that by 2010 all compulsory courses in Primary and Middle schools in Shanghai, such as Mathematics or Geography, are to be taught in both English and Chinese (Xinhua 2003)

#### Bilingual programmes in European countries

Teachers in European countries have designed various bilingual programmes based on the already mentioned Content and Language Integrated Learning (CLIL) (see: <http://www.factworld.info/materials.htm>). It is used by both English-speaking and other countries. The languages of instruction include French, German or Spanish. A successfully designed and conducted CLIL lesson should be based on four basic principles. They include:

- **CONTENT**, which means there should be some progress in acquiring the knowledge, skills and understanding connected with the curriculum of the school subject studied;
- **COMMUNICATION**, which means the language is there to learn the content and, at the same time the language itself is learnt; this is most successfully done while interacting with other people, be it a teacher or peers, and not solely a reaction;
- **COGNITION**, which means abstract and concrete concepts should be combined with understanding and language; this results in developing thinking skills;

- CULTURE, which means students should be exposed to alternative perspectives and shared understanding, which in turn develops awareness of otherness and self.

If it comes to the selection of the materials used, a well designed CLIL course should put the main stress on the content. The language, however, is also an objective. It is necessary, thus, to tailor the existing material to the target language skills of the students. Especially at the beginning, the linguistic demand should be relatively light. Only when the language skills are sufficiently developed, can the learners work at higher cognitive and linguistic levels.

The Content and Language Integrated Learning uses a number of tools which testify to its usefulness in language skills teaching (Kelly, date unavailable). They include:

- the usage of visuals, such as maps, pictures or video films;
- listening activities, such as gap-filling or question-answering while watching a film;
- guided reading on a content-related topic;
- semi-scripted speaking, such as answering questions based on the texts;
- supported writing, such as a written report on the project based on the framework given;
- language awareness, i.e. conscious usage of specific language constructions;
- vocabulary/memory, i.e. studying the lexis specific to the content;
- task design, i.e. engagement in doing tasks rather than just listening to a lecture;
- assessment, i.e. tests of both the knowledge of both the language and the content;
- networks/resources, such as the Internet or TV.

### **Bilingual teacher training**

The qualifications of teachers undertaking bilingual teaching may vary considerably in range. They may include:

- non-native speaker linguists with no specialist content subject knowledge,
- content specialists with a very good command of a foreign language, but without the ESL/EFL training;
- content specialists with a very good command of a foreign language and with the ESL/EFL training;
- native speaker subject content specialists;
- teams of language and content specialists.

The basic question here is whether content specialists who teach students for whom the language of the classes is not their native language, need special-

ist training. Canadian immersion teachers are “highly skilled bilinguals with a strong commitment to bilingualism and multiculturalism as educational aims. Teachers serve as linguistic role models. Teachers use L2 methodology systematically. Teachers are trained to provide comprehensible input through the use of their L1 skills and appropriate methodology.” (Mora 1999, undated a, b and c).

The Texas State Board for Educator Certification (2002) gives a full list of the knowledge bilingual teachers must have. It includes, for instance, the knowledge of:

- the theories of both first- and second-language acquisition,
- the interrelations and interdependencies between L1 and L2,
- the content in both languages,
- the language components and how to use them, such as phonetics or morphology,
- assessing the students’ academic language development,
- how to create learning activities tailored both to the students’ L2 proficiency and the content needs.

Without proper training, purposefully designed for bilingual teachers, both language and content taught will suffer. In Europe bilingual teacher training programmes are offered by a number of higher educational institutions. They are either aimed at initial teachers or qualified staff. In the UK, for instance, Initial Teacher Education in CLIL of high standards is available at both the Universities of Nottingham and Durham, while Continual Professional Development courses in CLIL for qualified teachers are offered by the University of Nottingham only. Other universities offering bilingual teacher training include Utrecht in the Netherlands, a number of universities in Germany, such as Bremen, Oldenburg, Cologne, and some others.

Courses for teachers who teach their subject via the medium of English are also offered by numerous colleges and language schools in both the UK and Ireland.

### **Topics of concern in the future**

There are still numerous questions to be answered regarding bilingual teaching. First and foremost, there is a lack of underlying theory to this way of language acquisition (Dalton-Puffer, data unavailable). The other questions include:

- What are the further language objectives to be reached after completing the bilingual course?
- How can a classroom language and discourse be characterised? Who speaks, how much, when and about what? Is this real communication or is this just presentation of the new content material?
- What are the implications of the fact that some content teachers are also

trained language teachers, while others are not?

- One of the arguments for bilingual teaching is that it prepares learners better for using the language outside the classroom. However, it is only an assumption, not a fact supported by research. Can anyone predict the future needs of the learners?

It seems that answering the above profound questions will cause the development of bilingual teaching to become more widespread.

### **Bilingual teaching of Geography in School Complex number 10 in Toruń, Poland**

The School Complex number 10 in Toruń, Poland, comprises two schools, lower level, i.e. three-year Gymnasium for 13-15 year-olds, and higher level, i.e. three-year Lyceum for 16-18 year-olds.

Teaching Geography in English began in the Lyceum in the school year 2003/2004. It was designed for an experimental class of the European profile class, secondary school, and included only a group of 7 students who were willing to experiment with such learning. Five of the students had a very good command of English (CFC or above), while the others had showed a much lower level of the language. The students also had regular lessons with a teacher teaching in Polish, so there was no threat they would not cover the material necessary for their final exams. This also proved an excellent situation for the bilingual teacher (the author of the article), as the programme of the classes could be tailored to students' needs and interests. Thus, it included plenty of fieldwork and project work. This experimental course lasted for two years, after which the students left school.

In the school year 2004/2005, however, regular bilingual classes were organised in both lower and higher school levels. In Gymnasium only Geography was taught bilingually. In addition, however, Biology and Mathematics teachers included elements of a foreign language during their classes, which generally meant studying vocabulary only. In the Lyceum both Geography and History were taught fully bilingually, as both content teachers have MA qualifications in English language teaching.

As far as Geography was concerned, initially students at both school levels had more lessons than other non-bilingual classes, some of which were taught in groups in order to cover all the curriculum material in spite of the slower pace of work. Alas, this was changed a year later, and classes that were allotted the same time to cover the material as the other classes. This meant that the content of the curriculum was extremely hard to cover. Finally, the school authorities decided to divide the teaching of Geography and History to higher level students between two teachers; one teaching in Polish, and the other teach-

ing some parts of the material in English. Lower level classes are taught solely by one teacher, so sometimes it is necessary for the bilingual teacher to switch into Polish if the material studied is a little too challenging linguistically and in terms of the complexity of the content.

After three years of teaching bilingually, the conclusions drawn include a number of issues and points to consider. First of all, there is a need for reliable information for the students joining bilingual classes, as they are often concerned with basic things, such as whether they will learn enough of the content material in order to take their final exams; whether the extra workload will not be too difficult to manage; or whether there would be a smooth transition from a bilingual to a non-bilingual class and vice versa. Another issue is the selection of students. Should a bilingual programme be available to everyone? What language competences should the students show? How should the students be evaluated, both linguistically and in terms of the content taught?

Any decision as to what school subjects should be taught bilingually must be well-thought out. It seems that Geography is among the most popular choices in Europe. The final decision, however, should be taken by the teacher himself/herself, as it is this person's responsibility for what is done and how during the classes. Yet one more issue to address is the selection of teaching materials. Bilingual classes need to cover the national curriculum objectives, and this should be considered by the bilingual teacher. It seems, though, that most of the material for bilingual classes is teacher-produced. It is not, however, the best solution to use available foreign-language textbooks, as existing curriculum differences might make exam preparations difficult.

### **Summary**

Bilingual teaching, no matter whether we call it CLIL or CBI, is gaining popularity among schools in most countries in Europe and outside. These include those which have to face growing immigrant populations and those which introduce this way of foreign-language teaching in order to give the students new competences in the multinational and multicultural world. Whatever the case, bilingual teaching needs a number of elements in order to develop successfully: conducting scientific research of linguist specialists to give theoretical basis for this method, sharing experiences of practicing both content and language teachers during various events, as well as widening the scope of teacher-training options for both newly qualified and in-service teachers.

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# Teaching Geography through projects: a European and linguistic dimension

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## Abstract

This article briefly presents the position of project teaching in both English and Geography. On that basis the author concludes this is the method which best suits the objectives of bilingual Geography teaching. The following description of a project undertaken with bilingual classes on the 2<sup>nd</sup> anniversary of the Poland's membership of the European Union shows advantages both in terms of content and language of the method employed.

**Key words:** bilingual teaching, CLIL, EFL/ESL, projects, language skills integration, EU

## Introduction

Teaching through projects has numerous advocates, both among English and Geography teachers. Every modern English coursebook for school students contains suggestions for project topics to be prepared in the form of posters. For instance, Snapshot elementary (Abbs, Freebairn and Barker 1998) suggests using a *Snapshot of where I live* or *Snapshot of a famous place*. The goals of such a project are to increase the motivation and engagement of the learners, as well as practice writing. Other projects integrate all the language skills (*integrated-skills approach* in teaching English as a Foreign/Second Language (EFL/ESL)) and may easily be used by Geography teachers, such as *Street interview on a specific topic* or *String and pin display: tourist destinations within a town* (Fried-Booth 1997).

For geographers the project method is a great way to give up the textbook as the main source of information. For Geography students it is also an opportunity to try something different, especially if the project is well prepared, both methodologically and practically. Projects in geography may range from short Geography-only projects to events of a few-days' duration integrating Geography with other disciplines (Bailey 1991; Gołębniak 2002). No matter what the organisation aspect of Geography project work is, it enables the students to 'put their hands on' a given topic.

Taking all the above into consideration, projects for bilingual Geography



teaching seem an ideal solution. Project work, as a part of *Content and Language Integrated Learning* (CLIL) advocated by the EU (also referred to as *Content-based Instruction* (CBI) within *Communicative Language Teaching* (CLT)), allows the learners to observe that a foreign language is a necessary tool for solving real problems and undertaking real tasks. Thus, the motivation, independence and confidence of learners grow. Moreover, the project method for both, language and content-teaching, gives the very teacher a chance to observe the students in various learning situations and thus to evaluate their abilities, skills and needs.

### A bilingual English-Geography project on European Union

The project was undertaken by four bilingual classes of both lower level (13-15 yrs) and higher (16-18 yrs) level of the School Complex number 10 in Toruń. It was connected with the second anniversary of Poland’s membership of the European Union. The stages of preparation, realisation and evaluation of the project (Figure 1) were based on the Field Studies Council publication for GCSE students *Projects without panic!* (Field Studies Council 1989).

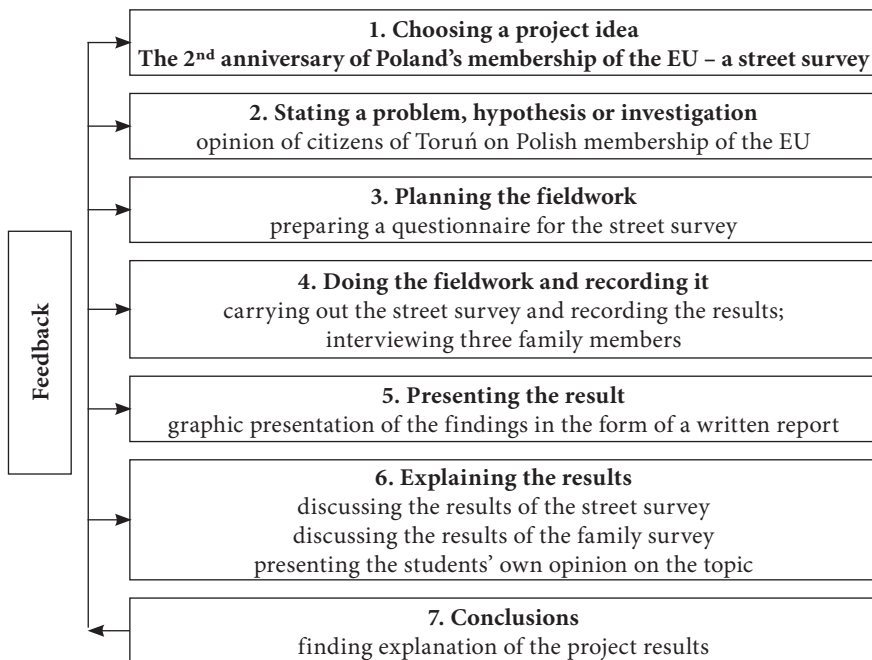


Figure 1. Stages of the project on the 2<sup>nd</sup> anniversary of Poland’s membership of the EU

*Choosing a project idea.* The fact that the project work was done in spring went some way to suggesting the topic of this project. Poland joined the EU on 1<sup>st</sup> May 2004, and that was the time to sum up the outcomes of its membership. This issue was widely discussed in the mass media; the stress was put both on the economic advantages here in Poland and on the mass emigration of young Poles in search of better economic conditions. Last but not least, EU issues are an integral part of the National Curriculum for Geography teaching at all school levels.

*Stating a problem, hypothesis or investigation.* The discussion regarding the support of Toruń's population for Poland's membership of the EU was conducted in the classroom. The students tried to predict the level of support for the EU, as well as the percentage of the population that would like to emigrate.

*Planning the fieldwork.* As the project was to include 4 classes and in order to save the lesson time, the decision on what to include into the questionnaire and how to construct it was made by the teacher. The outcome is presented in Figure 2.

Questions	Respondents									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. When did Poland join the EU? (I know/I don't know)										
2. Are you satisfied with this fact? (yes/no/?)										
3. What is the greatest advantage for Poland of EU membership?										
4. What is the greatest disadvantage for Poland of EU membership?										
5. Can you name two countries which have opened their labour markets to Poles? (yes /no)										
6. Have you ever worked abroad and what are your plans? (a. yes and I want to do so again; b. yes but I don't want to do so again; c. no but I want to; d. no and I don't want to)										

Figure 2. A questionnaire for the street survey on Poland's membership of the EU

*Doing the fieldwork and recording it.* All bilingual classes have some lessons taught in groups of 15-18 students, so it is possible for them to be taken to the

city centre accompanied by one teacher. As the school is located close to the city centre, there were no problems in carrying out the survey during one 45-minute Geography lesson with each group. Students worked in pairs and each pair was to question 10 randomly selected people. Before the survey the students were instructed on how to introduce themselves, ask for permission to conduct the survey and finally how to ask the questions and record the answers. The instruction was given in English, but the survey itself was conducted in Polish.

