

Transition from Secondary school CLIL to EMI at University: Initial evidence from research in Italy

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CLIL DEFINITIONS

- **a dual-focused educational approach** in which **an additional language** is used for the learning and teaching of **both content and language**' (Coyle, Hood & Marsh 2010)
- 'CLIL a dual educational approach where ***equal attention*** is paid to **both content and language objectives**' (my emphasis).

Dafouz, Camacho and Urquia (2014:224)

Content and Language **Integrated** Learning (CLIL)

- Ball, Kelly and Clegg (2015:5) observe: it **'is a term that encompasses a wide range of educational practices'**
- **Integration?**
- **The focus on language?**

Content and **Language** Integrated Learning (CLIL)

- Which language in CLIL?
- No accurate figures **for English CLIL versus other languages in Europe**
- **90% of students in secondary learning English**

Content and Language Integrated Learning (CLIL)

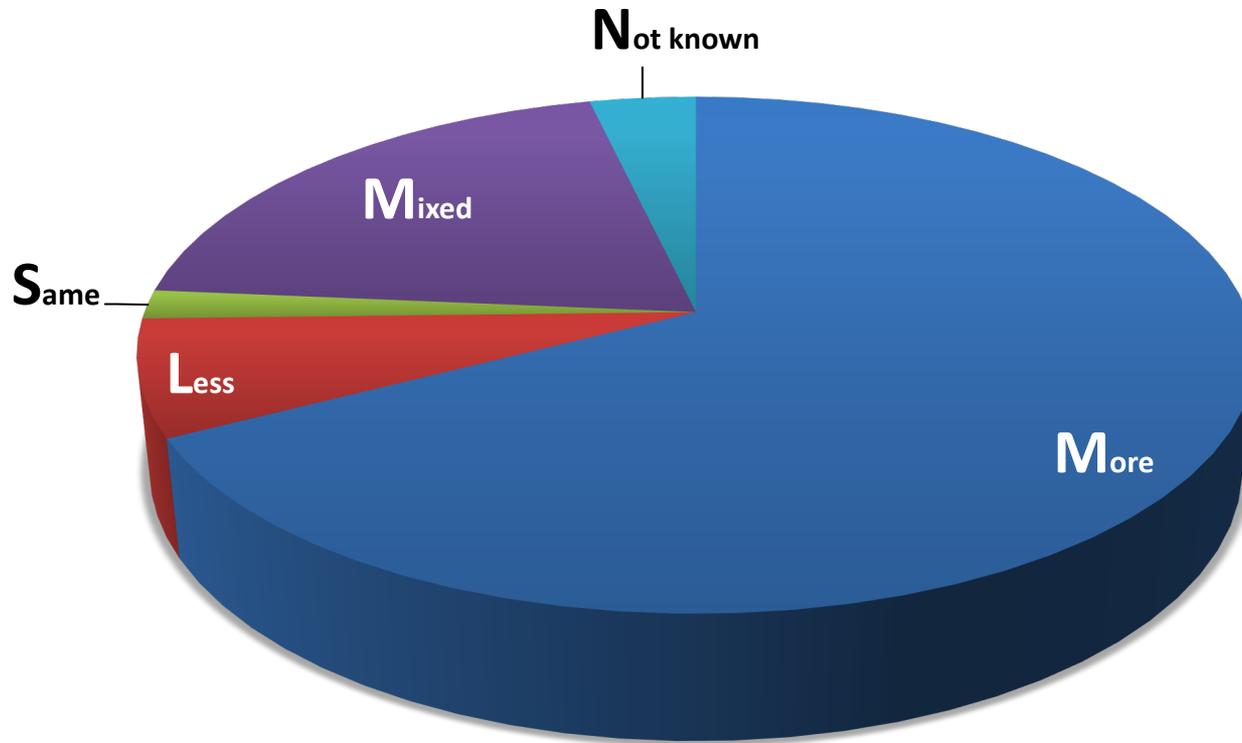
- Which subjects?
- Who teaches CLIL?
- Who decides?
- When introduced?

