Learning Contextualized Language: Implications for Tertiary Foreign-medium Education

Heini-marja Jarvinen

Professor, Department of Foreign Language Education, University of Helsinki, Finland

Introduction

There are numerous models and definitions of bilingual education all over the world ranging from the relatively rigid Canadian immersion models to models in which the use of two languages in teaching content is the only feature characteristic of bilingual education. In spite of this multitude, lack of clear, research-based definitions is obvious. Some of the definitions of CLIL are as follows (bolds are mine).

> *(1) Content and language integrated learning (CLIL) is a **generic** term and refers to **any educational situation** in which an additional language and therefore not the most widely used language of the environment **is used for** the **teaching** and **learning** of subjects other than the language itself (Marsh & Langé 2000, iii)*

> *(2) It is an educational approach in which **languages** and skills of **communication** are given a **prominent role** within a curriculum. It is often carried out by professionals who teach on courses other than languages. (Marsh et al. 2001).*

> *(3) CLIL is a multifaceted approach which is implemented to reach **specific outcomes** which enhance the **learning of field specific education alongside**. (Marsh et al. 2001).*

It appears from the definitions above that CLIL is indeed a "multifaceted approach" that can be used in any educational situations with varying foci depending on the mutual emphasis of content and language. Definition (3) is probably the most general and the most problematic one for someone who is keen on finding accurate definitions for phenomena, such as CLIL. One may ask what is meant by "specific outcomes which enhance the learning of field specific education alongside"? Furthermore, what is meant by "integrated" in "content and language integrated" How are "content" and "language" to be defined as part of CLIL?

To the best of my knowledge, there are no clear-cut answers to the above questions, especially if they are asked in the context of tertiary education. At the practical level and in the context of primary and secondary education, where the central role of national and local

curricula is acknowledged, some of these questions get their answers from the curricula. In general, the content to be taught and learnt largely determines the language to be used. At the theoretical level and in terms of learning language and content, there are a number of issues that have not been answered adequately. In addition to the key question, i.e., why language learning as part of content learning is effective, there are other, related questions. One of them is the relation of content and language. How are content and language related and does this have an effect on the learning of language or content or both? In other words, what does "integrated" refer to (in content and language integrated learning)? Does it refer to the vehicular role of the foreign language, a *lingua franca* (Holdsworth 2004: 24) used in the delivery of 'authentic' content? Or does it refer to the teaching of simplified, perhaps "watered down" content through a language matching the learners' current level of language learning? Or does it refer to focusing on content-specific knowledge hierarchies, related thinking skills and corresponding language skills? Or does it refer to some other combination of content and language?

The above questions are important and timely for increased awareness of foreign-medium teaching and in particular, the role of learning in foreign–medium teaching. There are numerous approaches, such as Language for Specific Purposes, Content-Based Instruction, Content-Based Language Teaching, immersion teaching and CLIL, but it is difficult to make a distinction between these approaches in terms of learning outcomes. For example, CLIL with its double learning outcome of content and language is not a typical model of language-medium teaching in tertiary education. Instead, foreign-medium content teaching in higher education tends to refer to teaching with content learning objectives. This means that the language of instruction has a more or less vehicular role and there are no explicit language learning goals. This type of foreign-medium teaching is the starting point of the present paper. The purpose of the rest of this paper is to discuss the possibilities of content teaching as inducing (implicit) language learning.

Content and Language Integrated Learning (CLIL), Content-Based Instruction (CBI) and Language for Specific Purposes (LSP)

CLIL is a European educational model and a relatively new approach to learning and teaching of language and content, although learning content through a foreign language is nothing new as such and many forms of language-medium instruction or bilingual education, such as immersion and content-based instruction have been around for decades.

Another, more fruitful, source for useful applications for Finnish CLIL implementations for higher education is to be found in different forms of content-based instruction, which is a form of language and content instruction targeted at immigrant speakers of languages other than (American) English in the United States. The literature is ample, and it involves research as well as instructional models and teaching materials. The definition of comes close to that of CLIL: "Content-based language instruction (CBI) refers to the integration of school or academic content with language-teaching objectives" (Wesche & Skehan 2002, 220).