Figure 3 presents the introduction from one of the student's survey reports with the questions and all the general information included (original style and spelling).

#### *Introduction*

*Recently for a geography lesson pupils from two school, carried research about European Union a migration. This research done four classes: 1c (it's my class ☺), 2c-there are classes in a Gymnasium 11, and 1b, 2b-there are classes in a Secondary School. We went to the City Centre of Torun and asked people six questions. These four classes asked altogether about 445 people. Questions:*

- 1. Do you know when Poland joined European Union?*
- 2. Are you satisfied with it?*
- 3. What are the biggest pluses this situation?*
- 4. What are the biggest minuses this situation?*
- 5. Do you know at least three countries where Poles can work?*
- 6. Do you work in European Union?*

Figure 3. Introducing the project

### **Presenting the results**

After all the groups had completed the task, the teacher summed up the findings. Altogether, the students interviewed 445 people of various ages.

To avoid a situation in which all the students would present literally the same results of the survey in writing, they were also asked to interview three members of their families of different ages, as well as to include their own opinion on the topic (especially questions 3, 4 and 6). The results were presented in the form of individual projects (John and Richardson 1990). Earlier, however, the students were given a model of a project, i.e. what the front page should include, what the introduction should inform the reader about, how to calculate the results into percentages and how to present them in graphic form. Finally, the students were told how to sum up the project by quoting their family members and giving their own opinions.

The report covers as well as the methods employed by the students to present the statistical data varied considerably. They included bar graphs, pie graphs and square graphs. Figures 4 – 9 show all the survey results presented by the author.

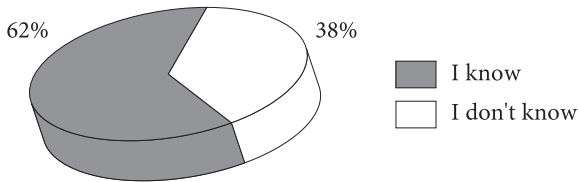


Figure 4. Survey results – question 1: *When did Poland join the EU?*

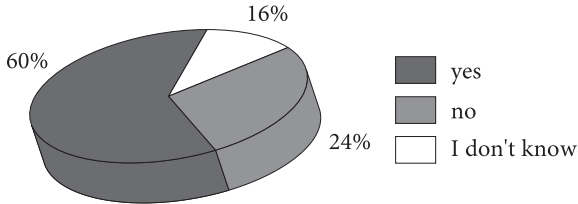


Figure 5. Survey results – question 2: *Are you satisfied with this fact?*

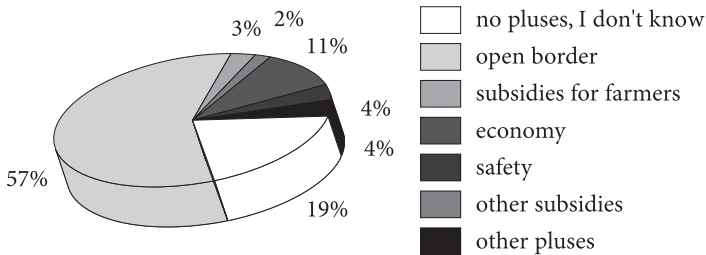


Figure 6. Survey results – question 3: *What is the greatest advantage for Poland of EU membership?*

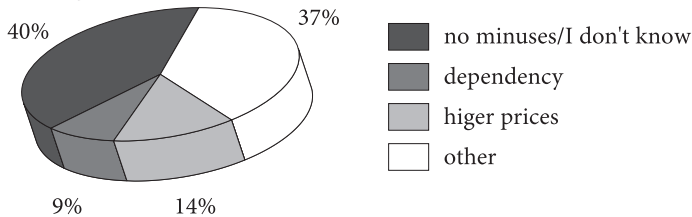


Figure 7. Survey results – question 4: *What is the greatest disadvantage for Poland of EU membership?*

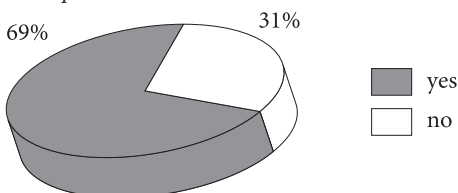


Figure 8. Survey results – question 5: *Can you name two countries which have opened their labour markets to Poles?*

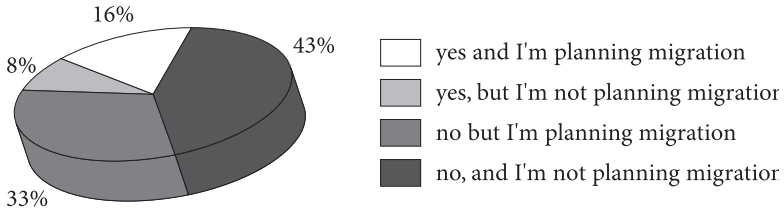


Figure 9. Survey results – question 6: *Have you ever worked abroad and what are your plans?*

*Explaining the results.* As an explanation of the findings of the survey, the students commented on each question, often giving interesting and intelligent comments. Interestingly, there was frequently a discrepancy in students' interpretation: e.g. the fact that 62% of the respondents knew the date of Poland's joining the EU was for some a positive result, while others thought it was much too low for such an important event just two years on. Most of the students were surprised that 'only' 49% of the people questioned opted for emigrating (a+c answers for question 6); they expected much a higher result. Additionally, they presented the opinions of their family members as well as their own.

## Conclusions

In the final part of their written project, the students tried to give solutions to the situation, for example those who thought more people should know more about the EU opted for more educational activities (TV programmes, school curricula).

Figures 10 – 15 present some sample pages from the students' reports with their comments (original style and spelling).

**SUMMARY!**

1. Majority Poles know, when Poland joined to European Union. But I think, that it know more people.
2. Results this diagram justifies, why Poland is in the European Union. More Poles wanted to be in EU and they are satisfied now. Only 24% people aren't satisfied with it.
3. More than half people think, that open borders are the biggest advantage of joining European Community.
4. 40% people don't see any minuses. This is quite much. But 60% people see some minuses.
5. Majority Poles are wise, because they know three countries when Poles can work.
6. Results this diagram are quite interesting, because not many people want to work abroad.

Figure 10. A student's summary of the project

#### MY OPINION!

*I think, that the biggest plus his situation is open borders. Thanks this people can work abroad without problems (for example passports). They can the more earn.*

*And the biggest minus this situation is dependency. I think, that European Union imposes Poland rules and decide instead in some matters Poles.*

*I think that small people want to work in the European Union (generally abroad). Old people don't want work abroad, because they can't. They often are retired. But young people often want to work abroad. They want to find a well-paid job so they go to abroad.*

#### MY FAMILY OPINION!

*My sister doesn't know, that Poland is in the European Union. She said: "I want to go to bed. I couldn't care less." But she could work abroad.*

*My mother said, that she think the same as I. She worked abroad, and she want would like.*

*My father is satisfied with higher standards of life. And he isn't satisfied with bu-reaucracy. He claims, that everything is strictly determine for example: amount of milk production. In the matter of fact free market is very limited and bureaucrat from Brussels decide or have influence on almost every sort of peoples activity. My dad worked abroad and he said: "I would like to have a possibility work abroad".*

Figure 11. A student's and her family's opinion.

*In my opinion the real effects of entering the UE, will be seen in ten to twenty years. After this time we will see big changes in Poland's industry and standard of life. We should take an example of for instance Ireland. This country was poor. 30 years after entrance the UE it became one of the richest state in Europe. At the moment in Ireland the unemployment rate stands at about 5%! and it is called the Tiger of Europe!!!*

*I think Poland could be richer in the future. In order to make this we must put a lot of effort into our job and development. The European Union is our chance!!!*

*This opinions and answers present low level of knowledge about UE in Society. I think that it is causes by unwillingness to UE and totally lack of inclination to get to know about UE. However a large number of people have basic knowledge about European Union.*

*It brings comfort. I believe that this questionnaire can realise people how important is UE knowledge and develop a pieces of information about UE. It was good idea.*

*I don't think that I will go abroad to work permanently. I would like to go there to earn some money during holidays but only if I would not get any work in Poland. I would rather go abroad for tourism than for feeding english or spanish job market. I find migration for work abroad as something wrong and humiliating for people here in Poland.*

Figures 12-14. Students' comments to the project results

*I think that In schools there should be some lessons about European Union, because I am not sure if I would be able to answer first question before making this project. After all, I am not satisfied about our membership in EU, but the reason is I don't know anything about it. That is why I can not tell about advantages or disadvantages of it. I know few countries in which I could work and I think that if it were possible I would like to work there. Summarizing, bad results of this survey and all wrong answers are brought about by lack of information in media or school.*

Figure 15. Students' comments to the project results

## Feedback

The basis for the project evaluation was the feedback received and digested both during and after completing the project. It is the basis for any corrections and changes in the project stages, especially if it was to be repeated with the next groups of students. In the case of this project, the analysis of the results revealed some important information about the respondents was missing: namely their age and sex. To gain such information it would be enough just to note down the observation results, i.e. male/female and student/working/retired.

Another difficulty was connected with the analysis of the answers to questions 3 and 4. As they are open questions, it was extremely difficult sometimes to decide on categories. For instance, 57% of all the answers to the question on the advantages of Poland's membership in the EU mentioned open borders; however, the respondents stressed various aspects of free movement, such as education, work and tourism.

Summing up, if the survey was to be repeated in future years, the questionnaire itself should be corrected (age, sex, suggested answers to questions 3 and 4). This might enable the students to monitor the changes in the opinions on EU membership.

## Conclusion

The presented project on Poland's membership in the European Union was not time-consuming. Two 45-minute lessons were enough to complete it, and the goals of both English and Geography teaching were achieved. According to the Content and Language Integrated Learning objectives, a well-designed bilingual lesson should have the following four elements: content, communication, cognition and culture. In our case these were the following aspects:

*Content:*

- developing research skills;
- collecting geographical data in the form of the street survey;
- transforming and presenting geographical data in the form of a project;

- developing geographical knowledge on Poland's membership in the EU;
- developing geographical knowledge on people's opinions on EU membership;
- using a word processor for presenting statistical data;

#### *Communication*

- using the language for a real-life task;
- using the language to communicate with the teacher and peers;
- using the language to write the report;

#### *Cognition*

- learning to think by combining abstract and concrete concepts with language acquisition;

#### *Culture*

- developing social skills at school (group-work);
- developing social skills during communication in an out-of-school situation;
- being exposed to other people's opinions;
- developing awareness of otherness and self.

Nearly all students presented language that was understandable. In spite of the mistakes, be it spelling, grammar or vocabulary, the texts were communicative to a teacher of the same mother tongue. There were some projects, however, in which the meaning of the language employed was hard to decipher (Figure 16). Generally, this so-called *inter-language*, which is a kind of language the learners create for their needs before they master the target language, is an important issue in EFL/ESL teaching. In the case of project work in bilingual teaching, however, the most important thing is to make the students use the language in an every-day situation, and not the correctness of the language.

*I think unacquaintance with of date of approaching be from for absurd european union. Certainly I know date of accession for european union polish and I am very happy with its membership.*  
*For our biggest plus of fixture are open borders. I am orientated which countries state work allow us . I think long prices of national products minus of membership polish in eropian Union. I never worked in EU but I want to.*

Figure 16. A student's comments to the project results – language problems

As teaching Geography bilingually in the form of a project stands out from normal classroom-type classes of both Geography and English, 65 students from 2 classes who took part in the survey in the streets of Toruń had a chance to give their opinions on that form of lesson. As many as 62% of them said it was good or very good, while 18% did not like the project. Although it was the teacher



who takes the final decision on the form and structure of the lesson, the students' opinions should also be taken into consideration. Their positive attitude would be a key element to successful project teaching.

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# Geography Curriculum of 2005 and its Reflections to Teacher Education Programmes of Geography in Turkey: Expectations and Recommendations

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## Abstract

This paper, firstly, discusses the new geography curriculum of Turkey for secondary schools particularly in the context of changes brought about with it. The Geography curriculum of Turkey for secondary schools was changed in 2005 through curriculum reforms of primary and secondary education. The new curriculum brought a new approach, method and content for Geography education in Turkey to the extent that it may be considered to be the most comprehensive reform of Geography education in Turkey. The new Turkish curriculum provides a holistic approach through which aims to develop geographic knowledge base, skills, values and attitudes in students with particular attention to pedagogical concerns and in the context of contemporary geographic content. Then, the paper argues that it is necessary for programmes of Geography teacher education in Turkey to align themselves to these new curriculum in terms of approaches, methods and content. Moreover, in order for Ministry of Education and education faculties that educate and train geography teachers to support each other, the new programme needs to be fully understood by education faculties and they should make relevant innovations in training in accordance with the new curriculum. In this respect, this paper reflects on likely effects that the new curriculum might have on the teacher education programmes. It is argued that education faculties should accommodate active learning and student-centered approaches to their teaching so that they can effectively train new geography teachers for the new curriculum.

**Key Words:** Geography Curriculum, Geography Teacher Education, Turkish Education System, Turkey

## Why a new Geography curriculum? What the new curriculum brings.

The need for a new geography curriculum emerged from the idea that, previously, geography education was not equipping pupils with necessary geographic skills, knowledge and understanding which would reflect contemporary geographic understanding and the complex times we are in. The traditional nature of geography education in Turkey often disregarded the humanistic and questioning functions of Geography but instead reinforcing facts and figure-based rigid aspects. It was based more on physical aspects of geography. The physical geog-

raphy characteristics of Turkey was repeated continuously in different years of study. Human geography topics were also both limited in breadth and mainly concerned with Turkey's human geography. Geographic knowledge generally had a factual nature and was required usually to be memorised by pupils, therefore, not allowing the application of knowledge to the real life situations. The following account of a geography teacher depicts this idea perfectly:

*Geography is considered something as theoretical which has to stay in the textbook. There is no link (being established) with people's lives. In geography classes, there is no place (evaluation, analysis, synthesis) for concrete/real data taken from real life. The ways to apply the knowledge are not taught to students* (Teacher Berna, taken from Öztürk 2005).

