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TITLE: The Joint Action Theory in Didactics' notions of jargon and thought style: exploring the organic relationship between language and practice in a CLIL programme

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Abstract (300 words)

This thesis investigates the specific conditions of a Content and Language Integrated Learning (CLIL) sequence in an undergraduate science programme. Using the Joint Action Theory in Didactics' (JATD) clinical approach, a sequence based on uncertainty in measurement is analysed in detail in order to investigate the didactic activity produced in class in relation to the epistemic potential inherent in the sequence.

Wittgenstein's conception of the nature of language is the view of language adopted in the study: language is seen as being composed of language games within forms of life which produce certain *thought styles* (Sensevy, 2019; Fleck, 1935/2008) together with an associated *jargon* (Sensevy et al. 2019). The notion of jargon can be understood as a system of expressions specific to a given cultural practice; it both produces and is produced by that same cultural practice and its accompanying thought style (Sensevy et al. 2019).

The CLIL programme in question was designed to generate a form of life in physics based on the issue of uncertainty in measurement. This paper will present analyses of classroom interactions where students are seen to explore the *jargon* and *thought style* intrinsic to this aspect of experimental science (Bloor & Gruson; 2019, Bloor, 2020).

The study proposes the JATD framework for both the analysis and design of language learning environments where language can be seen to be organically linked to the practice in which it is embedded (Collins, 2011). It concludes by identifying the specific conditions of the CLIL sequence investigated.

Key Words: Language Didactics, Joint Action Theory in Didactics, Jargon, Thought Style, Clinical Approach, uncertainty in measurement

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Extended summary (1000 words, excluding reference list) introduction, theoretical background, methods, preliminary findings/findings, results, reference list.

This thesis is based on the premise that language has meaning in context, that is to say a cultural context. This means that for language learning to occur, the target language must be encountered and developed within a context that would give it meaning. To that end, a challenging, intensive CLIL programme was developed based on the scientific culture of measurement. The hypothesis underlying the study was that in exploring the language and practice related to this field, students would develop useful habits (Dewey, 1938/1997) for successful future language learning experiences.

In this study, the details and impact of a Content and Language Integrated Learning programme are investigated. Students participating were presented a range of situations that were orchestrated in such a way as to ensure that they would be constrained to explore, collaboratively, various learning situations in the *jargon* and *thought style* of a scientific practice. This was based on the hypothesis that in the effort to master a social game based on scientific practice, they would develop the necessary language resources to succeed in that social game as well as a culture of language learning. To that end, multiple activities were designed which provided opportunities for students to co-construct meaning in English whilst acquiring the *jargon* and *thought style* of the practice of measurement.

Classroom practice is complex: how and where learning occurs in a classroom environment is not easy to determine. Learning a language is equally complex: the kinds of classroom learning environments that might be conducive to effective language learning is a question of considerable scope. Any attempt to address these challenging, multifaceted issues must entail correspondingly challenging, multifaceted answers. A starting point, which the Joint Action Theory in Didactics framework assumes as a given, is that a scientific investigation of such questions begins with empirical reality: that is to say, close inspection of what is actually happening in classrooms in relation to the knowledge taught.

To this end, the JATD descriptive notions offered the means to finely describe classroom practice vis-à-vis the given body of knowledge.

The notions of *jargon* and *thought style* were particularly important as a means of gauging the validity and the distance of student claims in relation to the knowledge at stake. That is to say they situated classroom practice in relation to its epistemic and epistemological context. They also served to highlight the common thread weaving together the different activities throughout the programme. They thus promise to be useful tools for elaborating future CLIL projects. This would entail devising activities to construct the jargon of a particular cultural practice whilst simultaneously situating that jargon within the context of its corresponding thought style. In this way, the language activities of a CLIL programme would be sure to be linked to the body of knowledge to which that jargon contributed and from which it emerged.

The study identified a number of necessary conditions for a CLIL programme of this type which are presented succinctly below.