A definition of EMI (tertiary)

- The **use of** the **English language** to teach **academic subjects** (**other than English itself**) in countries or jurisdictions in which **the majority of the population's first language is not English**



'EMI Growth' (our early research) General trend in 54 countries



Drivers for EMI growth:

- increasing the **international profile** of the institution;
- **increasing** a university's **income** by attracting international students and/or compensating for falling domestic enrolment;
- enhancing home **student mobility**; **Student mobility**, estimated that over seven million students studying away from their home country by 2025. **English as the international lingua franca of academia** increases

Drivers for EMI growth:

- improving **students' English** proficiency;
- using English as a **'neutral language'** in contexts where the national language(s) is/are in dispute.

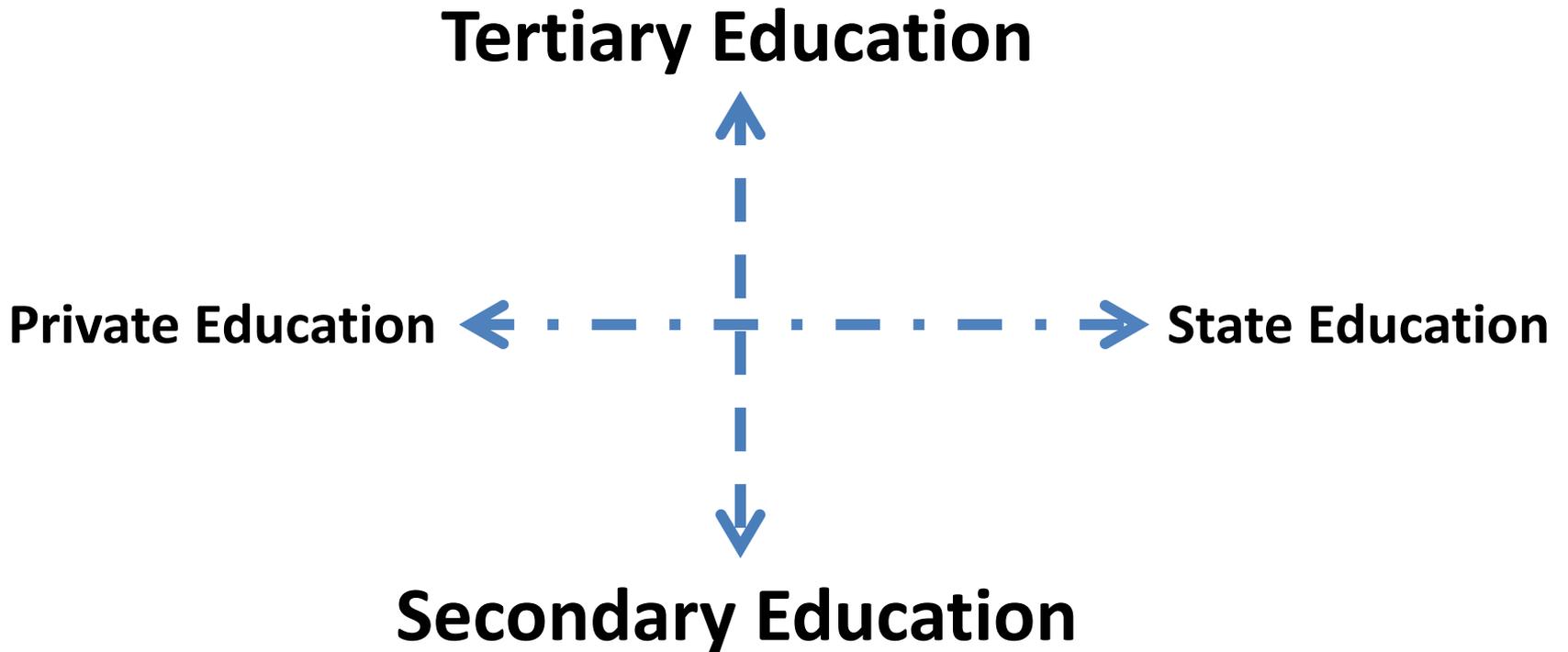
In Europe

- 2012 & 2013 **masters courses** taught entirely through EMI increased **from 3701 to 5258** (Brenn-White and Faethe 2013).
- In the European Higher Education Area **2900 undergraduate programmes** taught through English (Sandström and Neghina **2017**)
- Universities offering **no courses at all** through EMI was as low as **7%**. (O'Dowd 2014)

International Policy Drivers

- 1) In Europe: **the Bologna Process**
- 2) the 2012 Asia-Pacific Economic Cooperation Summit; **the ASEAN**
(Association of South-East Asian Nations)
- English indispensable tool to bring the ASEAN community **closer together & for student mobility**

Relationships and Influences



Differences: secondary -> tertiary

- **Class sizes:** smaller in secondary schools than in universities;
- **opportunities for interaction:** more in secondary schools;
- **Familiarity with students:** teachers in universities less
- **Familiarity with teaching approaches:** students in secondary schools will have become used to their teacher's way of teaching;
- **Learner autonomy:** generally expected more in universities.

