

The language of schooling and language requirements in mathematics and history

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Report on the ECML project:

***Language descriptors for migrant and minority
learners' success in compulsory education***

2012-2013

<http://www.ecml.at/F6/tabid/696/language/en-GB/Default.aspx>

Project group

Project hosted by the European Centre for Modern Languages,
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Overview of presentation

- Introduction
- Aim
- Method
- Results

Focus

What level of language competence do migrant/minority pupils need in order to succeed in compulsory schooling?

Subjects: History/civics and mathematics

Age groups: 12/13 and 15/16 year old pupils

Aim

- to indicate one or several levels of language competence that young migrant or minority learners need to have in the language of schooling in order to do well in mathematics and history/civics
- to raise an awareness of the challenges young language learners meet when learning subject matter contents by means of a language, which is not their first language.

Method 1

What did we do? – Stage 1

- Develop descriptors for *listening, reading, speaking* and *writing* for history/civics and mathematics (A2 – B2/C1)
- Input from
 - The CEFR
 - Council of Europe/ECML docs on the language of schooling (Vollmer, Beacco, Linneweber-Lammerskitten and Thurmann , Hasselgreen)
 - Subject matter curriculum aims (Norway /Finland)
 - Teachers and teacher trainers of history/civics and mathematics

Results 1

What did we develop?

- 163 descriptors targeted at levels A2-B2/C1
- Listening (6 functions – 25 descriptors) – A2 – C1
- Reading (6 functions – 26 descriptors) – A2 – C1
- Speaking (15 functions - 63) – A2 – B2
- Writing (12 functions – 49 descriptors) – A2 – B2

Reading functions

Understand factual information and explanations (6)

Understand instructions and directions (4)

Understand opinions (4)

Understand arguments and reasoning (5)

Find and localise information (3)

Read and analyse graphically represented information in tables, graphs, maps, charts, symbols, as well as photographs, paintings and drawings (4)

Interact in teamwork – example of speaking descriptors

CEFR level	Descriptor
B2	Can contribute to a project work by reporting and explaining detailed information on topics that he/she finds interesting.
B2	Can help organise the work, give feedback to team members and suggest how to proceed the work.
B1	Can help to solve practical problems that arise, e.g. while working on a project, explain her/his opinion and ask for classmates' views.
A2	Can ask and answer simple questions on subject topics that s/he knows well.

Method 2

What did we do? – Stage 2

Validation of descriptors

- Online questionnaire sent out to CEFR experts, each expert assigning 163 descriptors to CEFR levels (A1 – C2)
- In the questionnaire the descriptors were presented skill by skill, but within each skill functions and levels were jumbled
- Used *mode* to determine the experts' aggregated assignments

Results 2

What did we come up with? Stage 2

- 177 CEFR experts from 16 countries assigned 163 descriptors to CEFR levels
- Surprisingly high agreement between project team and the CEFR experts' assignment of descriptors – disagreed on 6 descriptors

Method 3

What did we do? – Stage 3

Online questionnaire to teachers and teacher trainers of history/civics and mathematics

- Respondents ticked off a subject (history or maths) and an age group (12/13 or 15/16 year old pupils)
- Respondents answered *yes/no* to whether the relevant age group needed the competence expressed in each descriptor to be successful in the particular subject, for instance:

Method 3*Understanding instructions and tasks in teaching materials (Reading)*

In order to do well in this subject, should the pupil be able to

1	understand in detail lengthy, complex instructions in an area of specialty? (C1) Answer: <i>yes/no</i>
3	understand simple routine instructions/tasks in teaching materials? (A2) Answer: <i>yes/no</i>
3	understand lengthy, complex instructions/ tasks in teaching materials, also when it involves several steps? (B2) Answer: <i>yes/no</i>
4	understand clearly written straightforward instructions/tasks in teaching materials? (B1) Answer: <i>yes/no</i>

Method 3

Deciding on levels

When deciding on a CEFR level for a language function and subject / age group, at least two thirds of the teachers (67%) would have to agree.

A transition phase from one level to another, for instance B1 – B2, when:

- more than two thirds of the teachers agree on one level, and more than 60% agree on the next
- when there are two or more descriptors describing a function and level, and the teachers (at least two thirds) say that the students need the competence some of these descriptors

express, but not all. See next slide.

Results3

Required levels

	History teachers saying yes (to two listening functions)			
Function	<i>Understand arguments and reasoning</i>		<i>Follow subject related conversations and discussions</i>	
	12/13	15/16	12/13	15/16
C1	11.3%	25,7%	9.4	21.6
B2	13.2%	62.5%	30.9%	67%
B1	86.8%	98.6	81.1%	94,6%
A2	92,5%	93%	96.2%	94.6%

B1

B1-B2

B1

B2

Results3

Overall results – history/civics

	12/13	15/16
Listening (6 functions)	B1 (6)	B2 (5) B1-B2 (1)
Reading (6 functions)	B1 (6)	B2 (5) B1 (1)
Speaking (15 functions)	B1 (13) A2-B1 (2)	B2 (11) B1-B2 (3) B1 (1)
Writing (12 functions)	B1 (10) A2-B1 (1) A2 (1)	B2 (7) B1-B2 (1) B1 (4)

Results3

Overall results - mathematics

	12/13	15/16
Listening (6 functions)	B1 (5) A2-B1 (1)	B2 (5) B1-B2 (1)
Reading (6 functions)	B1 (4) A2-B1 (1) Not relevant? (1)	C1 (1) B2 (3) B1 (1) Not relevant? (1)
Speaking (15 functions)	B1 (13) A2-B1 (2)	B2 (10) B1-B2 (5)
Writing (12 functions)	B1-B2 (1) B1 (6) A2 (2) Not relevant? (3)	B2 (7) A2-B1 (1) A2 (1) Not relevant? (3)

Results3

Not relevant functions?

	History	Mathematics
Reading		Understand opinions
Writing	Express arguments, prove Take notes	Express opinions, discuss Take notes Summarise

Results3

Overall findings

	History/civics	Mathematics
12/13 year old pupils	B1	B1
15/16 year old pupils	B2 (or «approaching B2»- for some functions)	B2 (or «approaching B2» for some functions)

The future

How can such descriptors be used?

By teachers

- to raise awareness of the language-related aspects of various school subjects
- to determine language objectives for lessons
- to use as formative assessment criteria
- to use as self-assessment criteria for students

By researchers/ teacher trainers / teachers – a starting point for

- developing descriptors for other subjects and age groups
- developing teaching materials