- (i) Sufficient epistemic potential for an inquiry-based learning environment
- (ii) Cooperative development between language teachers and specialists of a given field

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(iii) The introduction of jargon within the context of its practice

(iv) The condition of jargon being encountered in its dialogical form

(v) Orchestrated situations allowing for the exploration of semiotic systems (which can be considered as necessary to a language learning environment).

(vi) A shared background in didactic activities (e.g. the shared situational background of a cooperative roleplay).

(vii) Student-originator productions with a maximum of opportunity to develop L2 skills (in exploring jargon and thought style)

(viii) Teacher interactions and learning situations based on an adequately assessed zone of proximal development (Vygotsky, .

(ix) Student confidence to engage in epistemic commitments

Discussion and Future Research

This study hopes to contribute to future CLIL research in a number of ways. First, by illustrating how the theoretical and methodological JATD framework can be an effective tool for analysing CLIL practice. In particular, the notions of jargon and thought style promise to be a useful means of ensuring that the essential elements of a CLIL programme are included in its design, whatever the domain explored. It remains for this conclusion to be tested in future programmes of this type.

Second, there are a number of questions arising from the results of the study which could be interrogated further. On a micro level, there is the scope to further hone didactic resources to enable students to fine-tune their L2 skills. For example, students' written expression and the finer grammatical points encountered in the writing of the laboratory report.

On a macro level, the didactic content could be widened in scope in order to better include the objectives of the specialist subject. The mathematical, technical aspects of uncertainty in measurement could not be fully explored and integrated into this sequence. How might this aspect of physics practice be better included in a CLIL programme, without making the error of ignoring the language needs of the class? A related question is how CLIL programmes might seek to integrate jargon which is more closely-fit to specialists' practice, and whether this more closely-fit jargon might then contribute to understanding that practice. The sequence thus has the potential to explore the more epistemological concerns regarding the nature of scientific practice itself (Buffler et al., 2009; Cartwright, N. 1999; Hacking, I. 1983; Sensevy, G. 2008).

References

- Bloor, T. (2019). Signs of Thought Styles: The Gestures and Objects of Jargon
https://tacd2019.sciencesconf.org/data/ACTES_Session4_Congres_TACD_Rennes_2019.pdf
- Bloor, T & Gruson, B. (2019). Agir dans et avec l'anglais pour travailler une notion en physique à l'université. Didactique Pour Enseigner. Presses Universitaires Rennes, 2019
- Bloor, T. (2020). Travail coopératif entre une enseignante-chercheuse de physique et une professeure d'anglais dans le secteur LANSAD (LANGues pour les Spécialistes d'Autres Disciplines) : une étude clinique en TACD menée dans le cadre d'un projet CLIL (Content and Language Integrated Learning). Thèse, 2020

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Buffler, A., Lubben, F., & Ibrahim, B. (2009). The Relationship between Students' Views of the Nature of Science and their Views of the Nature of Scientific Measurement. *International Journal of Science Education*, 31(9), 1137–1156. <https://doi.org/10.1080/09500690802189807>

Cartwright, N. (1999). *The dappled world: A study of the boundaries of science*. Cambridge University Press.

Collins, H. (2011). Language and Practice. *Social Studies of Science*, Vol. 41, No. 2 (April 2011), pp. 271-300

Dewey, J. (1997) *Experience and Education*. The Kappa Delta Pi Lecture Series. Simon & Schuster (originally published 1938)

Fleck, L. (1935/1979). *Genesis and development of a scientific fact* (F. Bradley & T. J. Trenn, Trans.). Chicago: The University of Chicago Press.

Hacking, I. (1983). *Representing and intervening: Introductory topics in the philosophy of natural science*. Cambridge University Press.

Sensevy, G., Tiberghien, A., Santini, J., Laubé, S., & Griggs, P. (2008a). An epistemological approach to modeling: Cases studies and implications for science teaching. *Science Education*, 92(3), 424–446. <https://doi.org/10.1002/sce.20268>

Sensevy, G. (2011). *Le sens du savoir. Éléments pour une théorie de l'action conjointe en didactique*. Bruxelles : De Boeck.

Wittgenstein, Ludwig *Philosophical investigations*. Blackwell, 2009.

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