CLIL in Italy

- Since 2010 CLIL has been **compulsory** in High Schools and Technical Institutes (YEAR 13) – First country in Europe?
- Not taught if there are no **trained/willing CLIL teachers**
- Formal vocational requirements for content teachers: **B2 level of English** Language + 20 hour **CLIL methodology course**.

Italy: who teaches CLIL?

- In 2003, Law 53 **excluded language teachers from CLIL teaching** and from CLIL training.
- regulations (July 2014 Ministry of Education) attempted **to modify this situation:** guidelines for CLIL activities based on **collaboration between content and language teachers.**

EMI in Italy

- **No formal legal framework** to enforce EMI
- EMI courses **self-selected by students** (have travelled/elitist?)
- 2018: 396 degree courses in 59 universities (**mainly** in the **north** **mainly** in the **Sciences**)
- Entry requirement: **High school diploma**

We investigated (Research Questions)

- CLIL Students' English **vocabulary knowledge**;
- A **potential gap** between learning a subject through a school CLIL context and subjects taught through EMI at university;
- The nature of **classroom interaction** in the two settings;
- EMI students' general **approaches to learning and listening strategies**.

Data collected (NB: Not longitudinal)

- **148 secondary students** = vocab tests [different frequency levels + academic)
- **12 CLIL classes recorded** = analysis of lexical content of teacher talk
- **12 EMI lessons/lectures** recorded
- Questionnaire to probe **learner strategy use in EMI** (N=157)
- **15** stimulated recall **interviews (EMI)**

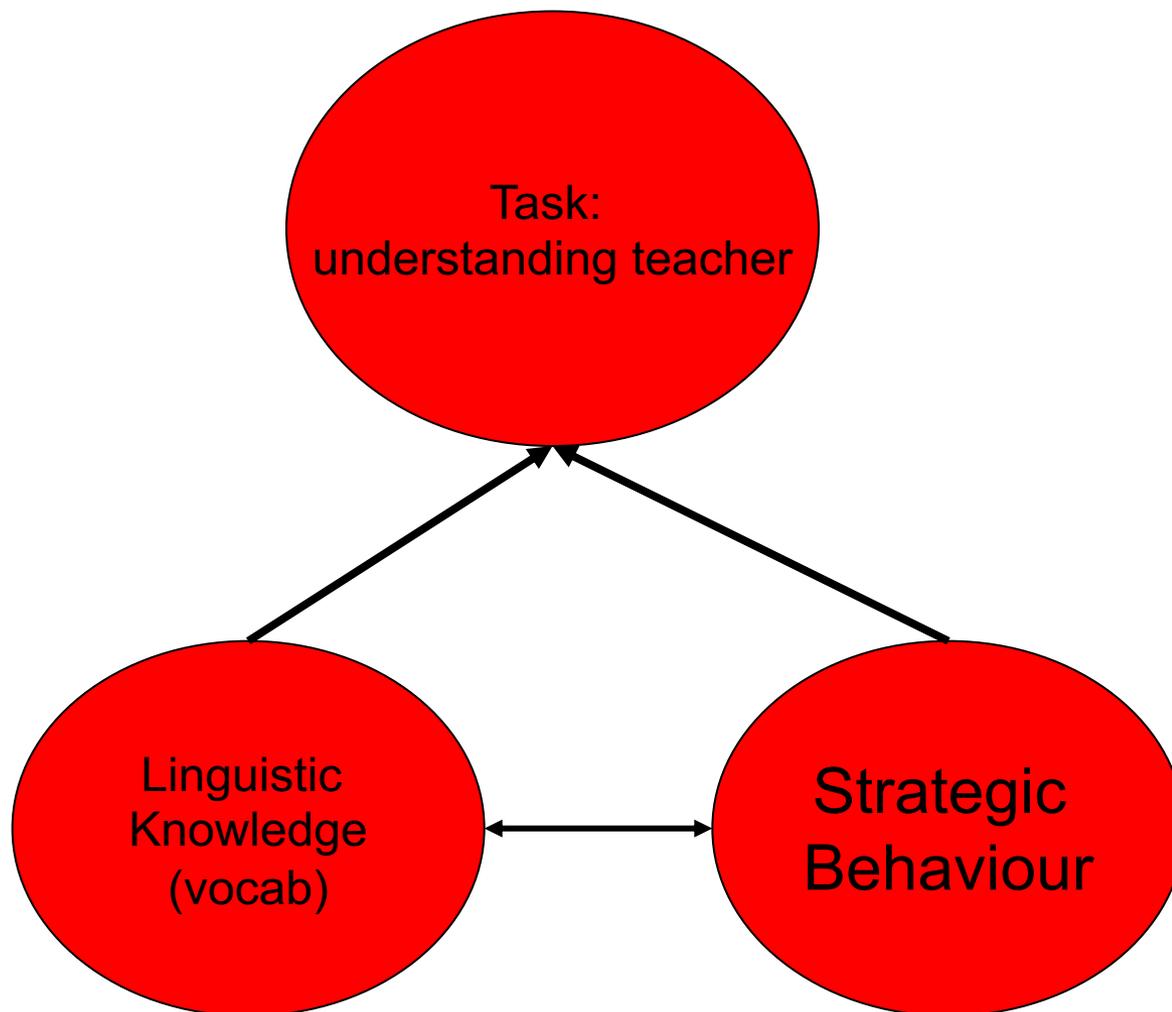
Summary of findings: vocabulary knowledge

