Integrating Content and Language in Higher Education in Italy: Ongoing Research
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Abstract
This paper describes a current research study into Content and Language Integrated Learning (CLIL) at the tertiary level in Italy. Studies on CLIL in primary and secondary schools have continued to increase in number, but there is still a lack of research at the tertiary level, and no doctoral study has yet been conducted with particular reference to CLIL in Italian higher education. The design of the research described in this paper comprises two main parts, the first quantitative and the second qualitative, with a third aspect whose purpose is to validate the approach to analysis of the qualitative data. First, a questionnaire survey of all Italian universities seeks to discover how many courses are presently delivered using English as the vehicular language. A second, small-scale survey asks students their views of presentation techniques used in English-language lectures. The qualitative element takes the form of a case study involving three Italian universities, each presenting a different institutional profile. For each university, two professors will be recorded giving at least three hours of lectures, and their input presentation strategies will be analyzed. Triangulation of the data will be obtained by means of: the recording and transcription of the lectures, observations, and interviews with the lecturers. At the end of the study, the perceived effectiveness of a range of input presentation strategies will be discussed.

Keywords: CLIL (Content and Language Integrated Learning), ICLHE (Integrating Content and Language in Higher Education), CBI (Content-based Instruction), internationalisation, Bologna Framework

1. Introduction
The wide recognition afforded to CLIL is due to the fact that providing curriculum content in a second or foreign language can lead to both increased subject knowledge and enhanced L2 proficiency (Cummins, 1984; Genesee, 1987; Brinton and Snow, 1990; Met, 1994; Swain, 1996; Baker, 2001; Marsh, Maljers and Hartila, 2001; Coonan, 2002; Wilkinson, 2004; Coyle, 2005; Ricci Garotti, 2006; Stohl, 2006; Dalton-Puffer, 2007). CLIL is a predominantly European movement (Council of Europe, 1995; European Commission, 1995, 2003, 2006), and the few empirical studies critical of a CLIL-like approach (Marsh, Hau and Kong, 2000; Yip, Tsang and Cheung, 2003; Gonzalez, 1998; Tan, 2005) reflect specific and non-European social contexts and learning cultures. Navés (2009) has identified factors for success in CLIL programmes.

If we adopt Second Language Acquisition (SLA) terminology, CLIL offers learners a comprehensible input (Gass and Madden, 1985; Krashen, 1985; Maggi, Mariotti and Pavesi, 2002; Marsh and Wolff, 2007). In Krashen's view, the L2 as a medium of instruction offers learners a substantial amount of comprehensible input, without which second language acquisition could not take place. Content is conveyed by the teacher as a way of facilitating understanding, and the input is represented by the language to which the learners are exposed. There are many ways in which an academic, lecturing in a language which is not the native tongue of many of his/her audience, can help to make the content clearer. Coonan (2002) has categorised these techniques for facilitating linguistic and conceptual comprehension in CLIL contexts under the label of presentation strategies. Coonan's taxonomy includes using discourse markers, repeating concepts, using examples, using synopsis, using definitions, explaining, re-using lexis, using synonyms, using paraphrasis, reformulating, asking for questions, slowing down the pace of speaking, emphasizing through intonation, and articulating words clearly. These categories can be expanded and adjusted to evaluate input strategies performed by teachers in university contexts. The present study seeks, on the one hand, to
explore whether, in general terms, students recognise the existence and potential validity of these strategies, and, on the other hand, to investigate which techniques lecturers in Italian universities actually use, and how frequently, consciously and deliberately they employ them.

There has been a growth in the number of studies on the outcomes of CLIL programmes in primary and secondary schools, though more research is still needed at the tertiary level (Järvinen, 2008). However, while CLIL functions as a bottom-up approach at the primary and secondary school levels, at the tertiary level it typically represents a top-down approach, an institutional initiative dictated by the strategic need for internationalisation, and one which will enhance the employability of home students while attracting international students. Both the growth of student mobility (Crandall and Kaufman, 2002; Wächter, 2004; Erasmus Student Mobility 1987-2007 http://ec.europa.eu/education/erasmus/doc/stat/table1.pdf) and the evolving epistemology of university disciplines in a globalising academy (Wilkinson and Zegers, 2008) have affected the growth of tertiary CLIL. In this context, thanks to a series of conferences held at Maastricht University (Van Leeuwen and Wilkinson, 2003; Wilkinson, 2004; Wilkinson and Zegers, 2007, 2008), CLIL is often referred to as ICLHE; it should be noted, however, that Integrating Content and Language in Higher Education (ICLHE) may refer more to the type of pedagogy adopted and to its particular characteristics. The various ICLHE programmes can be characterized by the aim of the programme (Alexander, 2006), the type of institution, and the availability of teachers. Students are exposed to academic staff with a broad range of knowledge from different sources, a good proportion of which are in English (Coleman, 2006; Wilkinson, 2004; Maiworm and Wächter, 2002; Wächter and Maiworm, 2008).