According to Wesche and Skehan (2002, 221), all programmes of content-based language teaching share the same contextual and pedagogical features. In higher professional education, the teaching of professional language skills, known as Language for Specific Purposes (LSP), has added an explicit emphasis on formal language skills. The common features are as follows:

- The premise that learners in some sense receive "two for one", that is, content knowledge and increased language proficiency.
- A language curriculum in which expository texts and discourse are central.
- Orientation into a new culture or "discourse community" (e.g. an institution providing higher education).
- Adaptation of language input, interactional moves, and context to accommodate learners' limited language proficiency.
- Focus on academic language proficiency. (Wesche and Skehan 2002, 221)

It seems that there are very few differences between CLIL and CBI that would matter at the level of implementation. I will use both terms to refer to the instruction that combines the teaching and learning of content and language.

Table 1 compares two approaches to content-based instruction in terms of the role of context, interaction and learning. For the clarity of presentation only, these views have been titled as *traditional* and *environmentalist* views.

Table 1. Two views on context, interaction and learning of language and conceptual content in CLIL.

Traditional view	Environmentalist view
Context is the source of input. Language learning is receiving comprehensible input (Krashen). Challenging spoken and written output may be necessary for further development of language proficiency (Swain).	Context is the source of language learning (ecological theory, the sociocognitive approach). Usage-based language learning (Robinson & Ellis, Larsen-Freeman)
Interaction is negotiating meaning & form Appropriate questions (referential questions cause more interaction than direct questions, (Shomoossi, 2004: 99) and feedback (extended IRF, elicitation, recasts, Lyster) promote interaction.	Interaction takes place on many levels: dynamic (sub) systems (DST), learner and context. Interaction in the zone of proximal (ZPD) development results in internalization (=learning) (Vygotsky)
Thinking skills & related language (Mohan), content-specific discourses (ESP) Content-specific language (concepts) is necessary for content learning (CALP, Cummins). Scaffolding (Bruner) is used to add support (context) to conceptual, context-free objects of learning.	In adult learning, when there are no maturational stages, *scientific concept learning* is the starting point, then these internalized concepts are used to form new ZPDs at a practical level. (Vygotsky)

The 'traditional' view is mainly based on research and models of immersion language learning and teaching, constructivism, and language learning theories, such as Krashen's and Swain's theories. The environmentalist perspective to learning has its starting point in the context and the interaction of an organism with the context in

which it finds itself. Sometimes this interaction is necessary for the survival of the organism. In language learning, the mutual relation of context and the individual's mental faculties varies from one approach to another, but in all of them, context is primary and the individual's mental resources a secondary source of learning.

Why an ecological perspective?

As mentioned above, CLIL as well as content-based language teaching (CBLT) lacks a coherent theoretical framework, which among other things would specify what *language*, *content* and *integrated* (Holdsworth 2004) mean in the context of content and integrated learning, and in particular, what – if any – specific features *learning* in such a context has, and where the added value comes from that results in the form of enhanced language and content learning. Part of the answer is likely to consist in the ample time-on-task that long-term CLIL programmes offer compared to conventional language teaching. Another part may be due to the rich input and affordances that are available to the learner in this environment. Context has an important role in content and language integrated learning, and even more so in the non-mainstream approaches to language learning, such as the sociocultural view, which is heavily influenced by neo-Vygotskian ideas of learning as a primarily social (and secondarily mental and individual) phenomenon (e.g. Kozulin et al. 2003). In this view, content and context are seen as closely related even so that content can only be understood in context, where it receives its full meaning. In line with the sociocultural and sociocognitive approaches on language learning (see also Bruner 1996), what we know of as CLIL, content and language integrated learning, is here viewed from the ecological perspective. CLIL might in this context perhaps serve as an acronym for *Context* and Language Integrated Learning. Below, I will first look at input and affordances and discuss these concepts in more detail (cf. Table 1 above). I will then move on to discussing the ecological perspective to content and language integrated learning.

Input vs. Affordances

Comprehensible input refers to language input that is targeted at the learner's current level of language proficiency (i) but contains an element (+1) that exceeds this level (i+1), involving potential for further language learning. The concept of comprehensible input is part of Krashen's Input Hypothesis, a theory of SLA, which in spite of substantial criticism has been and still is widely referred to in so called naturalistic approaches to language, such as immersion and more recently, CLIL. This is understandable, as naturalistic language learning, by definition, takes place in contexts where ample ambient input is available. The influence of input + 1 on language acquisition is less clear, however. It seems that comprehensible input may suffice for language comprehension to develop, but it is not enough for error-free, native-like language production to emerge.

