

## They learn the CLIL way, but do they like it? Affectivity and cognition in upper-primary CLIL classes

### What this research was about and why it is important

This study examined the reactions of Polish upper-primary school children aged 10-11 to their maths and science classes taught in English with the CLIL approach (Content and Language Integrated Learning). CLIL is a teaching framework, in which learners learn a foreign language together with content-subjects presented in that language. The research focused on children's affective sphere (feelings) and their cognitive (mental) abilities during CLIL maths and science lessons. Research in psychology shows that learners' intellectual gains may be related to their affectivity, that is feelings and emotions. Children learn best when experiencing positive emotions, but negative emotions may hamper their cognitive processing essential for problem-solving. Such negative emotions among children in CLIL programmes may be caused by ill-managed classes and inadequate materials that are too difficult in terms of content or language. If the language of the classroom activities is too difficult, the child can experience 'proficiency gap', which means that his/her level of foreign language is too low to handle the task at hand. Further, if a child continually fails to cope with some tasks, he/she may experience cognitive demobilization, a state called intellectual helplessness (Sędek & McIntosh, 1998). In the study, we checked to what extent young learners feel helpless in their CLIL classes, as well as explored the sources of their cognitive demobilization experienced in CLIL. We searched for the links between the children's emotions and their potential to experience the state of intellectual helplessness. Also, we wanted to verify if children's negative emotions in CLIL could disadvantage their learning of content and language.

### What the researchers did

- The researchers gathered data from 140 Polish children attending the same primary school and learning maths and science in L2 English. They wanted to explore links between children's affectivity and cognition.
- The children answered open-ended questions about their feelings, likes and dislikes concerning their CLIL lessons. They knew that whatever they wrote would be anonymous, so they were really frank in their answers.
- Moreover, the children completed another anonymous survey, that is the intellectual helplessness questionnaire (Sędek, 1995) – separately for maths and science.
- Through the open ended questions the researchers wanted to investigate their affective state and through the questionnaire the symptoms of cognitive demobilization (inability to actively solve problems).
- The researchers also obtained children's term grades in maths, science and English to investigate relationships between children's achievements in the subjects and their emotions evoked by the CLIL modules.

### What the researchers found

- The study revealed that some young CLIL learners experienced symptoms of intellectual helplessness. Also a lot of them experienced negative feelings towards their CLIL classes.
- From the children's answers to the open-ended questions, the researchers derived a measure of positive and negative attitudes towards CLIL. When compared, the negative feelings prevailed, and a lot of children complained about the level of English which was too high for them.
- The researchers wanted to find out which factors were related to the observed symptoms of intellectual helplessness experienced by some children. To do so, they used a statistical method - the regression analysis.
- Surprisingly, children's grades in English did not significantly predict children's intellectual helplessness in CLIL. The significant predictors were grades in science and maths, but also negative feelings towards English used in CLIL classes.

### Things to consider

This study provides evidence that proficiency in English taught during general language classes may not be enough to learn a difficult content subject, such as maths or science, in English. It is worth remembering that during general English classes children learn language for everyday communication. The English language of maths and science classes is more academic, more decontextualized and much more difficult. This may evoke proficiency gap, leading to negative feelings, and intellectual helplessness. This also means that children in CLIL classes need from their teachers a lot of support, both intellectual, linguistic and psychological.

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