At both macro and micro levels, the present study is a response to the changes that have occurred in Italy since available surveys were undertaken. According to the ACA (Academic Cooperation Association), Italy lags behind most European countries in the number of English-taught programmes; in fact, internationalisation programmes first appeared in Italy only around 1999, and Italy remains the largest European country without an organisational link to ACA. In addition, the survey data (Wächter and Maiworm, 2008) show that the majority of CLIL programmes are in Northern Italian universities, which have a significant edge over universities in Southern Italy. The 2007 data, however, are affected by the fact that a number of institutions failed to respond to the survey.

It is important to observe that, in addition to offering courses in English, Italy’s 78 universities offer courses in French and German as well, in particular in the border regions of Trentino Alto Adige and Valle D’Aosta. The data also reveal that the Economics and Engineering faculties offer the most courses in a foreign language, while Psychology, Medicine, Environmental Science, Biotechnology, and Art and Design offer the fewest. In a rapidly evolving higher education context, it is important to obtain an up-to-date picture of current ICLHE practice. This study seeks to provide state-of-the-art information regarding the number of institutions that have adopted CLIL in Italy in 2010, as well as the input presentation strategies of lecturers who teach in scientific faculties through English. Science faculties have been chosen for their strong international focus.
2. The Research Questions

The following questions are to be pursued:

- What is the current state of ICLHE in Italy at programme and course level, and has it extended since the three existing Europe-wide surveys (Ammon and McConnell, 2002; Maiworm and Wächter, 2002; Wächter and Maiworm, 2008)?
- Is there evidence that lectures in science, delivered in English, contain the input presentation strategies categorised by Coonan (2002)? If not, why not, and if so, in what instances?
- If comparison is feasible, is there a difference between native and non-native speakers of English?
- In the light of lecturers’ and students’ views of which input presentation strategies are effective, what are perceived to be the best practices that can be used as guidelines for other ICLHE contexts?

3. The Research Framework

The study is being undertaken as part of a Doctorate in Education at the UK’s Open University. As far as research methodology is concerned, a Quant→QUAL (Dörnyei, 2007) approach has been adopted as best suited to the research. The main qualitative study is preceded by a secondary quantitative one. It seems logical to begin from the general (a quantitative census/survey of Italian universities offering ICLHE) and move on to the particular (case studies). The quantitative part comes first in chronological terms since one of its aims is to identify the case studies to be examined.

A primarily qualitative paradigm (Merriam, 1998) was chosen because the research:

- is focused on a natural context
- is interested in the process (how lectures are performed) rather than the outcome
- is centred on the researcher as the main instrument of investigation
- involves fieldwork.

In particular, following the definition given by Marshall and Rossman (1994) and Creswell (1998), a qualitative paradigm has been chosen as an inquiry process for the principal element of this study because it aims at investigating a social problem based on observation, and qualitative approaches are highly appropriate to an educational setting such as a university. This part of the research can be defined as a case study (Yin, 1984) – or more precisely a series of parallel case studies – since

- It investigates a contemporary phenomenon in its real life context
- The boundaries between phenomenon and context are not clear
- Multiple sources of evidence are used (Gillham, 2000).

Despite the fact that case studies have been used in Applied Linguistics since the 1970s (Dörnyei, 2007; Duff, 2008) the approach was not explicitly mentioned before the 1990s, and it is hoped that the present study might contribute to case studies being considered as part of the investigative tradition of applied linguistics. The research is in one sense exploratory, since it seeks to open the way for further inquiry, and in another sense descriptive.
4. Research Strategy and Procedures
The following procedures will be adopted for data collection.

