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# EL BILINGÜISMO A DEBATE

ISBN: 978-84-697-0440-0

## **El bilingüismo a debate**

# **Actas del IV Congreso Internacional de Enseñanza Bilingüe en Centros Educativos**

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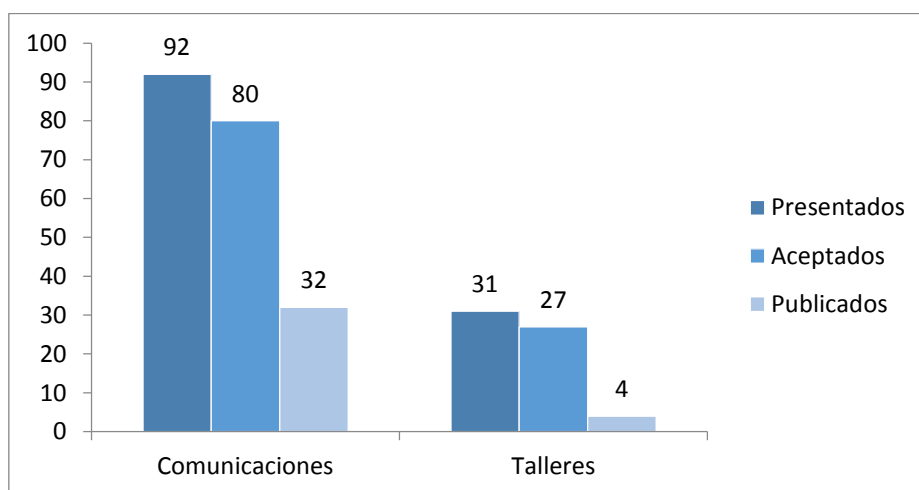
## CIEB 2017

En el IV Congreso Internacional de Enseñanza Bilingüe en Centros Educativos (CIEB 2017) se presentaron para su valoración un total de 92 comunicaciones y 31 talleres.

Tras la revisión de todas las propuestas por parte del Comité Científico, se aceptaron un total de 80 comunicaciones, siendo rechazadas 12 propuestas, y un total de 27 talleres, siendo rechazados cuatro propuestas. No obstante, no todos los participantes enviaron su artículo para su publicación dentro del plazo previsto.

Por tanto, en estas Actas no se recogen las ochenta comunicaciones y los veintisiete talleres que fueron presentadas oralmente durante el Congreso, sino solamente las treinta y dos comunicaciones y los cuatro talleres cuyo texto completo fue recibido, revisado, evaluado y aceptado por los editores para su publicación. El Programa completo del Congreso puede consultarse en la página web del congreso: <http://www.cieb.es/>.

Para la publicación de la Actas del Congreso, se propone un formato digital con ISBN. En el siguiente gráfico, se muestra un resumen de los datos finales.



# ÍNDICE GENERAL

## COMUNICACIONES

TEACHER EDUCATION FOR CLIL IN PRIMARY EDUCATION

*Aoife K. Ahern, Magdalena Custodio, María Dolores Pérez Murillo y Anna Steele*

ICT TOOLS: POWERFUL PATHS TO FOSTER DIFFERENT LEARNING STYLES  
IN ESL TEACHING AND LEARNING SCENARIOS

*Rubén D. Alves López*

MATERIALES AICLE: INVIRTIENDO EN UNA ENSEÑANZA DE CALIDAD

*Elena Ayala Tello y Thomas Schmidt*

FROM BILINGUAL TEACHING TO CLIL: TEACHING STRATEGIES AND  
TEACHING PORTFOLIOS FOR BILINGUAL TEACHING AT THE TERTIARY  
LEVEL

*Javier Barbero Andrés*

LA AFINIDAD Y HABILIDAD TECNOLÓGICAS DE LOS NATIVOS DIGITALES  
RESPECTO A LA INTEGRACIÓN DE LAS TIC EN EL AULA DE INGLÉS