As a result, such content and practice has led people (society, stakeholders, students and even Geography teachers) to have an incomplete image of Geography as a discipline, that it is a purely a general knowledge subject and specifically about some statistical figures and the names of some mountains and rivers. Critical analysis of concepts (based on the most prominent aspect of Geography; cause and effect) and their interrelations with each other were usually not being carried out. It was also not considered in a way that it relates to broader social, cultural, economic and geographic (physical) conditions of the nation and the globe. Maybe the problem relied on the fact that, as a geography teacher expressed, 'we could not bring Geography down to the (level of) society' meaning that geography education had nothing to do with people's lives but was a discipline which is carried out in the ivory towers of some academics. Such a narrow perception of Geography would lead students not to have a need of much help from teachers because they might easily do the memorising by just reading the textbooks.

Geographical skills (e.g. critical thinking, decision making, statistical analysis, evaluation and process of information, map skills, computer skills in Geography) were ill-defined and were not understood well by teachers. In fact, many teachers would not seem to recognise that Geography has great potential to enable students to process information, undertake critical thinking, navigate their way or communicate effectively in the information age. The following quotation from a teacher's interview expresses this idea quite well:

*There is no such a thing as teaching some geographical skills to students on our agenda. There is nothing being done on this* (Teacher Berna, taken from Öztürk 2005).

Therefore, this line of thinking about Geography stems from a very narrow understanding of what Geography is about. This view omits the potential of Geography as a means to help individuals to be aware of social, cultural, economic and political changes and current debates within the context of local,

national and global scales, forming attitudes, beliefs and values of being well-balanced citizens.

We would be neglecting an essential side of the issue if the curriculum only stressed geographic content or how Geography as discipline should be conceptualised. Another very important issue with regard to geography education is the way the content is delivered. Previously, the main teaching method used in Turkey was through dictation or the transmission of facts, as is seen in the following quotation:

*When we teach something usually we dominate, students are more receptive. We cannot make students actively to involve the class. Since they are in the position of listening, they cannot give their point of views* (Teacher Erol, taken from Öztürk 2005).

Yet teachers' expertise is much needed in developing contexts in which students may develop a personal and meaningful understanding of their Geography. Students need opportunities in the class to question and explore geographic ideas and actively create insights into Geography and develop their personal knowledge, values and attitudes towards geographic concepts and events. It is hoped that ultimately they will understand their position as individuals and as a member of a society in the space (both social and physical spaces through different scales from local to global) so they can develop an understanding of their responsibilities.

The pressing situation which guided the development of the new curriculum in Turkey was that education should be formulated on a more complex and sophisticated basis than the conviction that there is no substitute for teaching 'descriptive facts'. Such a need is recognised in the context of global and technological changes and, in turn, their reflections on Turkey. With all these aspects in mind, the new Geography school curriculum was developed in the context of a wider reform initiated by the Ministry of Education in Turkey. Through this reform, the Ministry of Education has sought to change the curricula of all subjects, bringing in a new philosophy and understanding of education which has a student-centred approach that is based on theories of 'constructivism' and 'multiple intelligences'.

Moreover, the realities of today's world (information age, globalisation, post-modern practices) make a new effort, as described above, in geography education crucial. With this effort (new curriculum), it is hoped that pupils will relate to 'geographic knowledge' in meaningful ways. For students, the geographic knowledge should not be something in isolation and a neutral thing, it should offer (mediate) a way of understanding the self, one's own society and values as well as the wider global community especially in the context of geographic understanding. In fact, in Geography, in order to be able to understand a phenomenon,

one usually needs to consider different dimensions of the phenomenon. For example, the physical features of a place might cause certain financial conditions and consumer behaviour. This might in turn lead to a certain way of organising society and its code of social values. Indeed such an approach would more accurately reflect the reality of today's life therefore giving students opportunities to match the knowledge that they learn in school with the real life situations.

### The New Geography Curriculum in Turkey

Based on a comprehensive body of research on Geography curricula of different countries, their curriculum design and effective student-centred pedagogies, the new Geography curriculum in Turkey represents what pupils should know in a complex and changing world and be able to do through geography education (i.e. the application of knowledge, geographic skills) and offers guidelines to teachers to improve their practice for a better student-centred education. The new curriculum takes into account not only geographical knowledge but also skills, attitudes and values. In this respect, the content was relatively reduced to allow pupils to have a deeper understanding of geographic knowledge and to develop skills, attitudes and values in the context of geography education. Figure 1 shows the main axes of the curriculum (the analogy could be a four-legged table).

1. Location Analysis	<ul style="list-style-type: none"> <li>• Places/spaces</li> <li>• Turkey</li> <li>• Regions and countries</li> </ul>
2. Geographic Themes	<ul style="list-style-type: none"> <li>• Climate, landforms, soil, plants, water...</li> <li>• Population, settlements, economy, politics, governing...</li> <li>• Environment and society</li> </ul>
3. Geographic Skills	<ul style="list-style-type: none"> <li>• Methods</li> <li>• Techniques</li> <li>• Applications</li> </ul>
4. Attitudes and Values	<ul style="list-style-type: none"> <li>• Towards nature</li> <li>• Towards the people</li> </ul>

Figure 1. The Main Axes of the Turkish Geography Curriculum

The curriculum, as stated earlier, also encourages and guides teachers to use a large repertoire of teaching methods to cater for different individual learning needs. Yet, it gives a great deal of importance that these learning methods should involve students actively. It is considered that one way of achieving this would be through activity-based education. In this respect, to guide teachers many activities were prepared and presented to teachers through website and books.

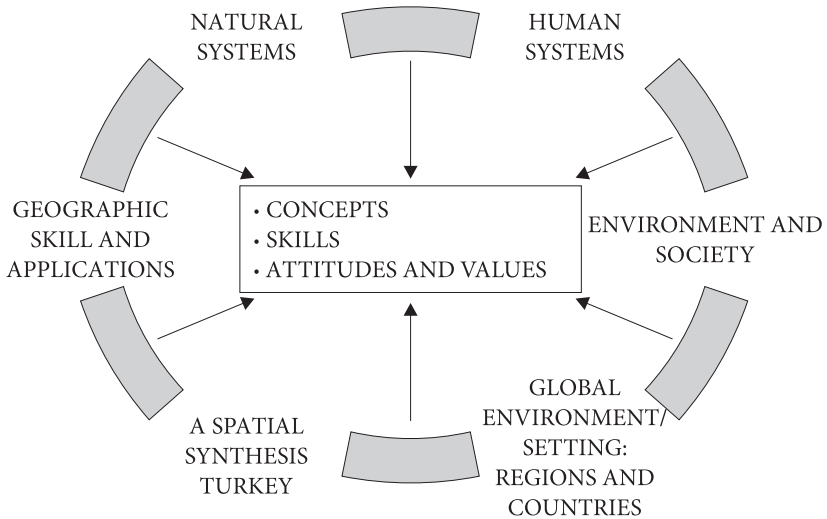


Figure 2: Organisation of the Turkish Geography Curriculum (Source: CDÖP 2006)

With the new curriculum a modern approach to the much more balanced content is sought. For example, GIS applications have an important part in the understanding Geography and so the new curriculum encourages teachers to use GIS in their teaching as much as possible. The geographic content consists of five themes; namely natural systems, human systems, a spatial synthesis: Turkey, global environment/setting: regions and countries, and environment and society (CDÖP 2006). Figure 3 provides an explanation of these themes where each theme is considered through the four axes of the main curriculum framework. Each theme has a number of objectives that need to be fulfilled through the year (Karabağ and Şahin 2006). However, these objectives are rather general and identify desired cognitive and affective outcomes. The implementation of the curriculum is largely left to teachers.

The curriculum has been developed with a spiral and progressive structure; that is the curriculum is organised around the same themes in all years but with a clear focus on progression. Therefore, every year each of the themes is introduced in a way that the quality of student attainment is ensured to advance. Themes (their contents and the structures) from year 9 to year 12 (ages 13-17) are also organised to improve the knowledge, skills, criticality, and values of students as well as towards fostering their intellectual and social maturity.

Figure 3: Turkish Geography National Curriculum themes (Source: CDÖP 2006)

Themes	Details
Natural Systems	The elements of natural systems, which are the atmosphere and climate, land shapes, soil, plants and water (hydrology), are scrutinised in terms of their processes of formation, relations and interrelations.
Human Systems	Human systems are scrutinised in terms of their activities, patterns, processes and interrelations. These issues are approached in the context of population, settlement, economy transportation, communication, politics, culture, governance, and tourism.
A spatial synthesis: Turkey	This theme aims to provide students with a conceptual consciousness and understanding of geopolitical issues from the local environment to national scale. Students are expected to learn the location of Turkey, natural and human features, characteristics of the regions and regional and global geopolitics.
Global Environment/ Setting: Regions and Countries	This theme seeks to provide students with an understanding of the world and encourage them make sense of it. In this respect, global changes and the different actors (regions, countries, unions, NGOs) are scrutinised through economic, cultural, strategic and geopolitical dimensions. The nature and importance of interrelations and the interactions between these actors are also to be studied by students.
Environment and Society	This theme aims to bring in values and attitudes towards ecology and the environment. Students gain an understanding of the value of environment and consequences of our activities on it.

### Reflections on Teacher Education

There are two routes to become a Geography teacher in Turkey. One is through the programmes of geography education in education faculties (B.Ed. programmes). The graduates of these programmes qualify directly to be Geography teachers. In the Education faculties, the proportion of modules related to teaching (pedagogy) is about 10-15% and two of those modules are practical, where student teachers go into schools to carry out some observations and do some teaching. Student teachers take modules on planning and assessment, method classes, and material development. The second route is through Geography departments in faculties of Science and Arts. Here those students who have a pure Geography education can take an 18 month Postgraduate Certificate in Education (PGCE) course in their subject area. This course consists of the same pedagogical modules provided to the B.Ed. students.

However, these pedagogy-oriented classes are usually taught theoretically so they do not provide the necessary classroom contexts where student teachers can experience activity-based learning situations. Similarly, there is usually no attempt to develop geographical skills, attitudes and values in student teachers through the programmes itself. Map and field skills seem to be the most ignored components. In turn, the most persistent problem that student teachers have is regarding their pedagogical knowledge of how to teach such activity-based lessons and the skills, attitudes and values they need to address with their future pupils. In this respect, there is gap between the requirements of the new curriculum from a Geography teacher training perspective. Therefore, there is a need for institutions of Geography teacher education institutions to re-conceptualise their programmes and practice in accordance with the future teaching needs of student teachers. It should be, however, noted that the Higher Educational Council in Turkey has developed an initiative to change the programmes of secondary teacher education in accord with the requirements of the new curriculum.

With such conceptualisation, it should be kept in mind that a Geography teacher should have teaching skills to maintain learning through three inter-related domains, cognitive, affective and psycho-motor (Karabağ 2003). With the cognitive domain, as Karabağ (2003) states, teachers of Geography should consider the 'thinking' processes of students and, in turn, organise learning based on geographical concepts through problem-solving and decision-making. The affective domain of teaching involves attitudes, values and emotions of students. Geography teachers, on this account, should provide the necessary contexts so that student can develop their attitudes and values regarding geographic phenomena (ibid). The psycho-motor domain is concerned with the applications of cognitive and affective learning domains through which skills are gained (ibid).

To summarise briefly, the main issue is that the university teacher training programmes are more interested in what they teach (in terms of syllabus) than in developing the above-mentioned teaching-learning domains in student teachers. In this respect, such skills as field and map skills, GIS skills, critical thinking, problem-solving, decision-making, the ability to recognise feelings and values need to be embedded into practice and the discourse of these programmes. We should also note that what has been discussed above also applies to current teachers of Geography and their professional development needs. They have been trained through a system of pre-service teacher education that did not recognise the need for the new pedagogical approaches and geographic skills such as GIS, mapping and fieldwork. In this respect, the Turkish Ministry of Education should establish well-organised in-service training for Geography teachers to allow themselves to improve their professional practice.



## Conclusions

Formulating a new geographical education (strategy) with respect to society and student outcomes is important for the future of Turkey. The image of Geography held by society, by students and even by some Geography teachers was of a factual and more physical geography oriented subject which exists separated from critical thinking and well-established contemporary and human geography issues. This view of Geography is certainly an incomplete one, as it leads students to not fully understand trends and issues of today's world. Another very important aspect missing in Turkish geography education has been the lack of application of knowledge to real life situations. Students and their parents consider that Geography was something theoretical which had to stay within the school walls without any use outside. Student outcome of the previous education curriculum, therefore, was not very promising because all students had to do was to memorise some facts, names and figures without a clear understanding of geographic events or phenomena.

The realities of today's world necessitate us to take new efforts in geography education. As a result the approach to Geography education in Turkey is to be established as student-centred, enquiry-based and much more flexible (Karabağ and Şahin 2006). It is based on a large repertoire of knowledge and skills that can be drawn upon, as needed, to handle ever-changing contexts (i.e. spatial, historical and social) (Karabağ and Şahin 2006). In this respect, as Karabağ and Şahin (2006) state, it provides students with a 'constructivist' framework through which they will be able to questions things, apply theory in practice, use up-to-date real world data and construct a 'world perception' of their own. The most overriding aim that held through the writing process of the curriculum has been to 'enable students to gain a geographic consciousness' with regard to their home, locality, region, nation and the world (ibid.: 3).