4.1 Survey.
As regards the enquiry on the state-of-the-art of CLIL at the tertiary level in Italy, a questionnaire will be sent by e-mail to all Italian universities. Prior to sending the e-mail, telephone calls will be made in order to establish a personal contact and find the right person to whom the email should be sent. University deans, the heads of the Internationalisation Project, and the CLA (Centro Linguistico di Ateneo – University Language Centre) will also receive a copy of the message. Where no response is received, further research will be carried out through the Internet, and a follow-up e-mail will be sent after two weeks. Where it is not possible to gain information, the Internet will be used as a data source (Dörnyei, 2003).

The survey can be also defined as a census (Dörnyei, 2003), since it includes the entire population (the totality of Italian universities) to be studied. As CLIL at the tertiary level is in its early stages in Italy, even single courses at the Bachelor's, Master's or Doctoral levels will be considered as falling within the definition of internationalisation or CLIL. This is in contradistinction to existing Europe-wide surveys which have recorded data at the programme level only. The courses will have to be content courses and not courses in English for Specific Purposes (ESP). This means that the language per se will not be the main focus or goal of the course.

4.2 Questionnaire.
A questionnaire will be administered to a sample of students different from those involved in the observations and recordings. This decision was made in order to be able to effectively use the students to test student perception of the categories that Coonan (2002) indicates as positive for a CLIL teacher. There are two main reasons for not giving the questionnaire to those students involved in the lessons under observation: the students could be biased in their evaluation of their teacher; and the teacher could consider such an action as a sort of evaluation.

4.3 Case study.
The cases involve: three Italian universities, six professors and eighteen hours of lectures. As in most of southern Europe, and in contrast to the more student-centred and small-group seminar approaches which are familiar in some northern European universities, Italian universities maintain the tradition of the formal lecture as the principal means of knowledge transmission. Following the case study protocol, we have adopted a triangulation of the data based on the following schema:

4.3.1. Classroom observation. The observation will be a non-participant semi-structured one. It is defined as semi because the observation calls for the compilation of several checklists based on Coonan's (2002) categories as well as on categories identified as relevant. Therefore, each time a type of input strategy occurs it will be noted; this is known as interval sampling (Gillham, 2000; Chaudron, 1988). In addition, during the recording the researcher will be present and field notes will be taken in an unobtrusive way (Bogdan, 1992; Marshall and Rossman, 1994; Dörnyei, 2003; Mackey and Gass, 2005).

4.3.2. Recording of the lectures. The study calls for the audio recording of three university lessons using a small pocket-size digital recorder. The lecturer will wear a microphone that captures what is said during the lesson. Furthermore, each lesson will also be transcribed so as to provide a corpus of spoken data containing instances of the input presentation strategies of the academic staff involved.
4.3.3. Interview with the lecturer. After the recording, the lecturers will be asked during a short, semi-structured 30-minute interview to comment on some important features that have arisen during the observation of the lesson. The main aim of the interview is to understand what intentions and meanings each lecturer ascribes to his/her behaviour.

5. Sampling

The study provides for sample selection based on the following criteria (Duff, 2008): 1. total population sampling as regards the census/survey of Italian universities; 2. convenience sampling as concerns the student questionnaire; and 3. criterion sampling as regards the case studies.

The universities will be selected according to the database provided by the Ministero dell’Istruzione, dell’Università e della Ricerca (Ministry of Education - http://www.miur.it/0002Univer/0020Atenei/index_cf2.htm). Seventy-seven universities will be surveyed in all; this will not include the foreign universities in Italy, as they offer courses only in English.

As mentioned above, the students chosen for the questionnaire are not students of the teachers involved in the case studies. The sample is a group of students that attend English-taught lessons in an Italian university. A total sample of 80 students is planned. Access to these students is facilitated since they are enrolled on a course taught by the first author.

The case studies will be chosen to address the following criteria: 1. a mixed experience (long-term or short-term) of CLIL at the tertiary level; 2. different teachers’ profiles (native speakers, non-native speakers of English). The lecturers will be directly contacted and will be asked whether they agree to be observed. This will imply being audio recorded for at least three hours of lecturing.

<table>
<thead>
<tr>
<th>Research Methods</th>
<th>Number</th>
<th>Type of sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey</td>
<td>77</td>
<td>Total population</td>
</tr>
<tr>
<td>Student Questionnaire</td>
<td>~ 80</td>
<td>Convenience sampling</td>
</tr>
<tr>
<td>Case studies</td>
<td>3</td>
<td>Criterion sampling</td>
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</tbody>
</table>

Table 1. Synoptic table of sampling procedures.