*José R. Belda Medina*

CLIL AND EMI IMPLEMENTATION IN A BILINGUAL FRAMEWORK: THE  
CASE OF GALICIA

*María Bobadilla-Pérez y Eugenia Díaz-Caneiro*

EXPERIENCIA BILINGÜE EN EDUCACIÓN MUSICAL PARA FUTUROS  
MAESTROS DE EDUCACIÓN PRIMARIA

*Raquel Bravo Marín y David Andrés Fernández*

¿EXISTE EL PROFESOR DE ESL PERFECTO? NATIVO O NO NATIVO, HE AHÍ  
LA CUESTIÓN

*Lee Ann Bussolari*

ENHANCING THE WRITTEN PRODUCTION IN L1 OF NATIVE SPANISH  
STUDENTS FOLLOWING THE ENGLISH NATIONAL CURRICULUM IN THE  
COMMUNITY OF MADRID: A NEW METHODOLOGICAL APPROACH TO  
COUNTERACT REVERSE TRANSFER

*Eva Cano Fernández*

ESTUDIO DE LAS PERCEPCIONES DEL PROFESORADO UNIVERSITARIO:  
ASSESSMENT EN EL ENFOQUE AICLE

*Fátima Castañón Podio*

LA ENSEÑANZA DEL INGLÉS ORAL A TRAVÉS DEL ENFOQUE ORAL  
*Inmaculada Clarens*

PRONUNCIATION: THE CINDERELLA OF ENGLISH LANGUAGE TEACHING  
IN SPAIN  
*Fidel del Olmo González*

THE ROLE OF INTERDISCIPLINARITY IN THE DESIGN OF CLIL DIDACTIC  
MATERIALS FOR PRIMARY EDUCATION  
*Ana Isabel García Abellán*

COOPERATIVE LEARNING IN A BIOLOGY BILINGUAL CLASSROOM OF  
SECONDARY EDUCATION  
*Marina Gutiérrez Sejas*

WHAT MAKES AN EFFECTIVE BILINGUAL PROGRAMME? TALKING FROM  
EXPERIENCE  
*Ramón Herranz Blokker*

IMPLANTACIÓN DE LA EDUCACIÓN BILINGÜE: MOTIVACIONES  
DIFERENTES EN REALIDADES INCOMPARABLES  
*Elvira Izquierdo Sánchez-Migallón*

DISEÑO E IMPLEMENTACIÓN DE PROPUESTAS PARA LA ENSEÑANZA  
BILINGÜE DE LAS CIENCIAS EN EDUCACIÓN PRIMARIA  
*Sandra Laso Salvador y Mercedes Ruiz Pastrana*

DE QUÉ HABLAMOS CUANDO HABLAMOS DE METODOLOGÍAS ACTIVAS  
*María José Luelmo del Castillo*

*LA FLEXIBILIDAD DE UN DOCENTE CLIL*  
*María Saray Mallorquín Rodríguez*

PHONICS TO READ AND WRITE!  
*Sonia Martín y Patricia Sánchez*

INTEGRACIÓN DE CONTENIDOS DE INGLÉS A NIVEL Terciario (ICLHE)  
*Natalia Martínez-León*

EXPERIENCIAS EDUCATIVAS A TRAVÉS DE PROGRAMAS EUROPEOS:  
HACIA UNA ENSEÑANZA BILINGÜE DE CALIDAD  
*Alonso Mateo Gómez, Raquel Bravo Marín y Pablo Miguel Garvía Medrano*

WRITING-TO-LEARN CONTENT IN A CLIL SPANISH COMPULSORY  
SECONDARY EDUCATION ENVIRONMENT. AN EXPLORATORY STUDY  
*Sophie McBride*

THE EXPLORATION OF ASPECTS OF LANGUAGE CREATIVITY IN  
STUDENTS FOLLOWING A BILINGUAL PROGRAMME  
*Silvia Montero Muñoz*

APRENDER LENGUA VIVA, POR MEDIO DE TICS, INTELIGENCIAS MÚLTIPLES, APLICACIONES MÓVILES, E-TWINNING....