With these aspects in mind, it can be argued that the current programmes of Geography teacher education in Turkey do not provide the necessary knowledge, understanding and skills that student teachers will need in their future practice in the context of the new curriculum. So, teacher education programmes need to consider the changes that are taking place in geography school education and develop the 'right' qualities in their student teachers. Finally, it can be seen clearly from the preceding discussion that the outcomes and achievements of the new Geography curriculum will almost entirely rely on the qualities, enthusiasm and motivation of teachers in the classroom. In this respect, we should stress that the teaching profession in Turkey needs to be re-defined making all Geography teachers aware of the changing nature of the subject and of their need for a continuous professional development.

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# European dimension in geography teacher education programmes in Turkey: Student teachers' experiences and opinions

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## Abstract

This paper looks at the learning experiences of student teachers with regard to the European Dimension (ED) through programmes of Geography teacher education in Turkey and how student teachers of geography conceptualise ED in Geography education. In this respect, this paper examines the ways and the role of the programmes in defining and disseminating knowledge on ED in terms of content, structure, culture and discourse in five programmes. Based on the data collected through questionnaires and in-depth interviews with geography student teachers, this paper begins by outlining of those modules that are related to the EU in each programme. It goes on to examine student teachers' reflections and feeling about those modules. Whilst in some programmes there are modules specifically named as 'European Geography' and 'The Geography of the EU', the coverage of the EU and ED are usually quite superficial, limiting geographical inquiry mainly to the scope of physical geography. Two main emphases of the modules related to ED are to describe the characteristics of European countries (more physical geography) and to become familiar with the general physical characteristics of the continent Europe in four programmes. This paper, then, considers how student teachers conceptualise ED in geography education. The majority associate the issue mainly with politics, including geopolitics, Turkey's membership politics and people's own political positions. The paper concludes with very brief summary and discussion of the issues raised in the paper.

**Key Words:** European Dimension, Geography Teacher Education, Critical Geography, Turkey

## Introduction

Turkey applied for full membership of the European Economic Community (EEC) in 1987 and became the EU's first candidate with a predominantly Muslim population for full membership at the EU Helsinki Summit in December 1999. Turkey has completed significant changes since 1999, by introducing comprehensive constitutional reforms and amendments to laws in order to meet accession criteria. Ultimately, having gone through a number of serious deadlocks Turkey started accession negotiations with the EU in September 2005.

Full membership of the EU is associated by many with the realisation of Turkey's modernisation project. When constituted in 1923, out of the ruins of the Ottoman Empire through the leadership of Mustafa Kemal Atatürk, the Turkish intelligentsia aimed to create modern society/state which has a democratic and secular form as opposed to the existing Islamic Theocracy of the Ottoman Empire (Aktekin 2004). In the following years under the leadership of Atatürk, the new State went through substantial reforms. Atatürk 'described the aim of the reforms: to achieve the level of contemporary civilisation, which of course meant Western civilisation' (MFA 2004; Internet). Modernity, in 'Turkish modernisers' conception, 'was a total project: one of embracing and internalising all the cultural dimensions that made Europe modern (Keyder 1997: 37). In this context, the synthesis of the Turkish Revolution was based on three main principles, namely science (the superiority of scientific knowledge over dogmatic beliefs, that is religious and traditional beliefs within society), secularism (the relationship between the public and the State, and the overall administration of the State, are not based on any type of dogma but laws emerged from scientific facts), and humanism (Papakci 1998).

However, it should be noted that westernisation has been an overriding goal not only of Turkish, but also the late Ottoman intelligentsia. They envisaged the vision of a European future for Turkish people over a period of two centuries. Therefore, this process takes its roots in the eighteenth century when the West was becoming the universalising model for societal progress by giving meaning to concepts of the 'modern' as a result of Enlightenment discourse. It was the time when the Ottoman Empire was losing its once economic and military superiority vis-à-vis Europe (Ozturk 2005). What happened next is stated in the following relatively long quotation:

"Having seen the need to catch up with Europe, the Empire started introducing some reforms especially in military field. Early transformations in Ottomans, therefore, are often presented as technical rather than political, social or cultural. At the time, Ottomans believed that their cultural, political, and social structures were superior than Western ones so the aim was only to create an effective army (and education system), one that would win battles. Therefore, like Russians who wanted to stay Orthodox and Russian, early Turkish Westernising claimed to stay as Ottoman, as Turk, and as Muslim. Therefore, once the army and education system were transformed, the State could be redeemed/reproduced in a different context (a European one). However, while at the beginning the westernising was seen as a 'metaphor' or a neutral 'concrete source of a civilisation project', quickly it gathered a cultural aspect; later on while being transformed into an ideology, it gained a dogmatic nature (Kahraman 2002). Since there was no any cultural space independent of politics in late Ottomans and early Turkey, the question of

westernising came down to be a political matter. In different terms, westernising process of Turks turned into a political struggle by opposing the commonly held notion of neutral and technical westernising and developed as a claim for cultural and social transformations needed (Kahraman 2002), (Özturk 2005: 19-20).

It is still the case that for many people, the issue of the EU in Turkey is mainly concerned with cultural differences which are reinforced by ideological and political discourses. The same tendency and concerns could also be observed within the EU especially through the discussions that broke out following Turkey's EU candidacy from the Helsinki Summit in 1999.

What follows the above discussion should be an assertion that the issue of becoming part of the EU is not a straightforward matter but in fact is rather complex and controversial in Turkish context. The EU is an important issue in the lives of Turkish people (particularly in the context of policies and transformations over two centuries), so it should not be omitted or approached superficially, but instead it ought to be analysed critically by student teachers. This should be undertaken to widen their views and understanding of the world, encouraging them to have a direct contact with developments, especially when concerning Turkey's EU membership process, which will affect their lives dramatically with regards to cultural, political and social structures. This should also be done to teach them to take responsibility for and control of their own lives and the society they are part of, and to promote an understanding of what it means to live together with 'others' democratically. This should also help them see that the choices they make as teachers will eventually have an impact on the whole community. Therefore, this issue with all its complexity needs to be addressed especially in the programmes of Geography teacher education. Such needs are even reinforced with the new Geography National Curriculum for because it requires pupils to undertake political and cultural analyses of geopolitical issues including those concerning the EU.

### **Turkish educational context**

The Turkish education system has recently been under attempts of comprehensive reform. This reform has two dimensions, the first is concerned with the pedagogy which is being implemented in schools with a subject-focused rationale (providing pedagogic content knowledge will improve teaching and learning in curriculum subjects). The second one is a more vocational, technocentric rationale, in that curriculum subjects should provide necessary applied-knowledge and skills, as Turkey needs young people who have skills and knowledge to operate through the workforce of the future. Therefore, through the reform, there should be a shift from traditional teacher-centred teaching and learning approaches to more contemporary student-centred teaching and

learning approaches. Furthermore, for all subjects, including Geography, new curricula are being developed, in fact the new geography curriculum has been put into effect from the 2005/2006 school year. As a result, teacher education faculties (TEF) have, for some time, been under various forms of encouragement to adopt these changes and use more student-centred approaches in their programmes.

### **Research Methodology**

This paper looks at how the issue of EU is approached through the programmes of Geography teacher education in Turkey and looks at student teachers' opinions of how the EU should be studied in their programmes (and in general through Geography). The research was carried out in two stages. In the first stage, in 2002, questionnaires were completed by Geography student teachers in Turkey. The questionnaire was distributed to the final year Geography student teachers (their fourth year at the time) in five Turkish universities. These universities comprise five out of six universities which had a Geography teacher education programme at the time of the data collection. Out of 202 students, which was the total number of final year students in five universities, 170 questionnaires were returned. The questionnaire had both closed and open-ended questions. While closed-ended questions were designed to carry out some cross-tabular analysis, open-ended questions were provided to obtain fuller insights into student teachers' experiences.

The second stage of the research was carried out in only one university in Turkey in 2003. Here, I conducted in-depth interviews with 26 student teachers who had previously responded to the questionnaire. At this time they were in their fifth year of study. The interview schedule for student teachers was prepared in the light of previously conducted teacher interviews and the findings of the first questionnaire. The main reason for choosing this university for these interviews was that it is usually considered to have one of the best and most comprehensive teacher education programmes in Turkey. It has a long and well-established tradition of teacher education and geography teacher education.

### **How the EU issue is studied?**

In the questionnaire, the respondents were asked to provide names, duration and the content of those modules in which the issue of the EU had been included or examined. The same issue was raised during the interviews with student teachers. This was to see whether importance is given to the issue of the EU and what type of issues/topics had been raised in the programmes of each university. According to the accounts of student teachers that are cross-checked, three universities have compulsory modules named 'Geography of Europe' and one has

a compulsory module called 'European Union Countries'. In the last case, the issue was subject to only a two-hour seminar given by fellow students.

According to the student teachers in four universities, the EU modules had two main emphases, these were to describe the characteristics of European countries (from a more physical geography perspective that is to say physical, climatic, demographic and economic characteristics of each country) and to become familiar with the general physical characteristics of the continent of Europe. In all universities, there were too few references to the EU as might be seen from these quotations taken from interview transcripts (IT) and questionnaire findings:

"The EU module was totally about mines, rivers, industry of each country. I remember being very angry because I thought at that time, that I don't even know what the natural sources of Turkey are so why would I learn Europe's?... There was no way that we did the relationship between Turkey and the EU. Even in the geopolitics module, the EU was hardly mentioned (Sabiha, IT, *University C*)."

"In that module, I believe that we covered issues that we should have not covered at all. The module was delivered through lecturing and topics we did were heavily relied on physical geography" (R134, *University D*)

"In classes physical aspects of the continent were covered from a very general point along with brief explanations. Ethic structure of Europe was taught. The time was very limited for the subject. To me, it was just about few brief remarks and explanations nothing more" (R.11, *University A*).

The approach to teaching about the continent of Europe in four universities seemed not to be through a holistic approach. Having addressed the general, usually physical, characteristics of the continent, every country in the syllabus was studied in isolation without making wider connections on a regional and global scale, especially in terms of an EU focus. An quotation from the questionnaire finding illustrates this:

"In the very beginning of the module very briefly we did some issues of the EU as an organisation and union. But then we did each country in the union in terms of their physical, economical and social features" (R34, *University A*)

The ways a particular member society (or nation) is being reshaped by the EU and through the wider context of the interactions between the EU and global flows were not evaluated by the student teachers. Added to this, another important gap concerns local responses to the EU and global processes because 'these processes can only be made sense of in terms of places' (Morgan 1996: 64). So the EU is studied very briefly in all universities, which usually address 'its background' and 'the advantages and disadvantages of possible membership of it for Turkey'. This superficial coverage also applies to the geopolitics modules that all universities have. In this respect, in all universities, very few references were made with regards to the EU as a political and economic union/project/in-

stitution with a set of values or in terms of Turkey's relations with the EU. Furthermore, cultural matters were totally omitted from the content. There was no coverage of the identity politics or raising critical awareness of issues of power, culture, identity, diversity, religion, politics and globalisation.

In turn, there was common dissatisfaction amongst many student teachers concerning the content of the EU modules they received. This was mainly because they believed that what they were offered was unnecessary, superficial and had too many details of physical characteristics of each country and the continent (Ozturk 2006). In this respect, many respondents claimed that they lack necessary knowledge and understanding concerning the issue, and nothing was done to make them critically 'aware' of the issue during their education.

### **What kind of EU Education? A need for a Critical European Dimension**

The EU is, as seen by now, an issue omitted in the programmes of Geography teacher education in Turkey. In the questionnaire, the respondents were asked if they would like more ED within their education, and they were asked to comment on/elaborate about their opinions. In all universities, the majority were in favour of greater input concerning the EU in their education. The number of respondents who were in favour and against are as follows: *University A*: 28 as opposed to 11; *University B*: 26 as opposed to 12; *University C*: 27 as opposed to 9; *University D*: 17 as opposed to 10; and *University E*: 17 as opposed to 8.

What was required by the respondents in all universities for their university education was almost the same as that which participants conceptualised as a critical ED for secondary school level, especially in terms of why it should be carried out and the content that should be contained within it. Since it is more elaborative, I have used the data that was based on student teachers interviews for the secondary Geography curriculum. Therefore the following analysis should be read bearing in mind that the opinions of the student teachers reflect both their education at the university and the secondary Geography curriculum.

#### *An Objective European Dimension*

A critical ED is considered first to be necessary in order to make themselves and their pupils aware of the issues associated with the EU and the consequences of a possible membership for Turkey of the EU in an 'objective' way. Here, criticality is meant to be associated with being 'objective' or compromising different sides of the argument in the sense of taking neither a pro-European nor anti-EU position when teaching it. There is a need to ensure that students are EU literate, with a general coverage of the subject; the basic facts, aims, internal and external dynamics, possible advantages and disadvantages of the membership.

"It is *very very* necessary. For example many students including their parents



think that joining the EU means walking on the streets of Europe and working there. ..It should be taught in detail that it is not only an economic union but a cultural one. Some political and cultural changes will be inevitable. These should be covered secondary schools in detail” (Samil, IT).

Participant Samil, with his words, draws attention to the misconceptions people have regarding the EU. Indeed, many people consider the EU only in the context of economics, and s/he rightly argues that students need to be made aware of the fact that the EU is more than just an economic union. It involves culture and politics, and s/he truly believes that cultural and political changes will be inevitable once Turkey joins the EU.

### *A Political ED*

Similar to the above, the second reason for a critical ED emerges from the idea that Turkish society knows little about the EU. Yet, some participants reach a rather interesting conclusion from this notion. They simply consider the matter of the EU as being something to do with one’s political/ideological stance or awareness and argue for a critical ED on the grounds of making students aware of politics before leaving secondary school or university. This idea is very well articulated in the following words of a participant;

“The EU education is very necessary in secondary schools. When I was in secondary school, I was not interested in politics at all. When you come to university where politics are everywhere, without any background in political issues, you have a very difficult time, as was the case for me. In secondary schools, these issues are not taught or even raised. This is because teachers maybe are escaping/avoiding dealing with such issues... I believe that in secondary schools at least some general and basic issues should be taught, again to at least give a sense of what is right and wrong, but of course not from any ideological perspective” (Demet, IT).