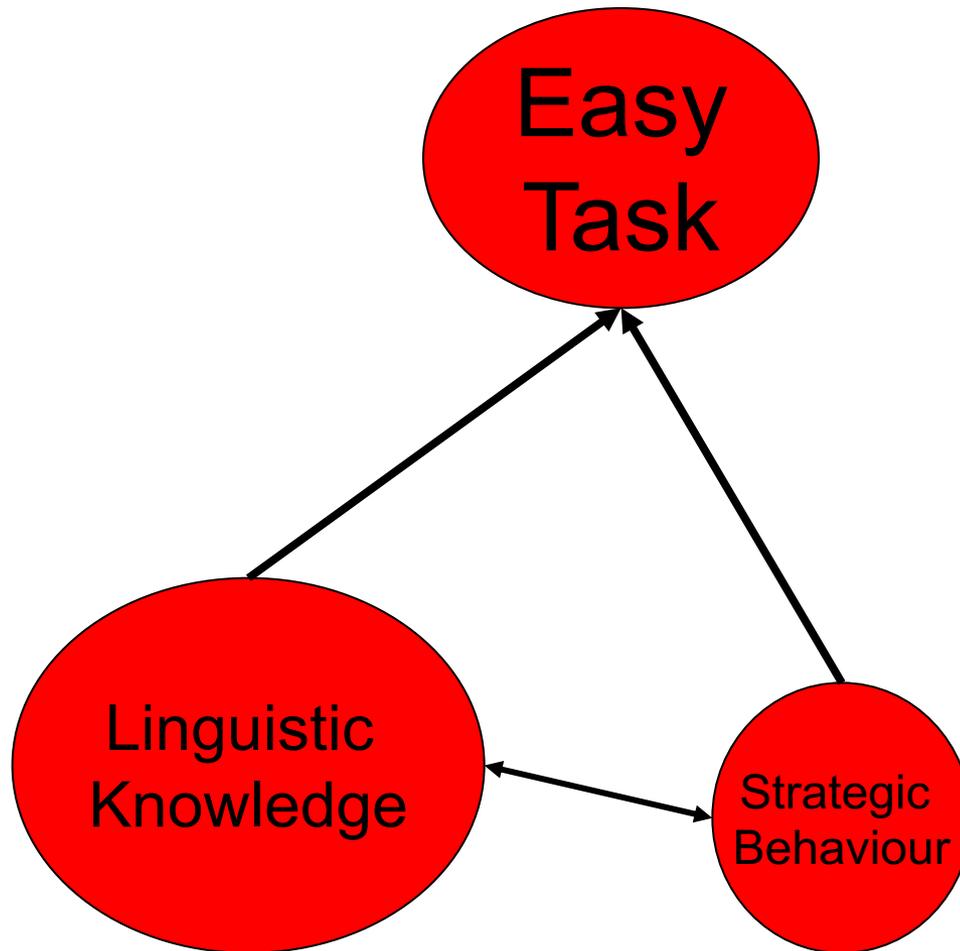
- LEXICAL COVERAGE (at 80%+):
- **test results alone** suggest that the **secondary (CLIL) students** have not sufficiently mastered *any* of the vocabulary frequency levels & **WILL HAVE SOME DIFFICULTY UNDERSTANDING THE TEACHER**

