

Foreword

All the work presented in this monograph is the outcome of a twelve-year cooperation between two departments of the Faculty of Education, Charles University in Prague, Czech Republic: Department of Mathematics and Mathematical Education, represented by Jarmila Novotná, and Department of English Language and Literature, represented by Marie Hofmannová.

The authors first met to participate in a Socrates Lingua A project *TIE-CLIL – Translanguage in Europe, Content and Language Integrated Learning* (1998-2001, project reference: 56287-CP-1-98-1-IT-LINGUA-LA). Three other European projects followed: *LOSST-IN-MATH – LOwer Secondary School Teacher Training IN MATHematics* (2003-2006, project reference: 112318-CP-1-2003-1-IT-COMENIUS-C21), *CLIL across Contexts: A scaffolding framework for CLIL teacher education* (2006-2009, project reference 128751-CP-1-2006-1-LUCOMENIUS-C21), and *MA²ThE TE AMO – Making MATHematics TEAchers Mobile* (2006-2009, project reference: 129543-CP-1-2006-1-ITCOMENIUS-C21).

Content and Language Integrated Learning (CLIL) is the central theme of the monograph. It refers to any learning context in which content and language are integrated in order to fulfill specified educational aims (Marsh, Langé, 1999)¹.

The monograph strives to present CLIL from different perspectives based on the areas of experimentation within the European context: content subjects, foreign languages as the means of instruction, types of schools. It links theories and findings from diverse research areas related to CLIL methodology: didactics of mathematics, methodology of teaching English as a foreign language, theories of Second Language Acquisition, bilingual education, and psychology.

The research presented herein focused mainly on the implementation of CLIL. All the experiments were piloted at lower and upper secondary schools in the Czech Republic. Mathematics was studied as the content subject in the conditions where the English language was used as the means of instruction. As both authors are teacher trainers in their respective fields, the development of CLIL in the university teacher training educational environment became the natural consequence of our common effort. Parallel to the research areas, a course for both pre- and in-service CLIL teacher education was developed, and attended in the twelve years of its existence by large numbers of participants from several European countries. Depending on their future qualifications the content matter was later extended by other non-language subjects, e.g. history, social studies, music, physical education, chemistry; and also by other foreign languages which were used as the means of instruction, e.g. German, French, and Russian.

The present publication comprises five main sections. Its individual chapters illustrate Czech participation in the development of CLIL since 1998. They correspond with the areas of interest of the above mentioned projects and further develop some of them in accordance with the local educational needs. The texts were presented in the form of articles at scientific conferences and in scientific journals.

The first article in the introductory section is of a more general nature and illustrates the authors' first encounter with CLIL. The second text introduces the theoretical background related to foreign language learning and acquisition.

The second section contains three articles dealing with methodology issues aimed at CLIL practitioners: such as advice how to work with textbooks and teaching materials, suggestions for classroom activities, or examples of learning strategies.

The third section deals with assessment and evaluation within the CLIL educational framework. It is a complex issue aiming at the integration of two different curriculum subjects with different approaches towards assessment. The improvement of classroom assessment is a very important factor in improving students' achievement. A more thorough understanding of what learners know results in a better informed instructional decision making. It is important for both researchers and CLIL teachers to uncover the main causes of learners' difficulties.

¹ Marsh, D., Langé, G. (Eds.) (1999). *Implementing Content and Language Integrated Learning*. Jyväskylä, Finland: Continuing Education Centre, University of Jyväskylä.

The origins of the articles grouped in the fourth section date back to the early years of CLIL development in the Czech Republic. They deal with psychological issues, i.e. the attitudes of teachers and learners to the new educational trend.

The closing section concerns curriculum development and deals with a teacher training course at Charles University in Prague, Faculty of Education. The course which has been running since 1999/2000 has been attended by students pursuing different study programmes: Training Teachers of General Subjects at Lower and Higher Secondary Schools (usually two-subject qualification), and Primary Education, both for Master's degree.

1. Introduction

1.1. CLIL and mathematics education²

All over the world the past decades are associated with two very important changes: establishment of global network of communication and globalisation of all social, political, economic and ecological processes. These as well as other changes have had strong impact on various aspects of our everyday lives. In Europe, the 1990s in education can be characterised by the renewed and increased interest in foreign language teaching methodologies due to European socio-economic integration and globalisation. The new trends that have drawn from both European and overseas tradition lead towards using a foreign or a second language as a means of instruction.

Bilingualism constitutes the presence of at least two languages within one and the same speaker. *Primary bilingualism* describes situations where a child picks up the two languages at the same time whereas *secondary bilingualism* refers to cases where the mother tongue is acquired first and the second language later. Within secondary bilingualism there are many subtypes with regard to the degree of competence, ability or level of proficiency.

In 1990 Lingua (DG XXII) was launched and the following years were marked by increasing frequency of articles published on research and practice. In 1995 the European Commission adopted a document on education named „Teaching and learning. Towards the learning society.” It declares proficiency in three Community languages as a prior objective, and suggests, in a list of methods, teaching content in a foreign language as a way to contribute to achieving this objective called *plurilingualism*.

Content and language integrated learning (CLIL) is a broad expression used to refer to any teaching of a non-language subject through the medium of a second or foreign language (L2). CLIL suggests equilibrium between content and language learning. The non-language content is developed through the L2 and the L2 is developed through the non-language content.

Events concerning CLIL are innumerable, e.g. the Council of Europe Workshop 12 B entitled „Learning and Teaching Non-language Subjects through a Foreign Language“, the publication of three books: „Aspects of Implementing CLIL“, „Future Scenarios in Content and Language Integrated Learning“ and „CLIL Initiatives for the Millenium“. CLIL Consortium was founded in 1999. Growing interest in CLIL is envisaged as the year 2001 was declared European Year of Languages.

² Novotná, J. & Hofmannová, M. (2000). CLIL and mathematics education. In: *Mathematics for Living: The Mathematics Education Into the 21st Century Project* (pp. 226-230). Amman, Jordan.