*Cristina Eugenia Nóvoa Presas*

MARCO TEÓRICO- CONCEPTUAL DE AICLE

*Miriam Pastor Morate*

LA ENSEÑANZA DE INGLÉS EN CENTROS NO BILINGÜES: UN CASO PRÁCTICO

*Dra. Cristina Pérez Guillot y Paula Hervás Raga*

CLAVES METODOLÓGICAS PARA GARANTIZAR EL APRENDIZAJE DE UN 2º IDIOMA (INGLÉS) EN LA ETAPA DE EDUCACIÓN INFANTIL

*Mónica Redondo Pérez y Susana Ortego García*

MAESTRO CLIL: UN PERFIL DOCENTE ADAPTADO A LAS NECESIDADES ESPECÍFICAS DE LOS ALUMNOS DE PRIMARIA

*Marta San Román López*

TASK-BASED LEARNING THROUGH VIDEOS AND ETWINNING IN THE BILINGUAL PROGRAMME OF THE FACULTY OF EDUCATION IN ALBACETE

*Raquel Sánchez Ruiz y Rosa María López Campillo*

AYUDANTES LINGÜÍSTICOS EN PROGRAMAS DE INMERSIÓN LINGÜÍSTICA EN EDUCACIÓN INFANTIL: PELIGROS Y TINIEBLAS

*Jorge Sánchez Torres*

## **TALLERES**

VOLVIENDO A LOS FUNDAMENTOS: ¿CÓMO APOYAR AL ALUMNADO PARA POTENCIAR LA COMPRENSIÓN Y ASIMILACIÓN DE LOS TEXTOS ACADÉMICOS (TAS) EN LA EDUCACIÓN BILINGÜE (EB)?

*Manuel F. Lara Garrido*

DIGITAL RESOURCES THAT WORK IN BILINGUALISM

*Paula López Cabello y Raquel de Nicolás*

*TOO MANY COOKS SPOIL THE BROTH?*

*Sabrina Michielan y María Isabel Requena de Lamo*

HERRAMIENTAS E IDEAS PARA EL AULA BILINGÜE

*Aser Santos Bajón*

## **PRESENTACIÓN IV CONGRESO INTERNACIONAL DE ENSEÑANZA BILINGÜE EN CENTROS EDUCATIVOS “LA ENSEÑANZA BILINGÜE A DEBATE”**

La Universidad Rey Juan Carlos y la Asociación Enseñanza Bilingüe, fueron los organizadores del IV Congreso Internacional de Enseñanza Bilingüe en Centros Educativos –CIEB 2017– que se celebró en Madrid, en el Campus de Vicálvaro de la Universidad Rey Juan Carlos los días 20, 21 y 22 de octubre de 2017.

CIEB 2017, bajo el lema “La enseñanza bilingüe a debate”, planteo no solamente seguir analizando su funcionamiento sino también debatir sobre la enseñanza bilingüe, los programas, sus ventajas e inconvenientes, su desarrollo y su gestión, sus resultados, con el fin de contribuir a la búsqueda de soluciones para los problemas que se plantearon y por lo tanto, a la mejora de la calidad de todos los programas.

Un objetivo prioritario fue generar un foro de discusión, de debate, de intercambio de ideas y de experiencias entre profesionales de la enseñanza bilingüe y la enseñanza de idiomas y, a la vez, apoyar a los miles de maestros y profesores que han entendido perfectamente el potencial que supone ofrecer enseñanzas bilingües a sus alumnos, y que trabajan incansablemente, esforzándose por adquirir el mayor dominio de la lengua de instrucción y las máximas competencias posibles, tratando de incorporar a su labor docente los últimos avances tecnológicos y de utilizar en la enseñanza de idiomas, las variadas metodologías activas en boga hoy en día.

El Congreso CIEB 2017 como siempre tuvo un carácter innovador y promovió la presencia de expertos nacionales, tanto en aspectos prácticos como teóricos del bilingüismo.