The role of input is viewed from a different angle in recent non-mainstream views of language use, such as sociocognitivism. As a matter of fact, the terms 'input' and 'acquisition', for example, are seen as reflections of a metaphor of language as an endowed capacity, regulated by a language acquisition device, existing in the form of relatively stable, passive 'input', which is picked up and internalized by the language user and stored in the form of abstract rules for later language use. In stark contrast is Atkinson's (2002: 535) view of (linguistic) knowledge organized in the form of "actional wholes", which means that language is embodied in the carrying out of action in the world. According to Atkinson, it is not possible that such knowledge could develop via decontextualized internationalization. The non-mainstream approaches, such as sociocultural, sociocognitive and ecological approaches, view language as activity which is in dynamic interaction with its context.

Another view on input, closely related to the above mentioned non-mainstream approaches, is the view of input as affordances. The following quote provides a definition of affordances in the words of Gibson, the creator of the Theory of Affordances:

Roughly, the affordances of things are what they furnish, for good or ill, that is, what they **afford** the observer. Not only objects but also substances, places, events, other animals, and artifacts have affordances. We might begin with the easy-to-perceive components of the environment consisting of surfaces and surface layouts. And we should assume a human animal as observer, to start with, since the list of affordances will be somewhat different for different animals.

I assume that affordances are not simply phenomenal qualities of subjective experience (tertiary qualities, dynamic and physiognomic properties, exc.). I also assume that they are not simply the physical properties of things as now conceived by physical science. Instead, they are **ecological**, in the sense that they are properties of the environment **relative** to an animal. These assumptions are novel, and need to be discussed." (Gibbons 1971)

Some examples of affordances (Gibson 1971):

- a sit-on-able surface (affording sitting).
- a stand-on-able object, stool, affording a high reach.
- a substance that affords pouring, dripping, dabbling. A **liquid**.
- a substance that affords smearing, painting, trace-making. A **viscous** substance.

Singleton and Aronin (2007) discuss multiple languages as affordances and view language awareness of key importance in utilizing the linguistic affordances: "Clearly, the higher the level of language awareness is, the more effectively language-related possibilities are likely to be perceived and capitalised upon." (Singleton & Aronin 2007: 85; cf also van Lier 1996, 2004)

The concept of affordances might offer a good candidate for a focused definition of *integrated* in CLIL for tertiary level. The affordances provided by the content area and related language would seem to open up new possibilities of both learning contextualized language and developing content-based thinking in creative ways.

Ecological perspective and the Dynamic Systems Theory (DST)

A narrow, biological definition of ecology is the study of the relationships between biological organisms and their environment. More widely, ecology is used to describe phenomena in their context and to understand both the context and the interactions that create that context. According to Marc Garner and Erik Borg (2005), language ecology

provides an appropriate framework to view content-based instruction (CBI), as it places situatedness, interaction and variability at the centre of language theory (Table 2). The key elements of an ecological view to language are the following: Language is holistic, dynamic and interactive, and situated. (Garner & Borg 2005).

Table 2. Relevant features of the ecological perspective on language (modified on the basis of Garner & Borg 2005)

Ecological perspective on language	Contrasting views on language
Holistic: complex wholes and systems	*Traditional view of language, cognitivism*: Language is essentially an abstract rule-based system.
Dynamic and interactive: communication is recursive, dialogic. The response (in the interaction) is primary for the understanding of the interaction in its entirety.	*Communication theory*: communication consists of transferring messages (sender>message>receiver)
*Situated:*Language is a form of being and behaving in the world.	"*Segregationism*": Language is an abstract rule-based system, isolated from its purposes and uses.

In an ecological view, communication occurs at several levels of complexity simultaneously. It does not consist of discrete messages, but of a series of overlapping and interrelated meanings. The three levels of complexity are the *communicative act*, the *communicative event* and the *communicative link*. Communicative acts may be utterances (essay, a brief exchange) that are included in series of acts to make up larger entities, such as books, lectures, and conversations. A communicative event is made up of communicative acts, it has its independent function, clear beginning and end. Finally, the communicative link is at the highest level of complexity. The function of a link is to connect the other two levels of communication and integrate them. Links, such as friendship, institutional structure, and classroom instruction provide a connection between the individuals involved, which may be very brief or last a lifetime. (Garner & Borg 2005: 124 – 125).