These are very interesting words. As stated earlier, westernisation in Turkey came from being a political matter, so having a basic understanding of the EU from a political perspective is thought to be necessary for students to understand the nature of politics. It is arguably important to make students politically aware of a having pro- or anti- EU stance. Similarly, for some others, ‘critical ED’ means teaching the EU from a political geography perspective as, seen in following rather lengthy but very interesting quotation:

“To me, emphasis should be given to political geography... (and) the EU would be an important part of it... (people) don’t know anything; whatever they learn, they tend to perceive/interpret it wrongly because they lack a solid background regarding the issues (of the EU)... If the child comes to the university, then his/her peer group and university’s attitude become the main determiner of his/her political stance. This then causes those individuals to be channelled

to some certain political stances and ideologies. Those who do not attend university after secondary school are even worse off. They are even less conscious. Their job environment and family then become the key factors defining their political ideas. We still maintain a mentality which is reinforced by customs and traditions (as opposed to reasoned arguments). I am not expert on curriculum development nor on political geography but we could teach, for instance, what politics mean, why it is important for citizens and what the democratic rights of people are... at present we are educated in a way that we don't know what our rights are and as a result we become those individuals who don't know what they really want" (Gulser, IT).

Gulser truly depicts the picture of what usually happens in Turkey. As s/he argues, students are just left to learn (in fact being indoctrinated) about such issues through the media, peer groups, parents or even universities, but these sources are considered not to be critical, but traditionally or ideologically driven. The most important implication of her/his words is that there is a need for a critical analysis of issues which have a political nature, such as the EU. The outcome of such education should be that those students who believe in democracy, care and respect for others, know and exercise their democratic rights and are critical citizens who question the legitimacy of any action taken by any organisation.

#### *ED as strategic interests*

Furthermore, there are also a considerable number of participants who consider critical ED in the context of geopolitics but predominantly centred on Turkey's wider strategic interests. This group of participants is sceptical about the EU and they strongly believe that other possibilities in Turkey's foreign policy need to be stressed through critical EU education. The underlying reason for such a stance stems from a belief that the Turkish public is conditioned to believe that the EU is the only way ahead for Turkey (so this notion should be challenged). They also oppose an EU education which would promote the EU on the grounds that European culture and values systems are different from Turkish culture and values system, so, for some, they are incompatible:

"It should be taught especially with an emphasis on Turkey's strategic location and from a political dimension. We have to stress that our country has been held (unfairly) at the door of Europe since the 1960s... We should also include values and culture of Turks which expands over 1000 years. We should show the mentality of Europe (using it in a pejorative sense. MO) towards Turks over centuries. The EU education should cover these issues" (Erol, IT).

"The EU education should make it clear that Turkey has different alternatives, so the EU is not the only option... For this reason, such education should evaluate Turkey's position within a much wider perspective and geography such

as Europe, the Middle East, Central Asia and Africa. I always think that if we change our direction to the Central Asia and become united with other Turkic nations, then we would break the hegemony of Europe and be in a position to put pressure on Europe. We could raise these issues in class..." (Sabiha, IT).

### *ED as globalisation*

Furthermore, having considered the EU from a geopolitical perspective, there are a few participants who considered critical ED in the context of globalisation and found it necessary because of international connections. 'After all, all countries are in some way connected to each other' as one participant put it. This group of participants, though, like many others, does not believe that the issue of the EU should dominate the syllabus. For them, the EU is as important as other organisations and countries, as seen below;

"The EU is important in the era of globalisation but so are roles of the IMF or WTO or America, Russia, Middle Eastern countries etc. We all live in the same world and one needs to get to know one's environment (on a global scale) to make most of it" (Turker, IT).

### *ED as unnecessary*

There is a relatively small number of participants who were either sceptical or against ED in Geography and their education. The main argument of this group of participants was that most probably Turkey will not be accepted into the union, then such education will have been pointless in the long run. Since the issue is a State policy and the media has been promoting it for a long time, they suspect that an EU education would be about promoting the EU and European culture. The following are examples of what has already been summarised;

"Perhaps they won't accept Turkey into the union. Therefore we will have taught it for nothing. If we 'have to', then we should teach about other unions too...It might be appropriate to teach it to get to know the EU countries but this should not be in a way that would create sympathy towards the EU; it should be totally neutral" (Evren, IT).

"I don't think that it is necessary. They make it appear that we 'have to' join the EU (as if we don't have any alternative)... Whatever we do, we will do it for our own people (not for fulfilling the Copenhagen criteria. MO). For that reason I don't care too much about the EU and its education. If it has to be taught, then Asia should be taught too. Those countries with which Turkey has political and economical relations could be taught to the level that students should know" (Utku, IT)

Therefore, if an ED in Geography education is inevitable, participants within this group placed an emphasis on the 'neutrality' of such education. According to them, it should also be 'balanced' with other unions or power 'centres'. This

idea is favoured not only by this group of participants, but also by the majority of student teachers. Furthermore, unlike the majority, some sceptics did not support the idea that a critical EU education should directly involve politics, as the classroom is not the place for that. This is clearly expressed here:

“...Education cannot be shaped in accord with politics. If we do this, then perhaps tomorrow when we want to join another union we have to teach it too. For example the D8 (an initiative to bring eight Muslim countries together brought up by an Islamist Party which was in office in 1996 in Turkey. MO) countries will be in the curriculum when Islamists take the government. Therefore our interest should be on basis of each country, and their current development situation and strategies” (Evren, IT).

Here the EU is not considered against the background of Turkish westernisation. So it could be argued that some student teachers simply do not want to see the necessity for studying the EU just to understand modern Turkey better.

## **Conclusion**

In this paper, student teachers' experiences of their university education regarding ED and the reasons for ED in Geography education in the opinions of student teachers are discussed. There is common dissatisfaction amongst many student teachers concerning the content of the EU modules they received. This is mainly because they believe that what they were offered was unnecessary, superficial and had too many details of physical characteristics of each country and the continent. However, how ED should be conceptualised in Geography education proved to be controversial amongst the student teachers. Various opinions emerged regarding the content and aims of such education. As stated above, the majority associated the issue mainly with politics, including geopolitics, Turkey's membership politics and people's own political positions.

In some cases, there was an element of mistrust of Europe, for Turkey is believed to be treated unfairly and so has been left outside the EU so far by some. In this respect, many student teachers stressed a need for 'balancing' ED with Turkey's other strategic alternatives or a need for 'objectivity' in the sense that the EU should not only be promoted through ED in geography education.

However, I believe that there should be more than this in such an education. Within this context, more general issues, which are the realities of today's societies, such as democracy, recognition of others, the nature and reality of the diversity, or the nature of identity need to be raised as core issues in learning. Teaching students about these issues might not be directly related to Turkey's relations with the EU, which the majority of participants (not only those sceptical but also others) asserted to be the case, but these concepts are essential to provide a contextual framework in which to study the EU. Such an approach would

allow students to evaluate issues from a wider and more meaningful perspective rather than being confined to some polarising political discussion, which, as seen, is very controversial.

As regards the programmes of geography teacher education, it can be argued that they mainly promote ‘factual’ learning, from a more physical geography perspective. In this respect, the programmes have lacked the element of criticality and different approaches to geographical knowledge, student teachers have been, in turn, limited in their thinking and realisation of the capabilities of geographical study. Hence, this situation does not provide opportunities for student teachers to ‘grow’ as geography teachers needed for the future.

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# Brussels: Enquiry Based Learning more than just a way of thinking

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## Abstract

This paper explores the value of enquiry based learning (Kahn and O'Rourke 2005) for a group of final year geography undergraduates undertaking a module entitled 'The Economic and Social Geography of Europe'. The module included an optional fieldwork work element in Brussels, which was planned as an enquiry based open-ended learning experience.

The fieldwork was optional and was specifically for those students who were prepared to embrace an Enquiry Based Learning (EBL) approach. These students were then required to justify the need to visit Brussels by means of formally presented arguments, in order to collect evidence to support their own learning needs. Student led investigations in Brussels into such issues as asylum seeking, the impact of the EU, and the perceptions of the changing faces the city were undertaken during a three day visit with staff acting as facilitators in this enquiry process. Flexibility of planning ensured that students who were not so comfortable with the EBL way of learning received more structured support from the staff.

Reflections of the process showed that the students were fully engaged and encouraged and developed a passionate interest in the learning that took place. They also assumed ownership of their individual investigations. The students on the structured enquiry route also reported positive benefits from the experience. Both student groups found the learning beneficial for the preparation of their own dissertations, especially in respect of improved confidence and the ability to take responsibility for their own learning. The staff-student partnership enhanced their own learning and teaching philosophies, which will inform future planning and delivery of the module through evidence informed practice.

**Key words:** Brussels fieldwork, enquiry based learning, geography, undergraduate

This paper evaluates a pilot project carried out in the geography subject area at Newman College of Higher Education, the aim of which was to introduce Enquiry Based Learning (EBL) into the year 3, geography module concerned with the economic and social geography of Europe. Within the subject area there is a history of using the enquiry method and setting students issues and problems to investigate. This pilot was undertaken to test the student response to fully-

fledged Enquiry Based Learning (Kahn and O'Rourke 2005) in the current idiom and to consider future developments

Geography educators have a long tradition of using enquiry methods (for example Roberts 1987). Geographical enquiry has been a paradigm used widely at primary, secondary and in higher education (Storm 1989, DfEE 1995, QCA, 1998, Smith 2002, Foley 1999, Scaife 2006). This traditional enquiry method at its best has certainly invigorated the subject and its learning, but may often result in lip service to student ownership and participation in as much as the tutor sets the enquiry questions for a particular exercise and the students provide the 'correct' answer(s). True EBL must involve student ownership of the learning and their ownership of and commitment to the enquiry project. Since they investigate real-life issues from a complex reality there are not likely to be correct answers only opinions supported by evidence; it is the process of enquiry that is important for learning rather than possibly uncertain resolutions of difficult issues.

Following the model of Enquiry Based Learning as developed by Kahn and O'Rourke (2005) for undergraduates in higher education, it can be seen that EBL should encompass several essential characteristics (fig 1).

- Engagement with a complex problem or scenario, that is sufficiently open-ended to allow a variety of responses or solutions
- Students direct the lines of enquiry and the methods employed
- The enquiry requires students to draw on existing knowledge and identify their learning needs
- Tasks stimulate curiosity in the students, encouraging them to actively explore and seek out new evidence
- Responsibility falls to the student for analysing and presenting that evidence in appropriate ways and in support of their own response to the problem

Fig 1 Characteristics of EBL (Kahn and O'Rourke (2005) p2.)

The essential element would seem to be for the student to take responsibility for the learning and ownership of the research project with the tutors acting as facilitators.

In the literature there is broad discussion of the different related learning and teaching methods which can be included in EBL. This deals with enquiry, problem based learning and action research (Boud and Feletti 1997; Bradbury & Reason 2001)

There are difficulties with introducing a new style of learning and teaching to an established student group. The general barriers to the adoption have been recognised by Jackson (2003 a; b). In the current study the students had experienced a variety of approaches both in the class and in the field and had also undertaken individual field investigations, such as beach dynamics in The

Gower, South Wales, and of small scale industrialisation in The Gambia. However they had not been required to take full ownership and responsibility for the development of their own projects as fully independent learners. With regard to Jackson's barriers, the geography tutor team were keen to develop the tradition of enquiry in geography and were happy to let those students who demonstrated a willingness to adopt EBL to take the initiative. There was an assessment orthodoxy, but this could be tailored to meet the demands of EBL. There was space within the explicit curriculum to allow space for the students develop their own ideas.

**Barriers to wider adoption of EBL and other forms of process-based learning  
(Jackson 2003)**

- Resistance of Academics – not interested, overwork, fear of unknown, of letting go, no time to change...
- Ignorance – absence of knowledge, ideas that can be contextualised.
- Lack of incentives, recognition/reward for effort invested in innovation.
- Teaching that is teacher rather than student centred
- Unsympathetic peers and institutional structures.
- The need to deliver an explicit curriculum with predictable outcomes
- Curriculum and assessment orthodoxy
- 'Resistance from students – not prepared for this type of learning, learning styles/ cultural issues.

Fig 2. Barriers to wider adoption of EBL and other forms of process-based learning (after Jackson 2003 a; b) ©1999 M. Foley

In practice the rewriting and updating of GG611 a third year module entitled 'The Economic and Social Geography of Europe' provided the opportunity to fully adopt an EBL approach. It also provided the added dimension of a field based element in a European city. A group of eighteen students were briefed initially about the module content and then the rationale behind the approach to be used. Elements of EBL, namely PBL and active research, had already filtered through first and second year modules but it was decided by the team that EBL would be whole heartedly embraced, with the EBL process becoming a fundamental assessment component.

The rationale behind this approach was that it was to be carried out with a group of students that had a sound subject knowledge base, this module building on an existing body of knowledge. The intention was that with this knowledge and through this approach it would allow for the individual development of a range of student abilities.

Many of the students had opted for this module because of the integral field trip element and were surprised that they were asked to demonstrate how the field trip was a necessary and important part of their individual research pro-



gramme, not merely a signing up for a study visit. It was advertised as a means to an end and as a case study component. If the visit did not significantly enhance their investigation the students were asked to consider what the value of going to Brussels was. Many found explaining the need to go to Brussels difficult, as their structured fieldwork elements in previous years had always been tutor-led, although their fieldwork in The Gambia in year 2 involved strong elements of PBL. Those students who rose to this challenge found the transition to EBL in this module much less threatening.

The student experience comprised a series of taught sessions delivered by a teaching team. Most sessions involved team teaching as a means of modelling the value of collaboration. The sessions comprised mainly Enquiry Based Learning questions which promoted discussion and interaction. Use was made of current radio programmes and TV footage followed by group and individual tasks. The sessions were intended to be a catalyst for further student effort, the aim being to further develop independent thinkers able to research areas of interest to themselves.

The module began with discussions about the value of this approach. Tutors were of the opinion, that some students had thought that if they acknowledged the limitations of their work this would be accepted as a legitimate 'excuse' for lack of student effort. Self-motivation should be regarded as the necessary driving force for success in this particular module, obstacles were to be seen as challenges to relish and overcome. Hence the tutors felt that students, driven by curiosity and ownership, would develop as more successful learners.

