

Teaching with CLIL: Learning and Language Come Together

1. Introduction

The educational concept of Content and Language Integrated Learning is an invaluable tool in promoting learner understanding of a secondary language. It is one of the crucial added-value propositions of bilingual education: rather than a simplistic approach to teaching in a foreign language, there is an emphasis on the integration of subject and language learning. Language is a shared primary concern, with subject learning. CLIL connects multiple intelligence teaching, multi-modality, activating exercises, and cooperative learning, creating a unified learning experience within bilingual education.

The research team, consisting of two teachers of English and a history teacher, examined the balancing act that teachers new to CLIL experience through a school-based case study. In Dutch bilingual education (hereafter referred to as TTO) there is an emphasis on balancing language and subject learning: the ideal environment in which to implement CLIL teaching strategies. A practice based research focusing on one particular school provides more direct insight into some of the difficulties in implementing CLIL teaching strategies there, while also scaling to more general advice. By examining the awareness of CLIL among teachers and pupils it is possible to discern the relation between what is taught and what is learned: is CLIL experienced in a similar manner by both teachers and pupils? Moreover, there is the consideration of CLIL in practice: is it possible to distinguish CLIL teaching strategies within subject lessons by an outside observer? Recommendations will be made for the improvement of CLIL implementation.

1.1 Research Problem

The RSG Slingerbos has been a TTO school since 1997, and the TTO team intended to emphasize the implementation of CLIL teaching strategies for in the classroom, during the 2010-2011 school year.

Improved CLIL implementation has been an intention of the RSG Slingerbos for several years. Emphasizing CLIL teaching strategies aims to increase effectiveness of English language education, as well as unifying the TTO team. Having a shared identity and a similar core working method would make the TTO more recognizable for the pupils and will support their English language learning.

This research measured the level of awareness of CLIL in November 2010 and May 2011 through questionnaires (for teachers; second and third year pupils), the level of understanding and implementation of CLIL through interviews, and the usage of CLIL in May through classroom observations. In compiling and analyzing the data, the research will examine: the state of CLIL awareness, understanding, and implementation; the pupils' perception of bilingual education and awareness of CLIL; what the TTO teachers say they do; and, what the TTO teachers do in practice. Furthermore, the research will make recommendations for the TTO team to support CLIL awareness and usage in the future. These recommendations, while derived from a case study school, will scale more generally to other TTO schools.

Thus, the research question is: *What can be done by RSG Slingerbos to improve the use of CLIL in the bilingual (TTO) department?*

This question is divided into several sub-questions:

- a. How can CLIL be measured?
- b. What has been done at RSG Slingerbos to further raise the awareness and use of CLIL in the TTO department?
- c. What is the level of awareness of CLIL at RSG Slingerbos in November?
 - i. Among pupils
 - ii. Among TTO teachers
- d. What is the level of awareness of CLIL at RSG Slingerbos in May?
 - i. Among pupils
 - ii. Among TTO teachers
- e. What has changed between November and May?
- f. Which measures applied by the RSG Slingerbos TTO department have been effective?
- g. What do teachers want to learn about CLIL?

1.2 Theoretical Framework

'Content and Language Integrated Learning' is an umbrella term for many different forms of bilingual teaching (Lorenzo et al. 419, Mehisto et al. 12), which makes it difficult to define absolutely, what its core values are, and the limits of CLIL theory. The working definition of Content and Language Integrated Learning derived in this section will be used in evaluating the awareness and use of CLIL theory at RSG Slingerbos. This definition of CLIL is not absolute. Instead, it aims to provide a list of concrete elements that are essential to CLIL theory, which can be measured in everyday classroom situations.