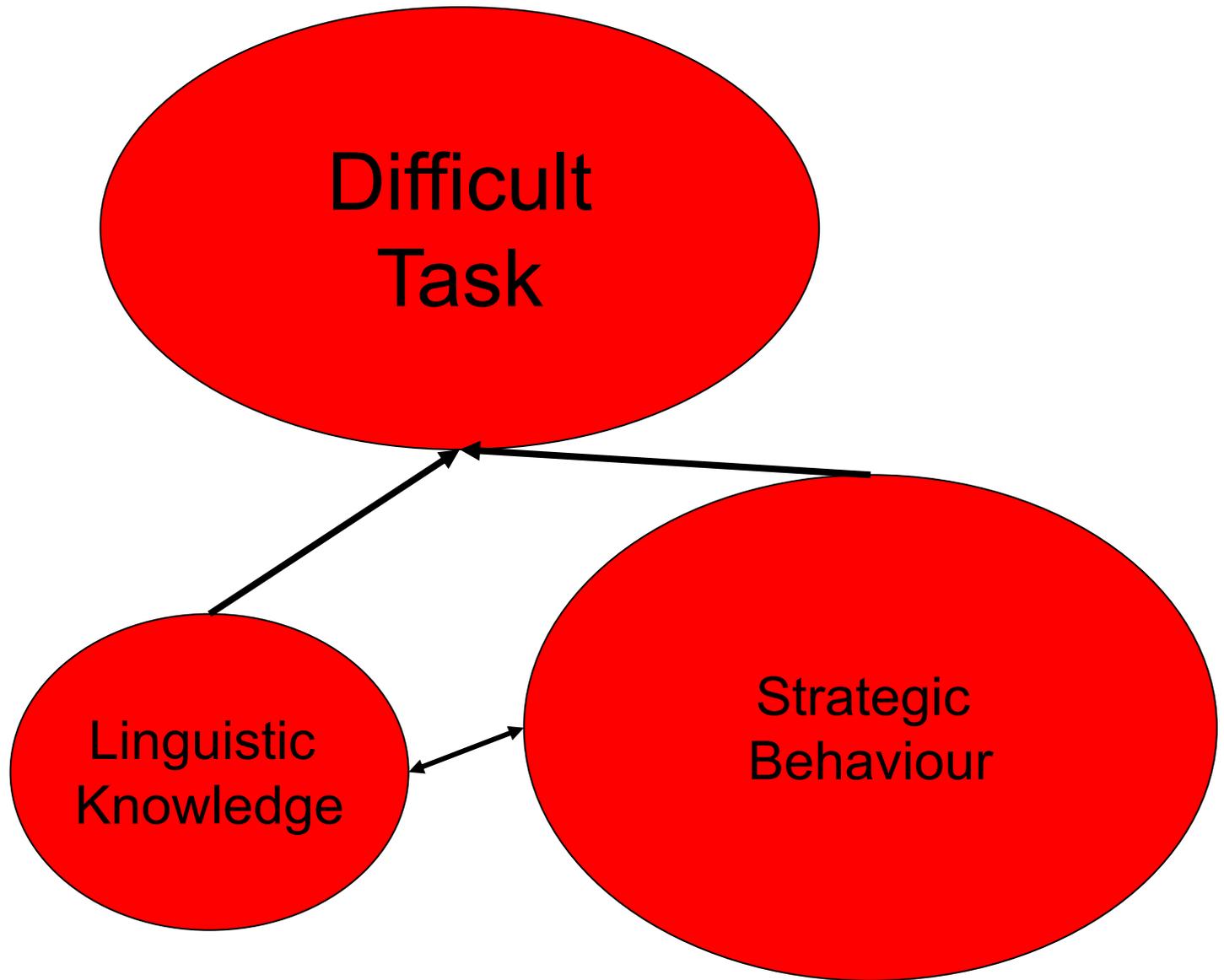
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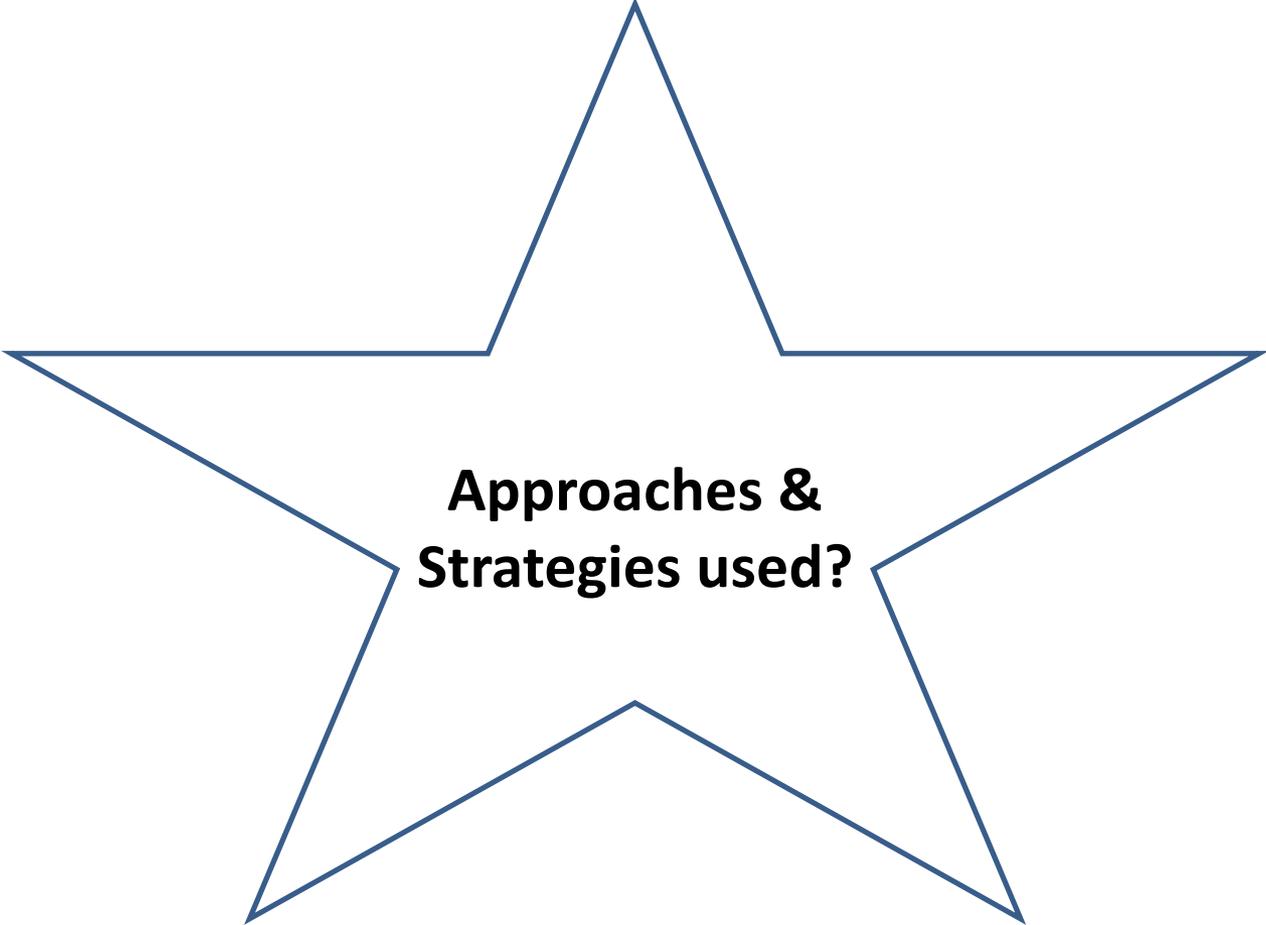
- LEXICAL COVERAGE (at 80%+):
- **test results alone** suggest that the **tertiary** **EMI students** have a better chance of understanding the teacher.
- Put differently: **the lexical gap** at secondary **was greater** than the one at tertiary

