

ENHANCING LANGUAGE AWARENESS AND COMPETENCE- BUILDING THROUGH A FUSION OF PHENOMENON-BASED LEARNING AND CONTENT AND LANGUAGE INTEGRATION

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This article describes how the fusion of two innovative approaches in education can provide alternative pathways to the learning of academic subjects, including languages. Content and Language Integrated Learning (CLIL) and Phenomenon-based Learning (PhBL) are combined to achieve intended learning outcomes which includes language awareness, attitude change towards language learning, and transversal subject learning. Enabling a form of pragmatic social constructivism, both CLIL and PhBL are heavily identified with types of integrative educational practices common to Finland. Following an introduction to each practice, the article describes the use of this fusion approach with high school students in Mexico where the level of additional language competence is generally low. Acknowledging that there are rarely educational models that can be exported from one country to another, it is argued that the fusion of CLIL and PhBL provides a blueprint that can enable educational innovation to flourish in different contexts.

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1 Introduction

Content and Language Integrated Learning (CLIL) was launched in Europe during the 1990s as part of an exploration in re-thinking how we learn languages. It was developed in Finland as a type of open-source framework. The original definition “CLIL is a dual-focused approach in which an additional language is used for the learning and teaching of both content and language” (Marsh, 1994) was intentionally inclusive. The strategy at that time was to pull together a community of researchers and practitioners who had common interests which could be strengthened, if aligned, through an inclusive and generic cross-curricular ethos (Marsh, 2013).

The experimental piloting and conceptualization of CLIL derived from work pioneered in Finland and the Netherlands. It became a largely grassroots innovation driven by educators and researchers in Europe. Adopting the term as an identity marker, this community of professionals voiced the view that the status quo situation of unacceptable language fluency outcome levels throughout Europe could be changed. Change required examining why after so many hours of conventional language learning, ability levels to actively use and think in the target language were so low. The desire for change provoked the question of whether different practices could be developed using available resources in real-life school contexts to achieve substantially better outcomes. Explicit support by the European Commission further enabled a swift uptake of interest across a range of experts in different countries to explore means by which to boost multilingualism through accelerating the successful learning of additional languages (see, for example Marsh, 2002).

Phenomenon-based Learning (PhBL), developed in Finland since the 1980s, (e. g. Rauste-von Wright, 2001) has become a key innovation in the 2016-2017 revised Finnish National Curriculum Framework (Halinen, 2015). It is a curricular technique by which to enhance intellectual development through use of recognized student-centered methods. Posited as a form of pragmatic social constructivism the concept incorporates the philosophical ideas of John Dewey, G. H. Mead, and the educational work of Richard Prawat (1989). It can be viewed as following the perspective of concept-based social constructivism. Realized as a form of transversal *learning across the curriculum* it has taken project-based learning to a new level of educational function through heavy focus on not just *doing* but also thinking skills and understanding.

Frequently student-driven, PhBL involves problem-solution-type learning sequences following what is widely termed as an inquiry-based approach (See Barrow, 2006; Lesmes Celorrio, 2017). It is supported by understanding of high impact educational practices (see, for example Hattie, 2012), and also recent discussion about the learning preferences of digitally astute young people

(Carey, 2015; Greenhow *et al.*, 2009).

Content and Language Learning (CLIL) and Phenomenon-based learning (PhBL) are examples of innovative practices achieved through both curricular integration and educator teamwork. Each involves re-conceptualizing subject teaching (e.g. languages, mathematics, physics, chemistry), and enabling change management in schools (see, for example Coyle, Hood & Marsh, 2010; Lonka, 2018)

Although both CLIL and PhBL require certain prerequisite conditions to put them into action, each allows a wide degree of freedom according to context and purpose. Each are relatively resource-light, but demanding in relation to organizational practices. To implement CLIL and PhBL a school needs to provide systemic support and recognition, and assessment procedures need adjustment. The major steps are in re-thinking teaching and learning practices, especially in relation to desired learning outcomes, and adjusting scheduling and learning environment arrangements.

In Finland PhBL is usually carried out through the first language in schools and colleges. But the fusion of CLIL and PhBL enables a further additional language development dimension to be realized. One aim of this fusion may be to develop Language Awareness and go beyond seeing language skills as purely utilitarian in education (see, for example Bruner, 1983; Krashen & Terrell, 1983; Hawkins, 1999).