CLIL, a bilingual teaching theory, stresses that language and content materials should be synchronised to form a unified curriculum. Simply put, it means that subjects such as mathematics, geography and physical education are taught in a foreign language. More accurately, it means adapting language and subject matter to provide learners with a natural way of acquiring a new language through subject learning. Researchers investigating bilingual education point out that the integration of both learning objectives will improve the results in both areas.¹ Theorists explain this as a result of establishing meaningful connections between subject matter and language functions. These meaningful connections increase the usefulness of language and subject matter, making it easier to remember both.

Additionally, CLIL theory has incorporated the best practice of many different bilingual teaching theories and projects to provide an enormous body of teaching knowledge. Although different authors and investigators focus on different elements, the following elements can be considered core attributes of CLIL theory, which overlap at various points:

Teaching various subjects in the target language

This is the most noticeable core attribute of CLIL and is mentioned in all CLIL theory consulted (Graaff et al., Lorenzo et al., Dale et al., Hillyard, Mehisto et al.). The integration of language teaching and immersion in another subject provides the possibilities and necessity for all other core attributes.

Synchronising language and content learning objectives

The integration of objectives forces teachers and pupils to combine both language and content matter into every lesson, connecting them to each other to enhance processing of information and thereby learning effectiveness (Dale et al., 72-4). The use of learning objectives and the

¹ Graaff, Koopman and Westhoff, "Didactische," (17). Lorenzo, Casal and Moore (426), (Lorenzo et al,

formulation of those goals is in itself a part of CLIL: it helps structure learning (scaffolding) and provides pupils with some learning strategies (Mehisto et al., 29).

Adapting language input

To ensure meaningful communication, it is important that the language in the classroom is tuned to the level of the students (Mehisto 29). This includes spoken language and written language. The perfect level of foreign language input is just above the pupil level, often referred to as *i+1* (Dale et al. 20-1, 39-48). The selection of input also includes considering different learning styles and multimodality, discussed below.

Stimulating language output

According to Dale et al., *“the stimulation of language output is vital for learners to process and deepen their understanding of content and their ability to use language effectively”* (110). The production of language and content both enhances and evaluates the learning process. CLIL requires pupils to learn by using the language and it is important to stimulate the use of language where possible (Mehisto 29).

Teaching learners strategies for their learning

One of the means to help pupils to deal with input and to produce output is to teach them how to solve problems themselves. In addition, it makes pupils more independent, allowing them to come closer to authentic language exchange.

Activation of learner’s prior knowledge

Another way to help pupils understand and participate in foreign language classes is to first activate the knowledge they have available. In addition, activation may increase motivation, provide more structure to the lesson and can implement individual student’s differences into the lesson (Dale 15-23).

Cooperative learning

To create a meaningful language exchange, it is important that pupils spend time working together and learning from each other. It also facilitates language processing and production, as pupils can help each other understand and produce language and content (Mehisto 30).

Scaffolding

Scaffolding is the practice of facilitating learners’ understanding of language or content, as well as the production of both. This can be done in many ways, including through the other CLIL elements. Essentially, it displays the teacher’s awareness of the difficulties of providing content in a foreign language, which he or she then counters by providing the pupils with the tools and help to work with the materials. (See also Mehisto 29 and Dale et al. 73, 127)

Multimodality

Multimodality in lessons ensures pupils will both receive input and produce output in different ways: visual, spoken, written, hands-on and practical (Dale et al. 41). This facilitates and broadens understanding, but is also a way to provide pupils with ‘modes’ that cater to different learning styles and learning strategies.

The combination of all these elements in everyday classroom practice can help define Content and Language Integrated Learning. Although these elements have been distilled from common grounds of various authors, it is by no means extensive. This is a result of the conceptualisation of CLIL itself, since it is not a fixed system, but rather a name for the collection of teaching and learning theories that have sprung from bilingual education. Because of this, CLIL methodology and theory may shift to include new ideas whenever they prove useful for teaching in a bilingual setting. This makes CLIL difficult to define absolutely, but increases its potential as it “is a value-

added, as opposed to a subtractive, approach that seeks to enrich the learning environment” (Mehisto et al., 27).