Can vocab gap be compensated by strategic behaviour?









**Approaches &
Strategies used?**

Table 7: When you enter an EMI class do you focus more on subject or more on improving English? (1-10 with 10 more on English language)

Response	%
1-subject	15.4
2	11.5
3	17.9
4	18.6
5	21.2
6	7.1
7	5.8
8	1.9
9	0.0
10-English language	0.6
TOTAL	100

Strategies which scored high (they said this is 'true or very true of me'):

DURING the lesson I **make notes of the keywords** used by the teacher

DURING the lesson I **make notes of the explanations** given by the teacher

DURING the lesson I am **aware of the difference between the types of vocabulary** I hear

DURING the lesson I try to infer (**guess**) **the meaning of an English word** I don't know from the context

AFTER the lesson I **review the materials** I have been given

AFTER the lesson I **review the notes** I have made

Strategies which scored low (they said 'not very true or not at all true of me'):

BEFORE the lesson I preview any notes I am given

BEFORE the lesson I preview the topics that are coming up (in books or on the internet)

BEFORE the lesson I preview any vocabulary that is likely to come up in the next class

BEFORE the lesson I listen to lectures on the topic to be dealt with, in English, on the internet (e.g. MOOCs; YouTube)

Strategies which scored low (they said 'not very true or not at all true of me')

- DURING the lesson I ask the teacher to explain individual English words or short phrases
- DURING the lesson I ask the teacher for an explanation of technical words
- DURING the lesson ask the teacher for an explanation of general academic words
- DURING the lesson I ask the teacher for an explanation of everyday words
- DURING the lesson I ask the teacher for an Italian equivalent of an English word I have not understood
- DURING the lesson when I don't understand something the teacher has pronounced, I ask him/her to repeat it
- DURING the lesson when I haven't understood a concept in the subject I ask the teacher, in Italian, for clarification
- DURING the lesson I prefer the teacher to clarify in Italian something I haven't understood in English

“Well I tend to look at the slides, before he starts talking about it. I tend to give a quick look at the slides to see the topic in general and I then have the slides printed. Also, I listen to what he says before and after, visual effects, any pictures or anything on the slides can make me connect it all together.” (Student 13).

*“I’ve never studied before physics in English, so **I have to try to translate my technical vocabulary from Italian to English** at the beginning of the course because I mean I’ve never tried to hear a lecture in physics in English so I had a couple of problems”*
(Student 8).

Summary of findings (EMI)

- STRATEGIC BEHAVIOUR: may compensate but:
before the lesson very little preparation/previewing;
- **during the lesson** very few clarification requests; requests for explanations of technical or academic words; a lot of note taking

Summary of Findings: teacher talk (CLIL/EMI)

- There was **more interaction in the secondary CLIL classes** than the university EMI classes, **but not much more.**
- we felt that a lot of the **teacher talk had been previously 'scripted'** in order perhaps to feel more confident and to gain a degree of fluency.
- **Questioning** was generally of the **lower order type**: checking that students knew the name of a concept or could supply a limited amount of information

CLIL lesson (Chemistry): high level of interaction resulting in medium level of student talk; with, in the main, lower-order questions

- Teacher: Do you know the meaning of the rate of reaction? How, how could you explain the meaning of **rate of reaction**?
- Students: How **fast... the reaction**.
- Teacher: Perfect er what's the difference between <gestures at slide> the red curve and the black curve? Which, which, which reaction is faster?
- Student: **The red one**.
- Teacher: The red one, everyone everybody agrees?
- Students: Yes.
- Teacher: Er what's the difference <gestures at slide> between them? How do you call this line?
- Student: **The energy**.
- Teacher: Yes the, the activation? Energy, okay? That means what is the activation energy?
- Student: **Is the energy**
- Teacher: The energy?
- Students: (various answers called out; phrase fragments)
- Teacher: er Deni?
- Student: Is the energy.