For the students to own their research, the traditional roles had to be broken down and tutors and learners had to negotiate and agree roles. Reluctantly for some of the students there had to be a change from passive acceptance of knowledge handed down in lectures, to actively taking responsibility and searching for appropriate knowledge and information with the tutors facilitating this new learning processes.

Parameters were established and students encouraged to take responsibility for the direction of their own learning. The student reports had to be something of interest to them individually and they were directed to carry out research that would take them away from an answer or solution that was already known. Their research hence needed to be specific and achievable. It was carefully explained that the processes they went through should document a series of problems for investigation, showing engagement with a variety of solutions or responses.

Students were then asked to present to the tutor team what they were interested in, what they wanted to find out and how they were going to attempt to deal with their enquiry. They were asked to articulate their intentions on the

understanding that they may find only a partial answer. It was accepted by both parties that all stages of their enquiry were ongoing and that some reports may never really end. Their reports had to define a specific focus and sense of purpose that investigated a real life issue.

A careful balance had to be drawn between too much tutor intervention and what the students perceived as too little support. It was now that the tutors became facilitators. This was in fact an issue for both tutors and students alike.

Following the formal presentations where the enquiry was presented, with collaboration between student and facilitators, each project was either accepted or declined. Students were then recommended to extend their responsibility further and go down the EBL route or be guided through a PBL project that was structured and organised by the tutors.

This followed the advice from Tosey and McDonnell (2006) a priori.

“Teaching in relation to EBL is likely to emphasise the creation of conditions conducive to enquiry: acknowledging and valuing enquiry in programme structures: informing learners of the nature of the enquiry and related skills, providing training and guidance where appropriate: and using skills of facilitation to guide and enhance learners during the process of enquiry” (Tosey and McDonnell 2006 p. 3)

Hence the PBL route included a series of activities and opportunities where students were answering a set problem. Those who felt capable of EBL further devised and developed their own research question and planned and ultimately carried out their own research programme.

In essence the outcome of the pilot was a series of EBL reports on issues that used Brussels as a case study, plus a collection of PBL tutor directed reports on the many faces of the city of Brussels, three others opted not to visit Brussels and developed their own enquiries.

### **Main findings**

A total of 15 students travelled to Brussels to engage in fieldwork. Six students prepared assignments through Enquiry Based Learning (EBL), whilst nine students chose the directed Problem Based Learning (PBL) route three others opted not to visit Brussels.

Students, who embraced the philosophy of EBL, produced assignments demonstrating a greater depth of understanding of their chosen area of study. The completed reports were academically more rigorous highlighting an analytical engagement with the issues. After double, blind marking and external moderation, the report grades prepared through an EBL approach ranged from 58%–73%. In contrast, those students who opted to follow the PBL route, in gen-

eral produced reports that lacked clear focus and academic rigour. The student grades for the PBL reports ranged from 35%–58%.

Overall, evidence from written fieldwork and group discussion indicated that those students who engaged fully with EBL gained higher grades and developed an increasing independence in their approach to their learning and research. Furthermore, these students could clearly be identified as confident risk takers, prepared to show initiative and commitment to investigate fully their chosen area of interest. Throughout the EBL driven module, it was most evident that students took responsibility for their own learning, valuing teaching staff as facilitators. Furthermore, the final reports presented by the EBL focused students demonstrated a clear analytical and evaluative written style.

Evaluation of the learning process and subsequent submission of completed reports by the students who chose the PBL pathway highlighted the following key points. It was evident that these students were unwilling to take risks and were uncomfortable with a non-traditional approach to learning. They needed the inputs of the tutors not only for information but also for encouragement to see the task through. Their completed reports were also overly descriptive lacking in focus and originality of thought.

Based on the evidence provided by this pilot, the future development of GG611 Social and Economic Geography of Europe will include:

- Greater emphasis on student understanding of Enquiry Based Learning. This, in part, will be enhanced with additional modelling of EBL through other geography modules.
- An encouragement for all students taking the module to embrace the EBL approach
- Review of the marking structure to reward the process of enquiry as well as the product
- Review of timings of fieldwork
- Introduction of formal periods of reflection to promote more effective EBL
- A review of the seen question in the formal examination, so that EBL learners can devise their own seen question.

This pilot has demonstrated that it is possible to introduce significant Enquiry Based Learning into a traditional module for students with a range of abilities and for them to respond positively to the approach.

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# Geoinformation in European education: a revolution waiting to happen

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## **Abstract**

EuroGENiE is a proposal to create a European GI-network, put together through EUROGEO and the HERODOT Thematic Network for Geography in higher education. EuroGENiE is the European Geospatial Enterprise Network in Education. This brings together a very large and diverse set of educational participants, all of whom are important and relevant stakeholders in the sector. They vary in range and structure, from large European and national professional bodies to individual schools and teachers that have been involved in pilot projects and national initiatives.

This paper outlines some of the issues that need to be addressed if GI is to become integrated into existing formal education structures in Europe. It considers the reasons why GIS remains a peripheral activity and outlines some of the infrastructure developments that will be needed in order to support users and encourage them to share resources. Aspects such as pedagogies, curriculum, quality and multicultural aspects are examined and the creation of an active user-centred community of practice is proposed to facilitate knowledge transfer.

**Key words:** GIS, geoinformation, Geography, network, blueprint, education

## **Introduction**

Geoinformation (GI) can be defined as the use of geographic information in order to provide the context for discussion, analysis, and decision making (ESRI 2006). The use of a geographical information system (GIS) helps users create, store, analyse and manage spatial data and associated attributes. GIS then is a tool that allows users to review, edit, present, relate and respond to spatial information. It therefore has the potential to be a very powerful tool for education.

According to Longley *et al.* (2005) Geographic Information has become a large industry utilised by the public and private sectors and in academia. This has resulted in the demand for basic and advanced education and training. As a result, many colleges and universities have established GIS courses. There are however new demands on GI education, as it becomes increasingly used as a decision-making tool for user-orientated solutions. European education remains distanced from much of this. Despite the opportunities, the European education

market remains very immature in its GI profile. GIS education is also highly fragmented and very patchy in terms of its activity and quality. So, despite the fact that technical barriers to GI access have been reduced and almost removed, there are a number of other significant issues which need to be resolved before education can make effective use of geoinformation technologies.

Recent trends suggest that geoinformation will be increasingly used for decision making in everyday activities through personal devices, like mobile phones and PDAs. Wireless technology provides enormous potential for the creation and use of geoinformation 'on-the-move'. GI-based competences will be increasingly needed by all members of society. The recent publication "Learning to Think Spatially" (National Research Council 2005) has established some fundamental components.

Geoinformation is used to make decisions at global, national, regional and local scales. Over the years, geoinformation has become an increasingly important resource for society at large. Kraak (2005) points out that 80% of all our decisions involve a spatial component. Society, in short, requires geoinformation for meeting the increasing information demands to manage and to solve current global problems related to, for instance, health, travel, environment, climate, and governance (ESRI 2002).

### **Networking and Education**

In the last few years there have been initiatives to create a European Geographical Information Infrastructure (EGII). Such an infrastructure assumes a working system to exchange data, a technical infrastructure, a set of standards for exchange and organisational arrangements for the development of the GIS market, but this has not yet engaged most education stakeholders. Craiglia (2000) reports on a workshop held on data policy initiatives commenting that there has been little or no education policy development, except at a local level. This is a major gap as public bodies hold the key to widespread data access.

Increasingly, GI will be used much more widely in education. Knowledge is seeping through from research and business to higher education to secondary education and even to primary education through initiatives largely developed by software vendors (de Bakker *et al.* 2002). The Internet and map-enabled browsers increasingly play an important role in opening up such opportunities. But, the adoption process still remains very slow and very haphazard in nature. It relies mainly on enthusiastic individuals often gathered together in EC pilot projects, who evangelically operate against the norm. Small pockets of GI education users in Europe are thus fragmented and isolated in their systems and rarely have the opportunity even to learn from one another.

### **Limiting factors**

Today in Europe it is predominantly social, educational, and political forces which limit the implementation of GIS in education rather than technological limitations. The teaching and learning methods that need to be used with GI in education are closely aligned with modern educational reforms to strengthen enquiry-based learning. The incorporation of these methods into the education curriculum fundamentally changes the manner of teaching, learning, and meaning constructed in the classroom. At present there is no systematic, European, national or regional, educational agenda to promote GI. It is rare to find any integration of GI in education or consideration of issues concerned and identified needs.

### **Education needs, e-learning and learning supply**

GIS can be assumed to have almost universal applicability in education terms. GeoInformation can be applied across different disciplines depends closely on spatial literacy. It is thus critical that we consider the fundamentals of this spatial dimension in order to make sure that it can be dealt with effectively. The education use of GU should involve studies at a variety of scales, global, international, continental, national, regional as well as local. Karen Kemp (1998a) suggests that in GIS education, concepts and data need to be localised in order to address:

- local and national differences, including curriculum and context.
- different classification systems and approaches
- cultural differences in different geographic regions and in different disciplines
- language variations both within and between language groups.

These recommendations seem particularly valid in a European situation where valuing diversity remains at the forefront of EU policy and approach. It is therefore important that most data for learning should be based on localised information, much of which can be easily created through the education process itself and specifically by field study. The relevance and importance of fieldwork must not be underestimated, where observation, recording, ethnographic and other forms of local information gathering can be used to produce datasets. This also allows learners to make meaning of their local situation. Multimedia tools allow geoinformation to be gathered in textual, audio and visual forms associated with location. So data needs in education are very different to those of other GI sectors, as they need to be dynamic with a strong local and global context.

It is essential that we try to separate the learning needs and education from the technology. However having stated this, it is nevertheless likely that e-learning will play an even more significant role in e-Europe, providing 24/7 access to learners from widely spaced geographical areas and with a reduction of language

and cultural barriers. At the moment most online courses have been developed in English, though Spanish and German versions for example of UNIGIS post-graduate courses have also been created. While there are a growing number of online e courses and programs, there are probably still not enough of them and most courses are dedicated to postgraduate education. In undergraduate terms many institutions are also a long way behind where the workplace needs them to be. In most schools and curricula the needs are not even really recognised or understood. So, raising awareness remains a significant issue.

### **Educational Issues for Europe**

A number of strategic education issues need to be addressed if European GI is to make progress. These include: involving stakeholders, mainstreaming innovation, promoting collaboration, GI pedagogies, training and support, data and resources, curriculum, certification and qualification, languages and cultures.

#### *(i) involving stakeholders*

With the availability of GIS as a decision making tool, it is imperative to recognise, understand and emphasise the type of role that geoinformation will play in future society through the formal education system. Despite the relevance of geoinformation, it has been adopted by only very small percentage of schools and a limited number of universities and courses. The reasons behind this low uptake is still largely unclear, however the absence of GIS in the formal school curriculum has been an important barrier to other developments. Despite the increasing use of GI in public and private organisations, it has not yet managed to percolate widely into the education system. To successfully implement GI, Europe will need to involve the key stakeholders and network them together.

#### *(ii) mainstreaming innovation*

A significant educational issue relates to changes in the types of education paradigm involved. It is likely that a futurist education model will need to be implemented if GI is to be established in formal education. Innovation in learning and teaching will be required to promote and establish the right sorts of GI learning experiences. Even the most dynamic education system cannot innovate or integrate without some organisational changes. Proving materials does not constitute change, it simply provides learning opportunities. It is likely that most educational institutions will require some innovation in structure, design and approach if they are to innovate accordingly. In the specific case of schools and teacher training, teachers will also require a major change in mindset. In all circumstances education administrators need to be aware of the issues and find flexible solutions to suit local needs.



*(iii) promoting collaboration*

Europe requires the establishment of an education network that will encourage co-operation of and partnerships between many organisations as suggested by the eContent+ programme and Call for proposals ([http://europa.eu.int/information\\_society/activities/econtentplus/index\\_en.htm](http://europa.eu.int/information_society/activities/econtentplus/index_en.htm)). A sound information infrastructure needs to be built. Harmonisation of expertise, support and resources must take place for optimised GI use in education. An information exchange process is essential to allow educators to share and acquire knowledge from others. Any networking will need to provide a bridge from existing knowledge to the information seekers. Such a spatial information service has also to consider the users perception and requirements.

An example of one such collaborative venture was the Digital Earth initiative (<http://www.digitalearth.gov/>). This was established as a platform which represented the Earth and encouraged users to explore and interact with the vast amounts of natural and cultural information from multiple sources gathered about the Earth. The Digital Earth community brought together industry, media, academia, libraries and government (federal, state, tribal, local) and participants from 30 countries as an independent, self-maintaining organisation with *the* primary goal to unlock the world's knowledge by simplifying access to georeferenced information for citizens, businesses and government. It examined digital resources, data, interoperability and multiple digital resources. It provided tools and technology with the emphasis on the users of the data. In this case the value of a 'Digital Earth' approach was demonstrated, but the potential of it in education has yet to be fully harnessed as project continuity was disrupted.

*(iv) geoinformation pedagogies*

Little attention has so far been paid to the issues related to pedagogy and geoinformation in school, or in university education. Problem-Based Learning (PBL) and Inquiry-Based Learning have become the main GI learning methods (Borgman *et al.* 2000). These are based on constructivism and are challenging the customary methods used in schools and universities. The roles of learners and teachers have to change if these approaches are to be encouraged and knowledge is to be constructed. The critical role that pedagogical transformation plays in developing socially attuned curricula and relevant teaching strategies needs to be recognised. Wider engagement and empowerment of young people in decision-making processes, through the use of participatory GI-pedagogies also must be explored and promoted.

*(v) training and support*

GI education needs training for teaching *with* GIS rather than for teaching about it. Davis (2002) suggests that it is probably more difficult to train the teachers than it is to teach the students. Teachers still do not feel that geoinformation is easily incorporated into their curricula. So, in-service training of teachers has to focus on pedagogical and curricular components rather than on technical parts. Providing on-going support systems will be an important component for sustainable professional development and successful implementation strategies.