1.3 Hypotheses

The hypotheses for the research sub-questions are:

- a. CLIL is measurable by observation using an established set of criteria considered to be CLIL, using an adapted existing CLIL observation tool.
- b. The RSG Slingerbos TTO department will have held meetings and workshops to raise the awareness and use of CLIL during the 2010-2011 school year.
- c. Pupils will not be aware of CLIL as a term. Teachers will generally be aware of CLIL, but not proficient in its use.
- d. Pupils will likely remain unaware of CLIL as a term. All teachers will be able to define CLIL and indicate strategies they employ in their lessons that are indicative of CLIL.
- e. There will be limited change between November and May measurements for pupils. Teachers will be more aware of CLIL and confident in its usage in May than in November.

For sub-questions ‘f’ and ‘g’, there are no specific hypotheses.

2. Method

2.1 Study Cohort

This research studies TTO teachers of various subjects and pupils in the TTO department. Ten teachers were given a questionnaire on CLIL awareness and usage. Six teachers were interviewed, five teachers were observed (of which one was not previously interviewed for this research), and the TTO team leader was interviewed. These teachers have varying levels of teaching experience in the TTO department, ranging from one year (this current school year) to numerous years. The pupil questionnaire was administered to 35 pupils, comprised of a second and third year class. The choice for this group of pupils was made on their level of exposure to bilingual education, and the reverting to Dutch language education that occurs in year 4 or 5.

2.2 Tools

As CLIL is an umbrella term for many different forms of bilingual teaching, the core attributes of CLIL as shared by different sources,² were used as a checklist of CLIL awareness and use. This was done in order to measure the degree of CLIL awareness in everyday teaching circumstances. For clarity, these core elements are relisted here:

- Teaching various subjects in the target language
- Synchronizing language and content learning objectives
- Adapting language input
- Stimulating language output
- Teaching learners strategies for their learning
- Activation of learners prior knowledge
- Cooperative learning
- Scaffolding
- Multi-modality

² Refer to section 1.2 and works cited for further information.

To identify the use of these CLIL elements in class, a CLIL observation tool developed by Graaff, Koopman, and Westhoff was adapted. Graaff et al. state that effective CLIL pedagogy is similar to applying language-teaching strategies in other subjects. Using Westhoff's second language acquisition penta-pie, they theorize that if these five "basic ingredients for effective language learning and teaching activities" are all represented in the lesson (Graaff et al., *Identifying 16*), the teacher displays CLIL behavior. Additionally, they establish examples of the use of these elements in class, essentially providing a checklist of behavior that shows awareness and use of CLIL theory.

The second language acquisition (SLA) penta-pie consists of five categories: exposure to input, meaning focused processing, form focused processing, output production and use of strategies (16). These five categories overlap with nearly all of the core CLIL elements listed above. For example, "exposure to input" includes teaching in the target language, adapting language input, and scaffolding. With the observation form developed by Graaff et al. as a basis, we added observation criteria to complement the observation form with the core values listed above. Elements such as cooperative learning and activation of prior knowledge were added to the form, while the other elements were worked into the five categories of the SLA penta-pie. This way, the checklist ensured coverage of several CLIL authors and theorists to investigate in what ways the teachers at RSG Slingerbos display elements of CLIL theory in their lessons.

This summary of CLIL core attributes was used to establish the criteria for all research methods.³ These were:

- Questionnaires for teachers, intended to gauge an initial awareness of CLIL terminology and aims;
- Questionnaires for pupils, designed to measure pupil awareness of CLIL elements in their curriculum;
- Interviews with TTO team teachers, intended to further investigate teacher awareness of CLIL theory;
- An interview with the TTO team leader, intended to shed more light on the renewed focus on CLIL implementation;
- A roundtable discussion with a group of TTO teachers, intended to gauge in what way the TTO teachers regarded the implementation and to further investigate the teacher's knowledge and opinion of CLIL theory;
- Observation of bilingual lessons to measure the use of CLIL elements in teaching practice.