6. Instruments

6.1 For the census/survey of English-taught programmes in Italian universities, the instrument chosen is the questionnaire. The questionnaire has been prepared based on the survey by Wächter and Maiworm (2008), who have consented to its use in the present survey. The aim is to have an up-to-date and fine-grained picture of English-taught lectures in Italy. The questionnaire was revised after informal circulation and piloting with academics aware of the issues but not directly involved in the survey.

The programmes and courses addressed by the questionnaire include:

- The teaching of non-linguistic subjects (even individual courses) in English by mother-tongue or Italian teachers
- Teaching as part of three-year degree programmes, master's programmes, schools of specialization and doctoral programmes.

The questionnaire does not consider:

- Programmes where English is itself the subject being taught (for example, English Literature).
While the survey contains mainly factual questions, there are also some items seeking evaluative responses. As a general guideline, and in line with conventional practice, questions using sentences in the negative form or combining two questions in one have been excluded; in addition, most questions are closed, to facilitate analysis and because there is no interest here in complicated explanations (Foddy, 1993). To avoid fatigue effects (Dörnyei, 2003), a very short and non-time-consuming questionnaire has been used. To encourage completion and optimise the response rate, questions which can be easily answered by other means (for example, through the Internet) have not been included. Finally, the questionnaire has, for obvious reasons, been written in Italian.

The survey contains the following information: a title, an introduction (where the aim of the research and its context have been introduced), detailed information for filling it in, and the submission deadline. The value of the resulting data for the study and for broader sectoral interests has been stressed. The questionnaire is five pages long (only four of which are to be filled in) and is divided into three sections:

**Organization**, with thirteen items on: course lists, length of course, funding, reasons for the policy implementation, difficulties encountered, whether there is collaboration with foreign universities, evaluation of experience to date, whether numbers of English-taught courses are increasing, whether courses are offered in other languages, and whether the Bologna Process Diploma Supplement has been adopted. There are four open and nine closed questions.

**Teachers and teaching style**, with seven items on: basis for recruiting teachers, competencies of the teachers, whether there is ad hoc training, support materials, types of lessons and assessment. All questions are closed. As it is highly likely that we are dealing with multiple courses in each university, the expression in most cases has been included. In fact, it would have been impractical to fill in a questionnaire for each experience. Where there are multiple possible answers, only two salient answers are to be indicated. In order to streamline the questionnaire, information that is common knowledge has not been requested, such as the total number of students and whether the university is public or private.

**Students**, with five items on: admission and linguistic requirements, number of students, planned number of scholarships and whether there is any bonus for students undertaking these courses. There is one open and two closed questions. In this section I don’t know has been included as an answer choice, in order to find out how much the institutions know about what is actually occurring in the classroom.

6.2 Concerning the validation of Coonan’s (2002) categories by the students, the instrument chosen is a questionnaire. All the categories are explained (Foddy, 1993) to the students, with definitions and examples, and a Likert scale (very helpful, helpful, a bit helpful, not at all helpful) will be used as the most appropriate way of evoking attitudes and opinions (Dörnyei, 2003). There are ten items, which replicate those used for the checklist on the number of occurrences in the transcriptions: repeating concepts, using examples, using synopsis, using definitions, explaining, using synonyms, using paraphrases, asking for questions, emphasizing through intonation, and focus on form. The survey is totally anonymous, and will be administered to the whole group (Dörnyei, 2003) by the researcher. It is in English, a language the students know since they are studying foreign languages and literature.

6.3 As far as the case studies are concerned, in order to have triangulation of the data, multiple instruments are used: 1. recordings and transcriptions of lessons; 2 observational checklists; and 3. interviews with lecturer.

6.3.1. observation of lessons. The lessons will be observed using two checklists, with categories in part created ad hoc and in part taken from Kasper (2000). The categories are: use of facial expressions, use of gestures, use of graphs and tables, use of handouts, use of OHP, and use of blackboard.
On the first checklist the number of occurrences will be marked every fifteen minutes; at the same time salient points and particular comments will be noted down in field notes. On the second checklist the number of minutes during which certain teaching behaviour lasts will be noted down. The categories of analysis are: use of Power Point, use of videos, time spent standing up (a potential indication of closeness to the students), time spent sitting down (a potential indication of a formal lecture without student involvement), time spent for classroom management, and time spent for content teaching. In this case too, field notes will be produced. These categories are evaluated according to the time spent using them because, given their intrinsic nature, it would have been impossible to determine the number of occurrences per minute as instead was done for the other classes of analysis.