According to the Dynamic Systems Theory (De Bot et al. 2007), a language learner is viewed as a dynamic subsystem operating within a social system. All three levels of communicative complexity described above are linked to the *social ecosystem*, which provides for the environment and e.g. language exposure which is necessary for the realization of communicative acts and events. Further resources that are necessary for the realization of the communicative act in question, such as cognition, intelligence, aptitude and motivation, are contained in the learner's own *cognitive ecosystem.* There is a minimal amount of force or resources that is necessary for any system to grow, but the resources are compensatory, so a low aptitude may be compensated by high motivation or vice versa. From a DST perspective, the language learner is one of the dynamic subsystems within a large social system, which in turn has a great number of interacting internal dynamic sub-systems. All these subsystems are linked to and function within numerous other external dynamic systems.

Typical of all dynamic systems is that they are always in change. The system evolves stage by stage, the current stage building on the previous one. It is possible that a very small change has an enormous effect (cf. the butterfly effect) and equally possible that an enormous force leads to seemingly modest result. The dynamism of the system can be compared to a surface with holes and bumps. The holes represent what are called *attractor states,* i.e. stages where the development seems to have come to a halt, and the bumps represent so called *repeller states*. An attractor state might be reflected by the stagnation of the language proficiency of immersion learners at an intermediate stage. To trigger the development of the production skills of these learners, Merrill Swain (1993) suggested challenging output, which in the DST translates as the use of a strong force to release the development from the attractor state. It is typical of dynamic systems that they have no end state. Therefore, even fossilization can be seen as reflecting an attractor state. Although there is some predictability in what causes certain systems to settle in certain states, such as first language influence or

overgeneralizations from other languages, there are states that cannot be predicted nor explained by such influences (De Bot et al. 2007).

In the developmental process certain sub-systems are *precursors* of other sub-systems. Not all sub-systems require an equal amount of energy, because there are also *connected growers*, as may be shown in the dispersion of growth in the lexicon and grammar. An example of one child's vocabulary and grammar development (a spurt in vocabulary growth was followed by the emergence of plural –s) (Ellis 2007) may reflect vocabulary and grammar as connected growers. It may also reflect an attractor state. However, Ellis says that although he holds "dear both the critical vocabulary mass theory of grammar development and resource limitation models, we are a long way yet from proof. " (Ellis 2007: 25).

In sum: what does this all mean for CLIL and its potential in higher education?

Above, I have taken an ecological perspective on content and language integration with a view of advanced language learners in higher education. At the same time, I have attempted to take a new look at some of the features that are frequently considered key characteristics of content-based language teaching. As part of the ecological perspective and as a way of contrasting the traditional manner of looking at the content/context with another way –a relative novelty in language learning, but dating back to the seventies – I have discussed the concepts of *input* and *affordance* in more detail.

The views of language as situated activity with a strong sociocultural and sociocognitive emphasis were chosen to be discussed in this paper because of the emphasis they place on the active role of language and its intimate contact with context. After all, there is a difference between learning language in so called formal

instruction, where the focus is by definition on the formal aspects of language no matter what language teaching method is used. The goal is language learning and the content is less important. In content teaching the importance of content (again by definition) is primary. In language-medium teaching in tertiary education, the language of instruction traditionally has a vehicular role in the delivery of the content, and the learning of language is not a separate goal.

The ecological perspective seems to offer *context* as a definition for *content*. Context has two contrasting references: it has the flavour of *generic* (as contrasted with biological, historical etc. content matter), but at the same time it refers to something that is intricately linked to the present *situated meaning*. In addition, the *affordances* view of input - what the context can 'afford' in terms of learning language - adds another component to the definition of content as context.

The dynamic systems view was selected to give an account of *language as a dynamic system*, always in flux and in interaction with numerous subsystems both internal and external, falling in attractor holes and bouncing over repellers, vocabulary heaping up in critical masses and triggering grammar on the way, unpredictable and capricious in its development. This was also done for the connection that language has to the context. Language development is related to context, the context has an influence on the language. Context and language interact and collaborate in growing in complexity. The metaphor of dance is sometimes used for this relationship. For a language teacher, the idea of language not adhering to prescripted rules and explicit teaching seems strange and frightening, but for a content teacher the idea of not having to teach the formal aspects of language may be a relief.

