

Research Project

Content and Language Integrated Learning (CLIL) in a Swiss Context: The Linguistic Challenges and Implications of Teaching Biology in English (CLIL) and German (non-CLIL) analyzed through the Lens of Translanguaging and Technicality

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Over the last two decades, Content and Language Integrated Learning (CLIL) programs, where a content subject is taught in an additional language, have become increasingly popular, and Switzerland is no exception. Due to its plurilingual landscape and its decentralized education system, Switzerland offers a particularly diverse context for the study of CLIL, which, compared to other European countries, is not that advanced yet. Therefore, this thesis investigates, in an extensive case study, the linguistic requirements for students and teachers in CLIL (English) and non-CLIL (German) biology lessons at a Swiss upper-secondary school (*Gymnasium*). In a self-collected corpus (EG_BIO corpus) consisting of 31 video-recorded CLIL and non-CLIL biology lessons, two particularly relevant aspects are analyzed using a mixed-methods approach: the use of multilingual and -modal resources (translanguaging) and the role of technical terms (technicality) in the classroom. Since biology lessons in Switzerland offer a highly multilingual environment, students' and teachers' L1s (Swiss German/ other L1s), the languages of instruction (German or English), as well as the source languages of technical terms (Greek and Latin) - the present study examines the use and frequency of translanguaging practices in CLIL and non-CLIL biology lessons. Translanguaging has often been investigated using qualitative measures, therefore the study proposes a model to operationalize translanguaging for quantitative analysis (research focus 1). Since science subjects such as biology are often marked by a high density of technical terms, the study further investigates the complicated relationship between English and German technical vocabulary as used in biology, again by proposing a model to identify and analyze technical terms from various perspectives (research focus 2). Finally, the present study connects the two previous analyses and explores the connection between translanguaging and technicality, and investigates how multilingual and -modal resources are used to negotiate technical terms (research focus 3).

Findings show that translanguaging practices and technical terms are used in complex and diverse ways in CLIL and non-CLIL biology lessons. Translanguaging practices are rare in both CLIL and non-CLIL biology lessons, while technical vocabulary makes up roughly a tenth of the classroom discourse. Particularly translanguaging with source languages, a strategy used by one of the teachers to negotiate subject-specific terminology, seems to be a potentially successful pedagogy in science teaching, even more so in CLIL science lessons. Overall, the process-oriented comparative study shows how language and content are closely intertwined at the level of translanguaging and technicality, and thus contributes to a further our understanding how language and content work in integration in CLIL and non-CLIL biology lessons.

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4511639, Bieri, Aline, Technicality and translanguaging in CLIL biology lessons in Switzerland, 1023-2044, Bulletin suisse de linguistique appliquée, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

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