Online postgraduate higher education GIS training in Europe is quite well organised, notably through UNIGIS, ITC, and other specific university initiatives and internationally through the ESRI Virtual Campus. The importance of GIS education via online learning is also expected to grow as it is particularly well suited to serve the needs of many who are only able to take part because it is delivered in e-learning mode. Teacher training and school learning using e-learning and blended approaches need to be reviewed. The opportunity to provide large-scale, web-based basic training for GI in schools needs to take place. In an Information Society context this approach could be very relevant for training large numbers of European educators. These courses could, for example, be linked to raising awareness through the European Computer Driving Licence (ECDL). The tools and content available and even required skills of tutors to deliver high quality learning experiences all need consideration. Training for European experts and the key roles they might play is also important.

*(vi) data and resources*

Data for education is a complex issue. Considerable amounts of data and resources are already available to education, but whether or not they can be usefully used in Europe is unclear (Neteler, undated). It appears that while technology has greatly eased the ability to collect data, it has not necessarily been translated into relevant data and resources for the education marketplace. Free data may not necessarily be useful data. Stability in the amount and types of data available is desirable. The availability of generic and more localised data sets and resources also poses additional challenges. Teachers will insist on localised information and expect to create their own resources. Establishing connections with local public and private organisations that gather data is likely to be essential.

Incentives for contributing resources need to be found to remove some of the barriers to establishing a sharing educational community (Molenaar, undated). International collaboration will also have to deal with enterprise, IPR and author recognition if an educational geo-resource is to be established. As materials useful for education are developed by many different kinds of institutions, both private and public, mechanisms for promoting and encouraging likely collabo-

ration between them and the education system will be needed. This can only be achieved through the development of a strong educational community with a wide variety of different stakeholders involved.

*(vii) curriculum, certification and qualification*

According to GITS there remain a number of curriculum, certification and qualification issues which need to be dealt with (GeoXchange, 2005). In higher education, programs are very varied with little or no standardisation, despite Bologna initiatives. They range from simply offering courses in GIS and using GIS as a tool in other disciplines to offering GIS certificates; part-time courses in GIS; GIS through distance education, GIS by e-learning, certificates, diplomas, bachelors, masters, and Ph.D. degrees. Finchum *et al.* (2003) suggest that at university level, there are two general types of GIS programmes, the Geographic Information Systems degree which focuses on skills that enable graduates to utilise GIS as a tool and Geographic Information Science which emphasises the integration of spatial disciplines and associated research. In schools there are as yet no formal qualifications, but if GI awareness and GIS use expands, so university curriculum will also need to be adjusted. Special efforts also need to be encouraged in initial teacher training courses.

*(viii) International issues, languages and cultures*

Since GIS is international in character, it follows that education activities need to account for international educational differences. These range from the obvious problem of language differences to more subtle issues of different education styles and learning cultures as described by Elsner (2005). Attention will need to be given to provide appropriate structures and components of educational materials so that they will suit educational needs Europe-wide. Is the concept of the reusable learning object relevant? Can materials prepared in English simply be translated to other languages? Are there vocabularies and/or dictionaries for GIS technical terms in all languages? Are there differences in how educational experiences should be structured in other regions? How might these differences be accounted for in the definition of education components? A recent session at the EUGISES 2006 conference began to unravel some of the educational issues associated with different cultural approaches to learning. It is clear that at this point in time there are no ready-made answers, but that the discussion needs to be advanced.

## Conclusions

Karen Kemp (1998b) commented that there were already a large number of existing activities which have been addressing various GIS education issues. The same is still true today, but most of the activity remains centred largely outside Europe, developments are very dispersed across different sectors and in different locations. It thus seems that the most important issue is to establish a wide and large European network to encourage these issue to be advanced. This is why the EuroGENiE network proposal was created, for once to place education at the centre of the GI system. To encourage GI education to become the centre-point of action and activity in Europe, to establish, promote and indeed celebrate European activities in geoinformation.

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# Assessment For Learning in Geography classes in England

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## Abstract

This paper presents some of the ways in which Assessment For Learning (AFL) is being integrated into the Geography curriculum in schools in England. Assessment For Learning has been part of the DFES Key Stage 3 National Strategy since 2003 and is slowly being implemented in schools across the country with varying degrees of success. In this paper I have reviewed the current thinking behind AFL and give some examples of how it can be used in the geography classroom.

**Key Words:** Assessment For learning, Self and Peer assessment, Formative and summative assessment

## Introduction

In order for assessment to be effective in promoting further learning it must be formative and provide a framework for sharing educational objectives with the pupils. (DfES 2004)

Traditionally in England assessment in secondary schools has been mainly summative in nature, this can be described as Assessment Of Learning, it is usually carried out periodically and judges how well the pupil is performing. It is driven by end of module tests, end of year examinations and externally set and marked assessments at each Key Stage. It provides the pupil with a snap shot of their progress but is often norm referenced and offers no opportunity for improvement.

One of the drivers for Assessment For Learning in the UK was the Ofsted (1996) general report on secondary schools which found:

“marking is usually conscientious but fails to offer guidance on how work can be improved. In a significant majority of cases, marking reinforces underachievement and under-expectation by being too generous or unfocused. Information about pupil performance received by the teacher is insufficiently used to inform subsequent work.” (Ofsted 1996)

Assessment For Learning however takes place all of the time and uses the information gained from the assessments to help improve learning. Successful learning only occurs when learners have ownership of their learning and understand the goals that they are aiming for. Black and William (2004) have found that for assessment to function formatively, the results have to be used to adjust teaching and learning.

### **Assessment For Learning: some principles**

Assessment For Learning should be used to inform the following five processes:

1. Planning
2. Setting targets for pupils
3. Supplying diagnostic information
4. Assessing the performance of the pupil and teacher
5. Long term planning

Assessment For Learning produces qualitative knowledge which builds upon previous knowledge and learning structures. In criterion based assessment the way in which the assessment is structured will produce either open or closed thinking. Depending on the desired outcomes of the assessment a wide range of strategies for AFL can be used and developed. The assessment should be designed to generate alternatives and pick up not only intended but unintended learning objectives

According to the (Assessment Reform Group 2004), effective Assessment For Learning:

- Is part of effective planning
- Focuses on how pupils learn
- Is central to classroom practice
- Is a key professional skill
- Is sensitive and constructive
- Fosters motivation
- Promotes understanding of goals and criteria
- Develops a capacity for self and peer assessment
- Recognises all educational achievement

### **Assessment For Learning in geography**

Geography as a subject lends itself to Assessment For Learning as it covers an extremely diverse set of topic areas. Figure 1 below summarises the different teaching techniques in Geography that support AFL

Figure 1. Teaching techniques to support AFL in Geography

Oral	Written	Graphic	Products
Questioning	Questionnaires	Diagrams	Models
Listening	Diaries	Sketches	Artifacts
Discussing	Reports	Drawings	Games
Presentations	Essays	Graphs	Photographs
Interviews	Notes	Printouts	
Debates	Stories	Overlap	
Audio recording	Newspaper articles		
Video recording	Scripts		
Role play simulation	Lists		
	Poems		
	descriptions		

After Capel *et al.* 1995

*Who and when should you assess using AFL?*

Assessment should be constant and should involve the teacher, peer and self assessment. In order for it to be effective the criteria must be agreed in advance.

### How to use AFL

Within the Assessment For Learning framework it is important that the learning objectives are shared at the start of the exercise so that everyone is clear what the expected outcomes are. This helps pupils to understand what they are aiming for and what their marks mean (Figure 2).

Figure 2. Learning objectives for a Year 7 (pupils aged 11 years old) newspaper report

1. To describe why volcanoes erupt
2. To use resource material to build up a picture of a volcanic eruption
3. To produce the front page of a newspaper about the volcanic eruption
Your finished piece of work should include
1. A description of what caused the volcano to erupt
2. A labeled diagram of the causes of the eruption
3. Pictures of the eruption
4. An eye witness report – written in your own words
5. A description of what damage the eruption caused
6. A labeled map to show the location of the volcano
Your finished piece of work should look like a newspaper with headlines and columns
Read the mark grid to get a good understanding of what detail is need to reach each National Curriculum level.
To successfully achieve AFL the teacher needs clear objectives for learning and an understanding of progression in the subject area. The teacher needs to know what the students are expected to learn and how this represents an advance in learning. So, Assessment For Learning strategies should ideally be built into the schemes of work that are being used.



## Examples of how Assessment For Learning can be built into teaching schemes

1. *The sharing of examples of good student practice with other students.* This allows the students to understand what makes a good answer and to review their own work in light of this. They start to develop the ability to become critical and reflective.
2. *Peer and self assessment.* When pupils are going to be involved in assessing their own or each others work introducing the idea of the pupils developing together the assessment criteria for the activity can be a very powerful tool. This gives the pupils complete ownership of their learning. This does lead to teaching implications for the teacher as time must be found to train the pupils in how to assess their own work and generate learning objectives and assessment criteria. The key would be to start with small simple tasks which build their confidence. As they become more confident in the process the quality of the criteria and their ability to become critical friends will increase and they will enjoy the challenge of self and peer assessment. Research by Gibbs and Simpson (2004) found the potential embarrassment of poor quality work being assessed by peers has a huge impact upon the quality of the work without the need for formal assessment. An example of how a teacher could apply self and peer assessment is given in Figure 3. This example incorporates peer, self and teacher assessment.
3. *Written comments on students work.* To be effective assessment the written comments should describe the strengths and weaknesses of the work and suggest targets for further improvement. These types of comments give particularly good results with low achievers, as the teachers is concentrating on specific problems and is giving the pupil clear direction as to what is wrong and how to improve it (Black and William 2001)
4. *Students reflecting on their own progress.* AFL provides the students with a structured setting in which to reflect upon their own progress. This self evaluation can be quite simplistic and completed at the end of each taught session (Figure 4), or much more detailed, for example at the end of an assessed piece of work (Figure 5). Both of these forms of self evaluation could become part of an ongoing individual learning plan. At the start of each lesson the pupil reviews their target from the last lesson and works on improving that aspect of their work. The self evaluation (Figure 6) can be combined with teacher input where a target level is agreed by teacher and pupil before the piece of work is completed. The expectation is that the pupil will at least reach the agreed level. How well the pupil has progressed to achieving that target is reviewed at the end of the work, with both the teacher and pupil making a formative

comment about the achieved outcome and then setting a new target for the next piece of work. This idea is based on the research of Black and Williams (2001) who advocate that a dialogue should exist between the pupil and teacher, which is thoughtful, reflective and focused allowing the pupil to have the opportunity to express their views and feelings about the piece of work.

Figure 3. A Year 7 assessment task (for 11 years olds): Volcano News Report

Name \_\_\_\_\_ Form \_\_\_\_\_

Mark your own work according to the descriptions given by putting a tick in the top row of boxes in the level that you think the work deserves. Use a + or – symbol to indicate if the work is in the top or lower band of this section.

Level of achievement	Level 3	Level 4	Level 5	Level 6	Teacher comment
Research (Knowledge)	Name of the volcano given and the name of the country in which it is located. A basic eye-witness account is included.	Volcanonamed and labeled. Facts about the number of casualties and damage included. Picture of the volcano erupting. Eye-witness report with some detail	Volcanonamed and location described. Eye-witness report is accurate and realistic. Some explanation of how the volcano erupts.	Nameandlocation included. Facts about a REAL eruption including dates and figures. Factual eyewitness account. Explanation of why volcanoes erupt and the theory of plate tectonics. Information specific to this volcano	
My mark					

Level of achievement	Level 3	Level 4	Level 5	Level 6	Teacher comment
Friends mark					
Presentation (skills)	Headlines naming the volcano and explaining where it happened. Eyewitness account as a short piece of writing	Headlines and eyewitness account. Picture of the volcano included and a map showing the location	Headline and written information clear and concise. Picture includes labels explaining what it is showing. Detailed map with key and title showing the location. Writing or diagrams to explain why volcanoes happen.	Accurate written information. Clear labeled picture. Detailed accurate map showing exact location of the volcano. Clear diagrams or maps to support written explanation of why this volcano erupted.	
My mark					Overall mark
Friends mark					

Now pass your work to the person sitting next to you who will also mark it in the second row of boxes

Figure 4. Some examples of AFL comments on a year 7 work-newspaper article

You have made good use the resource material provided. You do however also need to include some of your own research
You should aim to include more detailed annotations on your diagrams
You have made good use of ICT and your written English is excellent
You have presented the work very well. It looks like a real newspaper

Figure 5. Simplistic self-evaluation- the AFL sandwich

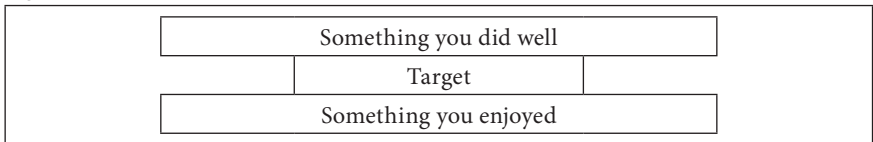


Figure 6. Detailed self evaluation sheet year 7 volcano newspaper article

Pupil name	Date
Yr 7 newspaper article	
Answer the following questions thinking carefully about your answers	
1. Were the instructions clear at the start of the task	Yes/No
2. Which parts of the work did you find difficult?	
3. Which parts of the work did you enjoy?	
4. Have you read and understood the teachers comment	Yes/No
5. What targets do you need to work towards to achieve a better ark next time?	

After Weeden P (2005)

## Research

The following survey was carried out by the Postgraduate (PGCE) Secondary Geography trainee teachers in their placement schools to ascertain the extent to which Assessment For Learning was being used in placement schools in the Merseyside region. A total of 21 schools were surveyed and the results are as follows. 13 out of 21 schools used Assessment For Learning techniques in the teaching of Geography, In 7 schools there was little or no evidence of its use. However only 8 out of 21 schools had Assessment For Learning integrated into their schemes of work the rest left it up to the individual teacher how and when to use it. In the schools that implemented Assessment For Learning it was used across the key stages and ability levels. The most common forms of Assessment For Learning used are described in Figure 7.