# THE ROLE OF INTERDISCIPLINARITY IN THE DESIGN OF CLIL DIDACTIC MATERIALS FOR PRIMARY EDUCATION

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**Abstract:** The purpose of this work is to reflect on the advantages of the use of interdisciplinarity when designing CLIL didactic materials for Primary Education. For this reason, an analysis of different activities, in which both CLIL and interdisciplinary approaches are combined, will be conducted. These activities are integrated into a published book series which was the result of a long school project that explored the use of interdisciplinarity in conjunction with CLIL's principles as the main criteria for the creation of didactic material. Before the analysis, a review of the term *interdisciplinarity* will reveal its multiple definitions, typologies and dimensions, creating, at the same time, a conceptual framework to justify the methodological basis of the project. Finally, the conclusion will provide some examples of the benefits of this double approach within this context.

**Keywords:** interdisciplinarity, CLIL, didactic material, school project, Primary Education.

**Resumen:** Este trabajo tiene como objetivo mostrar las ventajas que ofrece el uso de un enfoque interdisciplinar en el diseño de materiales didácticos CLIL para el aula de Educación Primaria. Con ese propósito se realizará un análisis de diferentes actividades en las que la influencia de ambos enfoques queda manifiesta. Dichas actividades forman parte de una serie de libros que fueron el resultado de un largo proyecto escolar en el que los principios metodológicos del enfoque interdisciplinar y de CLIL fueron usados de manera conjunta para la creación de material didáctico. Previo al análisis se presentará una revisión del término “interdisciplinaridad” en el que quedarán patentes sus múltiples definiciones, diversas tipologías y dimensiones a la vez que servirá para crear un marco conceptual que justifique las bases metodológicas del proyecto. Finalmente, se comentarán algunos de los beneficios del uso de este doble enfoque en el contexto abarcado.

**Palabras clave:** interdisciplinaridad, CLIL, material didáctico, proyecto escolar, Educación Primaria.

## Introduction

The rise of the bilingual programs in different educational contexts is leading to a reformulation of traditional forms of organizing contents and to more complex ways of designing didactic material. The aim of this paper is to show how the use of an interdisciplinary approach in the creation CLIL didactic materials for Primary Education can help reconsider the conventional “boundaries” between subjects.

In the first part, a theoretical framework will be established with the purpose of narrowing down the scope of the term *interdisciplinarity*. This initial section attempts to provide a justified context for the use made of interdisciplinarity in designing specific CLIL didactic material. In the second part, the procedure used for the creation of the above mentioned CLIL didactic material will be explained providing some practical examples of activities in which both Coyle's 4C's model and interdisciplinarity underpin the methodological criteria followed. The activities used as

examples are taken from García and Ramirez (2014). This book series was the final result of a long Primary Education School project coordinated and carried out by the author of this paper and Professor Ramirez, both of them authors of the books. The school project was planned to create a new subject of Art & Crafts based on a three pronged objective. First, it should deal with the curricular contents of Art & Crafts. Secondly, it should explore and review the concepts studied in Science from the perspective of Art History, and finally, it should help students develop their English language skills. Given the ambitious characteristics of the project, the authors found in interdisciplinarity a perfect approach to meet these requirements. But before explaining this project, we will start defining the term *interdisciplinarity*.

The concept and the definition of interdisciplinarity have been explored from multiple dimensions. Interdisciplinarity, is an umbrella term which cannot be restricted to a unique definition. On the contrary, it encompasses different interpretations, nuances and perspectives, not being exempt from ambiguity. From an epistemological point of view, this approach appears as a way of exploring different disciplines from various perspectives. As Germain (as cited in Lenoir, 1997) states, “it presupposes the existence of at least two disciplines and a reciprocal action” (p.2). As a result of this interaction, a new and synthesised form of knowledge may emerge. According to d’Hainaut (1986), “In epistemological terms the concept of interdisciplinarity may be regarded as a form of co-operation between various disciplines, which contribute to the achievement of a common end and which, through their association, further the emergence and advancement of new knowledge” (p. 38).

A similar approach can be seen in Pombo’s definition (as cited in Cezarino, Liboni, Oliveira and Caldana, 2015): “Interdisciplinarity is defined as a combination of various disciplines to comprehend an object on the basis of their confluence of diverse points of view. The final objective is to elaborate a synthesis of thought in reference to this object.” (p. 279). In that way, the terms *discipline*, *cooperation* and *integration* are keywords in many definitions. In this paper we will approach interdisciplinary from the scope of Education.