The definition of *integrated* has already been referred to above. It is ingrained in the new angle provided by the relationship of language as a dynamic system, closely

linked to the context and the context with all of its affordances to bring to the relationship of language and content.

The views presented above are meant to inspire those who work in content and language integrated programs to look more closely at the content/context of the subject they teach and try to find out what they afford in terms of discourses, hierarchies and new angles; what is the language syllabus in the content area; what the meanings to be negotiated, what the scientific concepts to be related to the context on the two levels are, theoretical and practical; what the levels of interaction are; and how interaction can be promoted at all levels. In spite of the ecological perspective adopted here, the 'traditional' view and its practices (Table 1) are neither inferior nor superior to it, just different and at best, complementary.

References

Atkinson, D. 2002. Toward a Sociocognitive Approach to Second Language Acquisition. *The Modern Language Journal*, Vol. 86 (4): 525-545.

Bruner, J. 1996. The Culture of Education. Cambridge, Mass.: Harvard University Press.

Cummins, J. 1998. Immersion education for the millennium: What have we learned from 30 years of research on second language immersion? Reprinted on the CARLA website with permission. Available: http://www.carla.umn.edu/cobaltt/modules/strategies/immersion2000.html

De Bot, Lowie, K. W. & Verspoor, M. 2007. A Dynamic Systems Theory approach to second language acquisition. *Bilingualism: Language and Cognition* 10 (1), 7–21.

Ellis, N. 2007. Dynamic systems and SLA: The wood and the trees. *Bilingualism: Language and Cognition* 10(1), 23 – 25.

European Commission 2004. Implementation of the Education and Training 2010 Work Programme. Working Group "Languages" Progress Report December 2004. Directorate-General for Education and Culture. Life Long Learning: Education and Training policies.

Multilingualism policies. Available: http://ec.europa.eu/education/policies/2010/doc/lang2004.pdf

Garner, M. & Borg, E. 2005. An ecological perspective on content-based instruction. *Journal of English for Academic Purposes* 4, 119–134.

Gibson, J.J. 1971. A Preliminary Description and Classification of Affordances. Available: http://huwi.org/gibson/prelim.php.

Holdsworth, P. 2003. EU policy on language learning and linguistic diversity as it relates to Content and Language Integrated Learning in Higher Education. In R. Wilkinson, (Ed.) *Integrating Content and Language: Meeting the challenge of a multicultural higher education.* Maastricht, Netherlands: Universitaire Pers, Maastricht, Netherlands, 20 – 27.

Kozulin, A., Gindis, B, Ageyev, V. S. & Miller, S. M. (Eds.) 2003. *Vygotsky's Educational Theory in Cultural Context.* Cambridge: Cambridge University Press.

Lantolf, J.P. 2003. Intrapersonal Communication and nInternalization in the Second Language Classroom. In A. Kozulin, B. Gindis, V.S. Ageyev & S. M. Miller (Eds.) Vygotsky's Educational Theory in Cultural Context. Cambridge: Cambridge University Press, 349 – 370.

Marsh, D. & Langé, G. 2000. *Using Languages to Learn and Learning to Use Languages*, Jyväskylä: University of Jyväskylä.

Marsh D., Marsland B. & Stenberg K.2001. *Integrating Competenciess for Working Life – Unicom*, Jyväskylä: University of Jyväskylä.

Shomoossi, N. 2004. The effect of teachers' questioning behavior on EFL classroom interaction: A classroom research study. The Reading Matrix 4 (2) 96 – 104.

Singleton, D. & Aronin. L. 2007. Multiple Language Learning in The Light of the Theory of Affordances. Innovation in Language Learning and Teaching 1(1), 83 – 96.

Swain, M. 1993.

van Lier, L. 1996. *Interaction in the Language Curriculum: Awareness, Autonomy & Authenticity*. London: Longman.

van Lier, L. 2004. *The Ecology and Semiotics of Language Learning*. Boston: Kluwer. London: Longman.

Wesche, M.B. & P. Skehan. 2002. Communicative, Task-Based, and Content-Based Language Instruction. In: R.B. Kaplan (Ed.) *The Oxford Handbook of Applied Linguistics*. Oxford: Oxford University Press, 207 – 228.