Language Awareness includes how language is used to achieve specific goals in communication; metalinguistic awareness of how an additional language reflects back on the first language; how academic genre differs across disciplines; how language is used to exert power and influence; and Halliday's (1978) "mathetic" function (combining the development of language-for-learning with language-for-action). It is described by van Lier as "an understanding of the human faculty of language and its role in thinking, learning and social life. It includes an awareness of power and control through language, and of the intricate relationships between language and culture" (1995, p. xi). In relation to PhBL this would include the culture of different disciplines and domains.

Both invite disruption to the status quo. Each is an example of innovative curricular integration. The introduction of CLIL in 1994 and formal recognition of PhBL in the Finnish national curriculum 2016/2017 can be viewed as emergent examples of curricular innovation. There are signs that other forms of curricular integration are becoming a norm in outstanding educational systems, schools and colleges. Examples include the uptake of environmental science, computational thinking and programming, career guidance and navigation. Each involves creating across-the-curriculum learning environments where single subject learning is taken out of the silo, integrated with other subjects, and

applied through state-of-the art student-centered methods and other subjects.

2 Assumptions in Implementing PhBL and CLIL

Children entering school now are likely to retire from working life around the year 2080. The competences they require for their adult lives requires both domain-specific knowledge and systems thinking. They will need ability to adapt knowledge, competences and skills, to manage emergent working and social life demands. Domain-specific knowledge alone, will not prepare them for this future.

Only a small amount of learning takes place within the confines of a school environment. Our understanding now of learning environments is that in school we have a mandate to provide a foundation for continuous out-of-school learning, thinking and competence-building.

The affective dimension of learning is crucial for success. Emotions drive attention. Attention drives learning and memory. Self-confidence, awareness, and a positive sense of self are crucial attributes that educators need to develop in young people. The affective dimension is positively driven by relevance. Learning needs to be perceived by all stakeholders, students, teachers, guardians, and employers as relevant.

Individual and collective teacher efficacy is essential if schools are to realize the potential of all students. These teachers need to believe in the capabilities of their students, and also in themselves as being able to nurture the personal and intellectual development of their students.

Digital technologies are having an impact on how young people think, behave and learn. The proliferation of devices, access to the Internet, and time-in-use continues to grow. For digital technologies to be safely incorporated into the upbringing and educational experience of young people it is essential to view what their use brings into the lives of young people, and what it can take away.

Education can be viewed as *one of the most talked about and least acted on* features of societies, and it can be resistant to change. There is a need to challenge traditional profiles and contexts of learning. If top-down directives are issued it can take 20-30 years for systems to adjust and yet the speed of change in our current societies does not allow such a lag between decision-making and realization. Education has been subject to short-term political directives in countries, and teachers, the front-line operational experts, have often not been given sufficient autonomy and resources to function as well as they could in schools as professional communities. Many examples exist which do not fit this picture but there is a widely held view that schools need to change, and need the means

by which to change.

Rather than operating as engines for progress and value creation for the wider societies, education in schools often evolves through first order change. First-order change is where small adjustments are made slowly over time that do not have a significant impact on existing power structures, teaching and learning traditions, and attitudes.

Second-order change involves transformative actions that require new ways of thinking and interacting, and the exploration of new *vistas* of opportunity. The fusion of PhBL and CLIL invites an opportunity for second-order thinking and action. One key reason for this is that it is the teachers themselves who innovate through creating high impact teaching (Hattie, 2012) and learning environments. Second-order change is possible if potential gatekeeping forces are controlled, including lack of recognition, time, collaboration, and inappropriate forms of assessment which can create systemic disjuncture that undermines efforts to implement innovation.

When examples of curricular integration such as PhBL and CLIL flourish in certain environments, they need to be identifiable and articulated. Articulation follows from conceptualization, and if this is too rigid then any innovation cascade is at risk of faltering. One power of both PhBL and CLIL is that their definitions can cover a wide scope of activities. For example, conceptualization of the term CLIL derives from the use of the phrase *dual-focused* in definitions such as “a dual-focused approach in which an additional language is used for the learning of both content and language with the objective of promoting both content and language mastery to pre-defined levels” (Marsh *et al.*, 2011, p. 11). For PhBL a similar definition is where knowledge of different academic subjects is applied to create a single transversal learning experience in which a real world problem is examined from diverse perspectives.