Figure 7. Results from an Assessment For Learning survey.

Assessment For Learning technique	Frequency of use
Peer assessment	By all schools with all key stages
Self assessment	By all schools at all key stages
Extended questioning	Mainly limited to key stage 4

Assessment For Learning technique	Frequency of use
Formative written comments	Only used by 4 schools as in a formal setting
Target setting	Limited use. The 4 schools that did use it had a very well developed scheme that was used across the key stages and ability range.
Aims and objectives	Most schools used aims and objectives at the start of the lessons but few integrated them into the lesson by referring to them during the lesson and targeting pupils learning around them.
Criteria setting Teacher and pupil generated	Most schools used criteria to enable the pupils to assess their own work. A couple of schools were confidently using shared or pupil generated criteria for some of their assessment tasks.

Though this survey only provided a limited snapshot of the position in teacher training placement schools in the Merseyside area at the present moment in time, it does appear that Assessment For Learning is being used extensively and with successful results in a number of our partnership schools. In other cases AFL would seem to still be in the early stages of development.

### **Implications for initial teacher training and conclusion**

In order to prepare our student teachers for their teaching career it is very important that they complete their professional postgraduate teacher training (PGCE) year with a clear understanding of the principles of Assessment For Learning including how to incorporate the main strands into their schemes of work and lessons. To foster this understanding, Assessment For Learning is one of the main strands that underpin the PGCE course at Liverpool Hope University, both as part of the General Professional Studies programme and in the Geography subject programs. The techniques used in school are mirrored in the University in that student teachers are involved in the self and peer assessment of their own work. Assessment For Learning is one of the three assignment titles and the students have to display, in a portfolio and on video, how they have used the AFL strategies in their teaching practice.

Assessment should also support and enhance the teaching of any module of work and should take many different forms to offer a diversity of teaching and learning methods. Teaching and learning have to be interactive, teachers need to know about their student's progress and difficulties with learning so that they can adapt their work to meet their needs. The only way that this can be achieved is by using positive and extensive feedback techniques.

William and Black (2002: page number 3) have found that “innovations which include strengthening the practice of formative assessment produce significant and often substantial learning gains”

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# Images, perceptions and questions: Europe through the eyes of children in England

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## **Abstract**

The author is a member of a new Socrates programme pilot project entitled 'The Implementation of a European Dimension by Peer Learning in Primary School' (E-PLIPS). The project aims to establish a concept and rationale for European education through Geography. It plans to develop effective methods and pedagogies to deal with the complex issues that concern this subject area. This paper offers an analysis of various theoretical perspectives and research that may inform the thinking of the project team. It may also provide a framework for other wishing to develop activities on similar themes.

**Key words:** primary, geography, European dimension, thinking skills, intercultural learning, peer learning, assessment.

## **Introduction**

This paper has been prepared to support a team of geography educators about to commence an EU funded project to develop materials for use in European schools. Their project will focus on the use of peer learning techniques to help children and teachers develop their understanding of Europe. It is written from the perspective of an English author with some perception of how English children and teachers may understand the concept of Europe. Part of its purpose is for other team members to challenge these perspectives in order for us to make the most of our funded project by developing ideas and resources that operate at a truly European level and avoid bias from any one nation. For example, the author has a concept of 'citizenship' based on his experience of life in England and perhaps related to the current national curriculum requirements in this subject: they may well be very different to those evolved in other European countries.

## **Theoretical frameworks**

The E-PLIPS project aims to provide new ways of developing learning and teaching in Geography that are relevant to pupils in the 21<sup>st</sup> century within a European context. Much current curriculum is viewed as being a product that children will experience: the content and processes of learning are seen as fact,

not to be contested. This perception is reinforced by text books, school subjects and timetables, national curricula and testing procedures. However, Young (1998) argues that in order to engage, or indeed re-engage pupils in learning, we need to change the nature of the curriculum. A meaningful curriculum is seen as a framework of experience that allows pupils to create it for themselves. They define the boundaries, develop enquiries and decide on approaches to learning. Young implores educators to examine the 'possibilities of change' in order that curriculum as practice becomes the dominant driving force. This is very much the thinking behind the E-PLIPS project and the participants involved and one that we are likely to have to work hard at in order for it to be successfully integrated in national curricula that are still based on the notion of product rather than process. Indeed, the mechanisms through which the project impacts in the partner countries will be an area of our research.

The sociological context of the Geography curriculum in England has been analysed by Morgan (2004). His central argument is that we must place the curriculum within the context of cultural politics. Until very recently geography in England has been tightly controlled by nationalistic processes of content, structure and testing. In order to break out of such approaches we need to develop post-modernist views of the curriculum by more critically understanding the construction and production of knowledge. From this, Morgan suggests that we can enable pupils to create local, situated knowledge in which they begin to develop an understanding that there may be no universal truths: knowledge is fluid and requires constant re-evaluation. This is a very different model to the one currently experienced by English pupils and one that we will have to confront in our project. Indeed, Winter's (1996) analysis of the national curriculum as 'socially constructed discourse' suggests this may be a major issue in some schools when confronting teachers' current perceptions of geography.

At a deeper level, Szczesna and Wojtanowicz (2005) examine ways in which emotional relationships and a sense of identity may be developed through primary school geography. They focus on the idea that children need to experience and immerse themselves in their own region as they become more aware of their own relationship with that place. The concept of a 'little homeland' is seen as a reference point for their understanding of everything else beyond. The E-PLIPS project could provide many opportunities to develop materials that will enable more children to have such experiences, especially as they then share those feeling with other children around Europe. Roberts (2005) reinforces this point by examining just what types of curriculum worlds we enable children to develop, depending on the content and structure of the curriculum. Her research in schools compared various approaches to teaching geography and the way in which much geographical education completely ignores pupil's own experiences



of the world. The E-PLIPS project very much hopes to make their experiences central to learning.

E-PLIPS has a strong focus on Geography of and in Europe and developing pupils perceptions of citizenship through intercultural learning. However, the concept of citizenship is complex and has numerous interpretations across Europe. Kociemba and Banzo (2005) use France as a case study for examining the ways in which teacher emphasis may control pupil's concepts of citizenship. We will require an analysis of citizenship from political and cultural perspectives, education systems, teacher's own experiences and the critical understanding and questioning of the children themselves. Fisher (2004) suggests that it is entirely possible for children to develop such skills through becoming part of a community of enquiry that creates new contexts for moral education. He advocates the use of Socratic approaches by helping children develop systematic and sustained questioning skills. Indeed, the 21<sup>st</sup> century may be a most appropriate time for children to develop skills in reflective thinking as proposed by Dewey (1909/1933), if they are to become active, informed and critical citizens in a rapidly changing world.

### **Spatial understanding and representation**

Spencer and Blades (2006) conclude that children start to gain knowledge of their own country from about five years of age. By eight years old, they are rapidly extending their knowledge of other countries. Mental maps are important structures to help them organise this knowledge. Membership of various social groups affects children's knowledge of other countries (Wiegand 1995). Trends vary within countries: Axia *et al.* (1998) established that levels of world knowledge varied between children in southern and northern Italy. Based on their own research and an analysis of research across Europe, Spencer and Blades (2006) are cautious about any relationship between the children's liking for a country and their knowledge about it. The whole issue of likes and emotional perceptions of other nations is one that E-PLIPS will need to address.

Schmeinck (2005) analyses pupil's perceptions of the world in depth. She demonstrates that there are considerable variations in their perceptions of countries. The sources of such knowledge have also been analysed. However, we will also need to evaluate how we interpret this in order to avoid falling into the notion of pupils being empty vessels on a sea of geographical knowledge: the theoretical perspectives of Young (1998) may help to keep the project on course, as we critically engage with the notion of what geographical understanding of Europe might be.

The affective nature of children's geographical knowledge is drawn out by Ross (2000) who argues that much current geography curricula encourages chil-

dren to develop boundaries between 'them' and 'us'. It does this through the nature of the spatial content and the relationships that are suggested through teaching approaches. The activities of E-PLIPS will need to carefully consider this possibility and also the ways in which teachers might interpret the resulting proposals. An ethnographic approach in which children seek to understand both their world and those of other children may be worth exploring. Schmeinck (2006) develops the notion of boundaries in her analysis of children's mental maps. She divides her data into a set of qualitative categories that reveal interesting perceptions of the world. Our use of maps within project activities will need to draw on these findings to help children interpret the world through mental and drawn images. Once again, we must be aware of our interpretation and understanding of what such images actually tell us about what knowledge, understanding and feelings the children have. The pupil's maps may not tell us everything about their thinking.

Much of the E-PLIPS project will involve the partners in developing materials and learning approaches to enable pupils to engage in intercultural group learning about each others places and their relationships with each other. Storey's (2004) research into children's use and understanding of nested hierarchies may help to inform our exploration of some of the issues raised by Schmeinck (2006). In particular, he suggests that children should be encouraged to discuss their making and use of maps in order to develop their metacognition of the process. Using this idea, perhaps within some philosophical frameworks proposed by Fisher (2004), it may be possible to develop innovative learning approaches.

Wiegand (2006) provides such relevant evidence about the representation of Europe in maps. He discusses the use of various maps projections and how each one affects our view of Europe. Issues such as map centres, scale, size and proportion may all influence children's knowledge of Europe, their place within it and that of children with whom they will be working. Castner (1987) suggests that we need to examine how maps and atlases influence the way in which children visualise complexity and then distil out generalisations about the world. This could provide a foundation for the development of innovative learning experiences within the project.

The E-PLIPS project may offer many opportunities to develop new approaches of how we perceive children's spatial understanding and representation. Kelly (2006) reminds us that children's

geographies should be celebrated as emerging geographic reasoning, as children's attempts at understanding the world rather than them 'getting things wrong'. (Kelly 2006:125)

The underlying nature of the intercultural group learning and peer assessment activities that we develop will need to recognise that we will be starting

from a radically new way of thinking about how children develop their understanding and representation of spatial abilities.

### **Children's worlds**

The E-PLIPS project will involve children around Europe in studying their landscapes and sharing them within an intercultural group learning environment. This will involve them in reading their landscapes. At first glance this appears not to be problematical. However, Muir (2002) proposes that this involves humans in both objective and subjective processes. Part of our work in the project may therefore be to enable children to understand both of these areas of interpretation. More important, may be developing their ability through metacognition to analyse how this works in their thinking about the world. Muir suggests that there may be a further complication. Building on the work of Eibl-Eibesfeldt (1979) in which human perception of national territory was connected with emotions, perceptions and an individual's identity with the homelands, he examines how emotional responses to perceptions may influence a person's sense of identity within a national context. This may have important implications for the types of resources we should develop, both in terms of their content and pedagogy.

Azevedo (2004) focussed this discussion on the understanding of landscapes by researching how primary children developed a sense of place and a perception of the language associated with it. She offers the notion of an 'emergent meaning of cultural landscapes' that we may be able to employ in our thinking as we develop project materials. In this way, it may be possible to help children develop a biography of landscape. Through this evolving landscape experience, they may be able to become more able to understand the objective and subjective ways in which they gradually understand and place values on it. This may be of further use if they can begin to evolve a biography of landscapes of distant places as seen through the eyes of other children.

Landscape perception is a very complex process. Catling (2006) proposes that it may be possible to identify ten geographical worlds children experience in various degrees, as they interact with their experiential and learning environments. The E-PLIPS project team may find that these worlds offer a framework for helping them to understand how the materials developed will provide children with effective and interesting ways of understanding their worlds. Brooks (2004) research of the YoungNet Project where children aged 8 to 14 presented their locality to other European children may also inform E-PLIPS activities. She examined ways in which children shared information and how they selected it. Attempts were made to analyse how they both understood and represented their locality. A focus on how the senses were used in these processes provided further

data. This analysis of representation of place through the senses could offer another dimension to E-PLIPS work on co-operative learning environments.

Some practical considerations

The E-PLIPS project will involve an element of teacher professional development. Central to the children's activities will be communication at a range of levels through a variety of media. Vodopija's (2002) analysis of communication skills offers further insights into how teachers may need to be aware of some underlying mechanisms at work as their classes are involved in the project. By drawing some distinctions between communication in everyday life and communication in education, she identifies a possible issue for E-PLIPS as the extent to which the children will use either one or a mixture of these approaches. Linguistic and communicational competences will also need to be addressed if the project participants are to fully understand and develop the peer assessment methods advocated in our project.

Beneker, Paul and van der Vaart (2005) examined the benefits of having students from a range of European countries together in university geography sessions. While many of their findings cannot be transferred to primary education, they do express concern that when young people from various countries are able to work together, a 'European average style' can emerge. This may be seen in non-verbal communication, language, methods of communication and content. They advocate approaches to learning that enable and actively encourage young people to retain their nation's values and ways of doing things in order to preserve a sense of national identity and cultural diversity within Europe. They argue that this is one of the strengths of the European Union. These thoughts are echoed by Baylina and Prats (2005) in their analysis of precisely what Europe is taught in university geography courses around the Union. We will need to regularly stand back to see just what Europe is being experienced by project children.

Mentz (2005) expresses concern that English is becoming the dominant language in education across Europe and that a form of 'conquest by language' could be taking place. His suggestion that we may be able to develop forms of geographical enquiry without the use of language may be worth investigating but this raises issues about the effectiveness of intercultural exchange. He offers useful insights into the nature of culture through a social and anthropological approaches and encourages us to ask the extent to which a common European culture exists. This is contrasted with the notion that perhaps a European culture should not exhibit one form, but rather its strength may lie in it actually being a 'celebration of diversity'. These might become crucial ideas with which to grapple as we attempt to develop primary children's understanding of Europe.

## Conclusion

This paper offers some English-European perspectives on how recent theoretical developments and research in geographical education may inform the E-PLIPS project. The project aims are ambitious and far-reaching. However, those involved will need to be careful at all times to guarantee that old notions of teaching the European Dimension are reproduced by assuming that intercultural group learning and peer assessment will guarantee success. Children will need to experience real empowerment through their learning if they are to develop concepts of being valued, active and respected members of a European community.

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