EMI University lesson (Human Biochemistry) of low level interaction; lower-order questions

- **Teacher:** Now, this very artistic picture makes me introduce the real lesson of today. And of course I didn't make this because my sense of art none, but you can see here the eye, so you can see through the vision, but then you can hear from the ear, smell through the nose, or touch through the hand. Through these things there has peculiar way of transmission, even though there are common points which are very interesting, and I will today explain why we eat and need candy and we feel cold or we eat the chili pepper and we feel hot, okay? This is why I like this lesson because of this painting warm and <inaudible>. **Let's start with vision, vision means** that we have to have an apparatus that is able to get the light in a particular part of the spectrum, here is the physical part that corresponds to the vision or light, that goes from 200 or 400 to 700 nanometers. And this is something that in medicine is very important, because the x-ray, the gamma-ray, many of the therapy are done the x-ray, in medicine, in this part of the spectrum... ..Now, **why do we remember the Pentose phosphate pathway, for two reasons**, this is an oxidative catabolic pathway of the glucose.
- **Student:** To make NADPH
- **Teacher:** Very good
- (NADPH = Nicotinamide adenine dinucleotide phosphate)

CLIL Class Corpus

Lessons recorded in the Fifth Year at Scientific High Schools

Two lesson types:

1) 'lecture style' teacher-centred lessons:

- reads from notes
- produces lower order interaction: occasional why/what questions but no time provided to answer
- is not confident in the language (hesitates, repeats terms, mispronounces etc...)
- rarely looks up/rarely uses blackboard
- is visibly uncomfortable in the language
- lack of discipline/lack of attention in the class

The CLIL class

2) Student-centred lessons:

Students are given tasks (in groups or individually) based on previous lesson content/homework/online activities (flipped classroom) /videos watched in class.

-Teachers:

- present well-structured, well-planned lessons
- appear confident in the language
- take a back seat ('I agree' rather than that is right/wrong)
- mainly ask lower order recall questions **to the student speaking** (why/what/where..)

Motivation to study through EMI

- *“ I started the Italian course for just one month, but we were 400 people ... there wasn't a direct contact with the professor and ... it was difficult to even communicate with other people because we were too much. Instead, in the course of English, we are just twenty people, so it was one of the reasons why I chose the course ..” (Student 5).*

Motivation to study through EMI

- improving both English language proficiency and developing content knowledge
- a language learning opportunity,
- a way to foster future opportunities to work internationally after graduation,
- *“my aim is one day to go abroad, so I can practice the profession in another country”*
(Student 3).

Challenges of EMI

- key terms were “*very similar to Italian terminology*” (Student 6).
- “*no more difficulties than studying it in Italian because really it’s just about remembering things in one language rather than the other*” (Student 12).

Challenges of EMI

- *“I believe that there are differences even from each professor here, in university, for one professor you have some struggles that you don’t have with another professor, it really depends on the person rather than the way things are taught” (Student 12)*
- [NB: most students insisted on being interviewed in English – a learning opportunity]

Challenges of EMI

- *The best teacher ‘...tries to broaden the topic and make it more clear than what it’s actually on the slides, because the slides are very synthetic....very short and right to the point, so when he talks, he explains everything a little bit better and goes more in depth” (Student 12).*

Summary of findings: **Transition** from CLIL to University

- University students did not report insuperable obstacles
- **HOWEVER:** Although in Italy technically no selection; some self-selection at transition may be occurring = many university EMI students had **studied abroad** in Anglophone country and/or had had **private English lessons: issues?**

Both CLIL and EMI research suggests

- A different pedagogy is needed
- More student-centred
- Students need to develop (and helped to develop) CLIL/EMI-specific strategies in order to thrive
- Much greater and better quality interaction

good quality interaction in CLIL/EMI classrooms

- ***Extended Initiation-Response-Feedback (I-R-F) sequences*** instead of rigid ones: these extended I-R-Fs (e.g. I-R-F-I-R-F with the same student) allow for further probing by the teacher to establish in-depth understanding of a concept and its associated language.
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- ***Teacher question types*** that require high level cognitive responses from learners, not low-level demonstrations of knowledge already shared. Teacher question types have been comprehensively explored in the education literature generally and now increasingly in the CLIL/EMI literature (Yip and Tsang 2007; Dalton-Puffer 2007).
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good quality interaction in CLIL/EMI classrooms

- ***Long student turns*** instead of short ones to allow the student to express these higher level concepts: these longer turns should particularly include the use of verbs (rather than just nouns) because verbs demonstrate an understanding of 'processes' which are prevalent in most academic subjects and especially science subjects.
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- ***Sufficient 'wait time'*** to allow the thinking processes necessitated by the items above to occur prior, during, and after the student turn.