Curricula usually have academic subjects taught as separate and often fragmented domains. This encourages myopic thinking perspectives that do not reflect the holistic ways by which people perceive the real world.

“Language is not a domain of human knowledge (except in the special context of linguistics, where it becomes an object of scientific study); language is the essential condition of knowing, the process by which experience becomes knowledge” (Halliday, 1993, p. 94).

Language learning benefits from a “threefold integrated perspective of learning language, learning through language, learning about language” (*Ibidem*, p. 113). This can be viewed as the foundation that underpins CLIL.

21st century education needs to develop a worldview through holistic learning that enables systems thinking. This can be understood as the *knowledge triangle* in which teaching and learning should involve integration of practices

in education, innovation and research. Students need to identify and see interdisciplinary patterns. They need to understand the inter-dependency of the knowledge and understanding of different subject domains which can be utilized for real world problem solving, be this academic, pragmatic, work-based or personal. They need to see learning as relevant and practical, and not only theoretical, and develop collaborative teamwork skills. This can be viewed as the foundation that underpins PhBL.

3 Case: High Schools, Jalisco, Mexico

During 2017-2018 an experimental project involving the fusion of PhBL and CLIL was co-designed by experts in Finland, Spain and Mexico. The concept was to be piloted in a context where long-standing constraints are deeply embedded in an educational system, but confidence and readiness to change the status quo and introduce innovative practices is strong.

Guadalajara is Mexico's second largest city, located in the state of Jalisco. Over the last decades the state has steadily lost economic influence. One of the identified weaknesses is a lack of workforce foreign language competence, especially in English. Having experienced some 500 hours of English teaching only 15% of high school graduates were, when entering higher education, at Level B1 of Common European Framework of Reference for Languages (Universidad de Guadalajara, 2016).

Studies have demonstrated that whilst curriculum, teaching competence, course content, and methods play a role in explaining such poor outcomes, one key area of interest is the attitude of teachers and learners towards learning languages. Another is that learning English as a subject has tended to be predominantly through grammar-based language instruction (*Ibidem*).

In 2018 the University of Guadalajara covers more than 50% of all the high school and higher education students in Jalisco (280,297). In 2015 it launched a Language Policy to improve the learning of languages alongside a strategic action plan to remedy the situation. One action was to explore ways to counter the negative attitudes of adolescents towards the learning of English, and towards themselves as foreign language learners.

PhBL-CLIL projects were designed for an initial 15 high schools. 10% of the volunteer teachers were language teachers. The number of teachers in one school per project ranged from 2-6 persons. The students were generally in their first year of high school (aged 15 years). The group formation of teachers was carried out according to the principle that not all members would be expected to actively use English, but that their involvement would be significant if they could contribute to the development of teaching and learning practices used.

This PhBL-CLIL pilot had 3 objectives:

1. To raise the self-confidence and motivation of young people to learn and use English
2. To co-design a prototype of a learning environment that accelerates the learning and acquisition of both content and English
3. To build teacher competences to use innovative student-driven learning through PhBL-CLIL methods by which to raise teaching and learning standards (of both content and language)

Themes were selected according to curriculum learning standards for each subject, the subject areas of each school-based teaching team, and the interests of students.

Each project involved 25 hours of student contact time and was co-designed with the teacher teams in training sessions (30 hours) where the principles of PhBL and CLIL were blended. Versatile content and language scaffolding resources were designed to enhance learner-centricity and autonomy, and to help students navigate learning paths.

PhBL-CLIL phenomena (from Greek *Phainómenon* the obvious, what can be seen) included environmental sustainability, heroism, happiness, physical health, myths, ethics, music, identity, pregnancy, and well-being.

3.1 Case Example: Adolescent Pregnancy

Student teams examined unintended adolescent pregnancy through the lens of multiple actors and inter-disciplinary perspectives. This is a topic of considerable relevance to the lives of the students as the adolescent birth rate is high in Mexico when compared globally (UNFPA, 2016). In Jalisco it is of acute societal concern. From January to July 2016 17.5% of all births were to mothers aged between 10-19 years old (IEGEJ, 2016). The final outcome was designed as an awareness-raising workshop for young people on sexual behaviour entitled *Passion or Pressure?*

Combining the principles of PhBL and CLIL techniques the project generated an unconventional learning environment. This was partly due to the integrative inter-disciplinary approach involving empowerment of students to take responsibility for processes and outcomes; relevance of the learning experience to the lives of the students; techniques for competence-and confidence building; and even with widely diverse levels of language proficiency, the use of English to source, process and accomplish aspects of tasks. The pedagogies used were new to the students as was the experience of studying through a collaborative project involving teachers of different disciplines. These pedagogies also invited use of mobile devices to support learning (see, for example Binterová & Komínková, 2013; Cinganotto & Cuccurullo, 2015).

