

COGNITIVE AND APPLICATION ASPECTS IN THE BILINGUAL TEACHING OF GEOGRAPHY ¹

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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, interculturalism

Introduction

Education, which is an idea underlying the operation of Europe today, is the most important domain leading to a higher level of literacy of society and a knowledge-based economy (Tarkowski, 2003). Hence, we can observe constant advances in education, culture and science. An important place in this development is assigned to 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 the geographical space. It focuses on describing and elucidating the relations and interactions holding among the particular elements of animate and inanimate nature as well as between those elements and human activity.

Another phenomenon highly relevant to geography is the linguistic diversity occurring in the geographical space. Today it is estimated that 53% of Europe is practically bilingual

¹ Piotrowska, I. 2007. Cognitive and application aspects in the bilingual teaching of geography. [in]: K. Donert, P. Charzyński, Z. Podgórski (red.), Geography in European higher education. Teaching Geography in and about Europe. Herodot Network & Association of Polish Adult Educators, Liverpool-Toruń, 4: 50-57.

(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 its 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, 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 school year 1991/1992. 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 were agreements signed by the Polish Ministry of National Education and proper institutions in the 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 (Multańska, 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 (Fig. 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 (Multańska, 2002)

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 is to help 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 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.

The awareness of the diversity of the geographical environment and its attractiveness may further 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 an Higher Secondary School No 1 in Poznań. A survey research 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 of pupils engaged in bilingual education, one can still observe a very great interest in this type of schools. 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) foreign 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.

Conclusions

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, 2006), 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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