6.3.2. for the recordings it was decided to use a type of transcription that is easy to read and interpret. An appropriate transcription was created that is well suited to the research categories; at the same time, there was a desire to start from one already in existence: Jefferson's (1979) system (http://www-staff.lboro.ac.uk/~ssca1/sitemenu.htm). Since transcriptions are not intended to assess the competence of non-native speakers, whenever pronunciation is erroneous in English it will be transcribed using the correct spelling. The transcriptions will be in British English.

For each transcription, the frequency of occurrence of each of Coonan's (2002) categories (repeating concepts, using examples, using definitions, explaining, using synonyms, using paraphrasing, asking for questions, emphasizing through intonation, focus on form) will be calculated. Certain items from Coonan's categories have been eliminated: discourse markers and using paraphrasing, because they are the fruit of other studies; re-using lexis and explaining, because they are similar to other classes and very difficult to determine in terms of instances or use; and, finally, slowing down the pace of speaking and articulating words clearly, since, as the pilot study confirmed, these are too cultural-based to be determined and too dependent on the spoken language of each teacher to be standardized. Nevertheless, the item focus on form has been added as it is fundamental in determining to what extent the university lessons under study embody the CLIL concept.

6.3.3. Interview with lecturer. It will be a one-to-one professional semi-structured interview, using a protocol based on both a set of prepared questions and a set of open ones. This type of instrument is appropriate given the researcher's insight into the situation, but at the same time the need for spontaneity from the lecturers and access to their judgments (Dörnyei, 2003). The interview will involve a conversation with open questions, key topics, prompts (reminders for the interview) and probes (questions to gain a deeper understanding of a particular issue). The interview protocol is in English because it exists only for the researcher's use. A simultaneous translation of all the questions will be made directly during the conversation.

Table 2 provides a synoptic table of the instruments used:

<table>
<thead>
<tr>
<th>Research approach</th>
<th>Instrument</th>
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<tbody>
<tr>
<td>institutional survey</td>
<td>Questionnaire</td>
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<tr>
<td>students’ questionnaire</td>
<td>Questionnaire</td>
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<tr>
<td>case studies</td>
<td>two checklists</td>
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<tr>
<td>observation</td>
<td>transcription/recording</td>
</tr>
<tr>
<td>interview</td>
<td>Semi-structured interview</td>
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</tbody>
</table>

Table 2. Synoptic table of instruments used for data collection.
7. Ethics
All procedures are in line with the best practice guidelines of the British Association for Applied Linguistics (http://www.baal.org.uk/about_goodpractice.htm) and British Educational Research Association (http://www.bera.ac.uk/ethics-and-educational-research-2/). Procedures and instruments have been formally approved by the Human Participants and Materials Ethics Committee of the Open University, UK.

8. Piloting
A pilot study has been undertaken to evaluate the practicality of the student questionnaire and the lecture recording and transcription. At the time of writing,
- the student data has been satisfactorily collected and entered into a spreadsheet;
- a lecture similar in content and delivery to those targeted in the main study has been satisfactorily recorded and transcribed.

9. Conclusions
With the Bologna Framework, initiated in 1999 with the aim of restructuring higher education programmes all over Europe, many universities have become more and more interested in internationalisation.

It is widely recognised that there is a strong need for research and better practices in tertiary CLIL settings. This study aims at bridging the gap between scientific research and classroom enquiry and between top-down and bottom-up approaches. It is also hoped to uncover the strategies which teachers adopt to compensate for the fact they are teaching a subject in English, no matter what the native language of the students is. Clearer and more precise guidelines for teachers working in English-medium Instruction might result in more teachers willing to undertake such teaching. Moreover, the study should provide useful information for studies on lecturing styles and academic genres in Italy.

Currently, it seems that CLIL at the tertiary level is often performed in a rather casual manner because university professors are not inclined to receive training on how to teach in a foreign language. They are content to teach independently, and see no need to discuss issues with language teachers. Even worse, some content teachers may also feel that the subjects taught through English will be watered down and simplified in order to make them comprehensible to the students. On their part, language teachers see a need for collaboration in order to properly define how to teach in English at the tertiary level. It is hoped that this study might bridge the gap between content and language academics, and thus genuinely embody Content and Language Integration.
References


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