According to Lenoir (2004), interdisciplinarity in the field of education has historically been approached from different conceptual frameworks: the European-francophone, the North American-anglophone and the Brazilian-phenomenological framework. Each of them explores interdisciplinarity from different angles. The European-francophone is oriented toward the unification of the scientific knowledge, which, in a school context, leads to the connection between the different school subjects. In contrast, the North American-anglophone has a more functional nature. The use of interdisciplinarity has, as its final aim, the resolution of social problems through integrative education and integrative approaches. Finally, the Brazilian approach is based on a phenomenological and introspective perspective of interdisciplinarity. The aim of its use does not result in a unification of disciplines or in an instrumental functionality like in the European and North American ones respectively. The focus here lies on the search of an affective dimension emerged from the interaction between the different stakeholders which gives rise to self-knowledge.

Interdisciplinarity has also been subject to multiple typologies and classifications according to different criteria such as the quality of interdisciplinarity or the degree of influence each discipline exerts (d'Hainaut, 1986). Regarding the diverse focus of interest various taxonomies have also been developed depending on factors such as the degree of disciplinary integration, the interdisciplinary practices or the rationales of interdisciplinarity (Huutoniemi, 2010; Lenoir 2000), to name a few. In this paper, we will only mention a general typology mainly used in the context of education proposed in d'Hainaut (1986). This typology distinguishes between three levels of interdisciplinarity:

*Pluridisciplinarity: which merely brings in several disciplines, often going no further than to juxtapose them.*

*Interdisciplinarity: which assumes a good knowledge of each other's concepts between the disciplines concerned and is based essentially on a systems approach.*

*Transdisciplinary: even more ambitious, which assumes conceptual unification between disciplines. (p.9)*

A deeper analysis of the term leads us to a necessary distinction between two types of disciplines depending on the context interdisciplinarity is approached: discipline in the scientific context and discipline in the school context. The aims, objects, application and systems of reference are different in each context as well as the consequences which, according to Lenoir (1997), in the case of scientific interdisciplinarity “leads to the production of new disciplines by various means” whereas in the case of school interdisciplinarity “leads to the creation of complementary links between school subjects” (p.7). And it is exactly at this point, in the creation of complementary links between school subjects, where our project finds its justification for the use of an interdisciplinary approach.

To sum up, in this paper interdisciplinarity will be addressed as a way of promoting the creation of meaningful connections between different subjects and curricular aspects in the context of the material design for bilingual school subjects in Primary Education. Therefore, we consider that the definition that better suits our needs is Lenoir's (2000) in which school interdisciplinarity is:

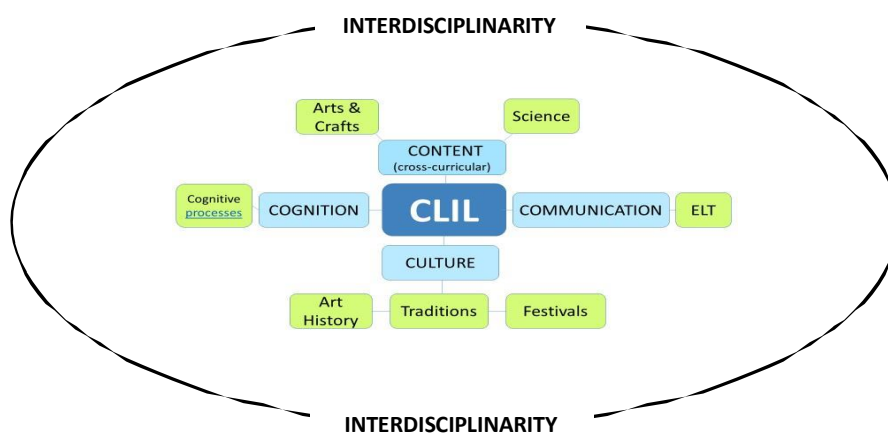
The interrelationship of two or more school disciplines exercised at the curricular, didactic, and pedagogical levels, leading to the establishment of links of complementarity, cooperation, interpenetration, or reciprocal actions among diverse aspects of the curriculum (study matter, concepts, learning methodologies, technical abilities, etc.) in order to promote the integration of learning and knowledge by the student. (p.105)

In the second part of this paper, once the conceptual framework has been

delimited, we will show how a combination of CLIL and interdisciplinarity was used as the methodological basis for the design of teaching material in the work of García and Ramirez' (2014).