Students approached the subject from different academic perspectives. They assumed intentional responsibilities and roles (parents, medics, social workers, career advisers, female and male students, economists, religious, and legal figures) to enhance cooperative learning through simulations in creating and assessing cases involving young people of different ages and relationships. This also involved modelling activities for students to teach and transfer knowledge about issues relating to fact, fiction, prejudice and feelings.

Anchoring to prior and background knowledge was often in the form of visuals such as drawings, photographs, video and statistics (such as looking at family histories and regional early pregnancy statistics). Critical discourse activities, especially through image and text, were used to enable students to compare, evaluate, and describe how peer, social media, fashion, and other pressures impact on encouraging sexual activities, alongside protective behaviour and contraception.

Drama and simulation was used to act out verbal and non-verbal communication in managing different types of situation through face-to-face role-play, and to demonstrate the emotional and physical experience of a young woman as she goes through the stages of pregnancy.

Open-ended questions, often carrying new concepts, were used for situation appraisal and reflection on student's views on unexpected pregnancies during the module, alongside assessment of prior knowledge about sexuality, behaviour, choice, and peer pressure.

Student outcomes were included in a single demonstration designed for adolescents. This involved use of a wide range of language-supported activities, games, predictive tests, role-play, simulation, statistical analyses, and interactive voting.

In summary:

- Students looked at a single phenomenon, one which they themselves perceived as relevant to their lives, from different real-world perspectives.
- The phenomenon was examined from different 360°-type perspectives.
- Versatile scaffolding resources were used to support and guide the student's conceptual learning of the phenomena through the additional language.
- Learning included the development of skills in creativity, learning, thinking, social communication, problem solving, and the fostering of academic participation. One key area was the development of skills in using digital devices and eLearning environments.
- A key objective was to enable students to develop their own preferred ways of thinking in order to develop lifelong learning strategies for both

- problem-solving and other forms of learning.
- Assessment was team-based, and rarely individual.

Concluding Comments

Since inception in 2016, this PhBL-CLIL approach has been regarded as largely successful. In 2017 it was formally ratified into the curriculum as *an across-the-curriculum* learning event named *Trayectoria de aprendizaje especializante (TAE) Ser Global*.

One typical type of criticism about any educational innovative initiative stems from applying a fragmented research approach, and not looking at an initiative with respect to the ‘bigger picture’. The Jalisco pilot was evaluated according to a form of knowledge mobilization whereby a set of inter-linked parameters were examined in relation to impact.

Over the years, both CLIL and PhBL have attracted criticism in learning environments ranging from those which may be highly-resourced in Europe, through to less-well-resourced in sub-Saharan Africa. Sometimes, possibly through intentional tunnel vision, criticism is used to defend established interests (for example textbook producers, assessment organisations, and political entities) which, wanting to maintain the status quo, use fragmented research and inquiry perspectives to undermine the introduction of innovative practices.

One example is that CLIL ‘only serves the elite and neglects the majority of young people’. Another is that ‘PhBL students will become confused by mixing the logic of different subjects such as maths, chemistry and the humanities’. Fragmented criticism can undermine the logic of enabling innovation through integration. It is rarely helpful in encouraging the development alternative pathways by which to adapt education and raise standards desired in educational processes.

Systems-thinking is not only what we need to embed in school learning, but also in the search for identifying transformational processes in education. This has been the approach adopted at the University of Guadalajara (Foreign Languages Institutional Program) in searching for language learning solutions that can be applied in situ with existing infrastructure and resources.

CLIL and PhBL are learning approaches in their own right. Combined, they can provide lever for positive change with respect to learning, the learning of content, and the learning of languages.

There are rarely models suitable for educational export, but there are blueprints where educators worldwide can explore means by which to ensure that their schools and systems engage with an *educational leap* as significant

as the *generation leap* taking place amongst the young people in our schools.

Witnessing how PhBL-CLIL works in very different social environments such as Mexico and Finland is testament that content and language teachers can make change happen if provided with the inspiration, guidance, and systemic support.

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