Regarding CLIL, Coyle's (2006) 4C's model was followed to structure the project (Figure 1). Although interdisciplinarity appeared at different levels, in this paper we will only explore the links established by the Art & Crafts, Art History and Science subjects as well as the relationship between the contents and language which is, besides, inherent to CLIL's integrative nature.

**Figure 1: Interdisciplinary and CLIL 4C's model as methodological basis for teaching material design.**



Note: Adapted from Coyle's (2006)

From a cognitive point of view, the activities were planned taking into account the different levels of Anderson and Krathwohl's (2001) revised taxonomy (Figure 2).

**Figure 2. Anderson and Krathwohl (2001)**



The title of this unit is *Expressionist animals*. It is addressed at Primary 3 students (8-9 years old). The curricular contents are: different types of shapes and

lines for drawing, the use of the drawing technique and colour theory (primary and secondary colours). From the perspective of Art History, the unit introduces artistic trends such as Expressionism and Fauvism and it explores the use of colour in these movements for

expressing feelings or emotions. With respect to the links to Science, a very popular content is dealt with: animals. Finally, the linguistic outcomes expected are the use of the present simple both for oral and written descriptions.

The unit should be started after students had studied the topic *Animals in Science*. In order to activate their previous knowledge, a picture of two horses is shown and students are invited to briefly brainstorm their knowledge about these mammals. After that, the teacher will explain that in this unit they will be dealing with a familiar topic from a completely different perspective. They had just studied animals from a scientific point of view, they came, thus, from the world of reason and now they will travel to the world of imagination.

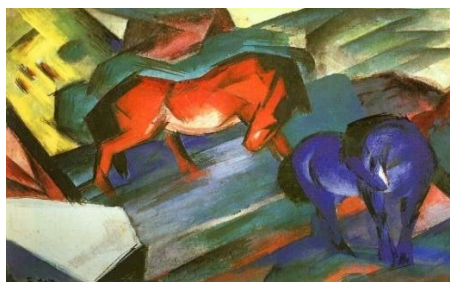
The next activity proposed is a comparison between a picture of real horses (Figure 3) and a picture of Franz Marc's painting *Red and Blue Horses* (1912) (Figure 4) which is the reference artist in this unit.

**Figure 3. Comparison of animals from different perspectives (Science-Art).**



Note: Photograph by Pottok at the German language Wikipedia under a CC BY-SA 3.0 license,  
<https://commons.wikimedia.org/w/index.php?curid=1788367>

**Figure 4. Red and Blue Horses. (Marc, 1912)**



In order to provide students with linguistic scaffolding, the teacher will remind them of some structures such as *there is/there are; I can see a/ I can see some; the horses in this picture are... but the horses in the other picture are...* In

that moment, a dialogue between students and teacher should start. Children are encouraged to talk about colours, lines, shapes and compare both pictures applying their previous knowledge and the new input.

The next step will be reading the text in the box: *“Expressionism was an art movement that expressed feelings and emotions through colour, lines and figures”* and a new topic will come into play: feelings and emotions and how artists used colours to express how they felt. After showing them more examples of expressionist paintings and their use of colours, the teacher will explain the final task: completing a sketch of Marc’s painting and colour it using the colours in the same way Expressionist artists did, that is, according to the way they were feeling at that particular moment. Finally, they are asked to briefly describe how they feel.

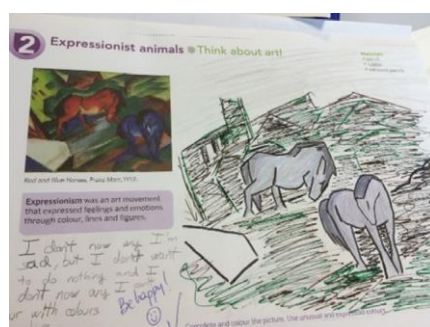
Below (Figure 5) we can see examples of this activity elaborated by some students attending a bilingual school in Murcia.

**Figure 5: Samples of students’ drawings in Art & Crafts final task.**



Most of the students used lively colours. However, of special interest is the picture in Figure 6 in which one of the students used cold colours and the result expressed a profound sadness. Given the circumstances, the teacher encouraged her to write about her feelings.

**Figure 6: Sample of writing about feelings in Art & Crafts interdisciplinary session.**



Note: Student’s work in García and Ramírez, (2014).

She wrote a brief text expressing her sadness and his incapacity to use lively colours for her drawing at that particular moment. This is an example of how, by using an interdisciplinary-CLIL-like approach, students are not only able to achieve the

different goals of the Art & Craft curriculum above mentioned, but also to incorporate to their own production cross-curricular elements such as the Expressionist conception of the use of colours to express feelings and emotions or the use English language structures for oral and written descriptions.

With respect to the cognitive processes, as stated above, Anderson and Krathwohl's taxonomy was taken into account when planning the session. In that way, students remembered basic concepts of animals in the initial brainstorming, they understood how a topic, like animals, can be explored from different perspectives, they applied their knowledge of the drawing technique to carry out the main activity, they explored the use of the colours to express feelings and they evaluated their own feelings in order to finally create a new version of Marc's painting.

This session model is an example of the rationale behind design of interdisciplinary CLIL activities in which we can observe a balanced interaction between Art & Crafts, Science, Art History and English language while, at the same time, an introspective exploration of students' own feelings takes place. Although Science and Art represent the dichotomy between reason versus expression, evidence versus imagination or rationale versus creativity, exploring their connections allows children to have different perspectives of reality which fosters the development of flexible and critical thinking skills. As Lenoir (2000) states "the art program ensures simultaneously the construction of reality, its expression and the interrelationship with that reality, but in an aesthetic mode that is different from a scientific approach" (p. 105).

The approach developed in the school project and, subsequently, in the book series gave rise to a new way of assessing contents, also based on an interdisciplinary practice. But this will be subject for another paper. It could be stated that this approach may represent a first step towards a new definition of the term *school subject*, as can be found in other methodologies such as Phenomenon Based Learning.

Among the benefits of this approach, we agree with Ackerman (1988) and Ackerman and Perking (as cited in Van del Linde, 2007) when they claim that interdisciplinarity enhances acquisition of vital learning skills, raises student's awareness of the teaching of skills, fosters cooperative work among teachers, helps understanding the limitations of disciplines, improves cognitive skills and critical thinking, provides students with the possibility of exploring a topic from multiple angles which contributes to generate flexible thinking.

To conclude, and going back to the distinction between the three types of approaches to interdisciplinarity, the European, the North American and the Brazilian ones, we can state that the type of activities here presented encompass the three different approaches. The European one because it connects different school subjects such Science, Art and Crafts and English language, different curricular contents and techniques such as animals, colours, lines, feelings, drawings and the use of present simple structures for oral and written descriptions. The North American perspective, since the realization of the activities leads to the achievement of the different learning standards and the development of the basic competences. This fact provides our approach with a practical functionality like the one promoted by that perspective. And

finally, we find features of the Brazilian-phenomenological approach in the exploration of students' inner feelings which fosters self-knowledge and generates a certain introspective interdisciplinarity.

In today's globalised society, it seems reasonable to suggest that education should move from a traditional segmented disciplinary approach to a more dynamic, holistic and interdisciplinary one in which students should be ready to address topics from multiple perspectives by fostering critical thinking, problem solving and emotional intelligence. In that respect, interdisciplinarity-CLIL approaches constitute a first step towards a new conception of school didactic material design.

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