Teacher questionnaires

In order to assess the level of Content and Language Integrated Learning (CLIL) awareness at the RSG Slingerbos a brief questionnaire was administered to ten members of the TTO team in November, with the same questionnaire repeated in May. The questionnaire consisted of nine questions with responses given on a seven-point scale, where one was "no" and seven was "yes".

The questions can be divided into four categories: CLIL understanding (questions 1 and 2), CLIL valuation (question 3), CLIL support and implementation (questions 4, 5, and 6), and CLIL preparation and application (questions 7, 8, and 9).

Pupil questionnaires

In addition to teacher questionnaires, 35 pupils were also administered a brief questionnaire to measure their awareness of CLIL. Again, the questionnaire consisted of nine questions with responses given on a seven-point scale, where one was "no" and seven was "yes".

³ All tools used can be found in the Appendices.

The questions can be divided into four categories: valuation of bilingual education (questions 1, 2, and 3), content and language balance (question 4), basic knowledge and awareness of CLIL (questions 5, 6, and 7), and CLIL valuation (questions 8 and 9).

Teacher interviews, TTO team leader interview and roundtable discussion

Interviews were conducted in November and May in order to further establish the level of CLIL awareness among TTO teachers. The November interviews investigated the level of understanding, awareness, and usage of CLIL prior to the systematic renewed emphasis on CLIL intended for the 2010-2011 school year. The interviews gauged the then-current awareness of CLIL for these teachers, but also inquired about the hopes and expectations for the renewed emphasis. The May interviews investigated whether there was improvement in CLIL understanding, awareness, and usage among the previously interviewed teachers. Additionally, interviews with other teachers allowed for gauging the state of CLIL in the TTO team more generally, looking back and reflecting upon the renewed emphasis on CLIL, as well as providing the possibility to look forward. An interview with the TTO team leader gave insight into the renewed emphasis and steps that had been taken. Lastly, a roundtable discussion was conducted with some TTO teachers and the TTO team leader in order to establish a broader sense of how CLIL is perceived within the team.

Lesson observations

Five lessons were observed. Lessons were observed in pairs or threes to prevent biased interpretations. The lessons were selected from the English and bilingual teachers of the TTO department. The observations were scheduled only two days in advance to reduce the chance of artificially 'enhanced' lessons. Three of the observed lessons were taught to the same second year class.

During these lesson observations, the aforementioned adapted observation tool was used. The observation was directed at finding elements of language teaching in all subjects, as presented in the penta-pie. The complete 'CLIL observation tool' was used as a checklist for identifiable language teaching strategies in these lessons. Furthermore, there was space to note additional tools of CLIL as explained in the rest of the theory section, such as pupil activation, multi-modality and the connection of language and content objectives for each teaching unit.

After each class, one of the observers would question the teacher to validate the value of the observation. These questions were the following.

- 1. How did you select your materials? Did you adapt them for this lesson?*
- 2. Was this an average lesson? If not, how was it different?*
- 3. On a scale of 1 to 10, how CLIL was it? (Would you change anything?)*
- 4. What is the history with the class? (Mentor, how many years, etc.)*

Question 1 concerns the preparation of appropriate-level English material, ideally i+1 as stated in CLIL theory. Question 2 concerns average use of CLIL activities and strategies, and allowed for additional information from teachers about CLIL activities and strategies they employ. Question 3 gives an insight into the teacher's awareness of CLIL theory and allows for evaluation of conscious effort in applying CLIL this lesson or more generally. Question 4 contextualizes the relationship between teacher and pupils.

3. Data

3.1 Questionnaire results

Teacher questionnaires

As can be seen in figure A, the most significant differences between the November and May questionnaires are in questions 4, 7, 8, and 9. The scale ranges from 1 (“no”) to 7 (“yes”).

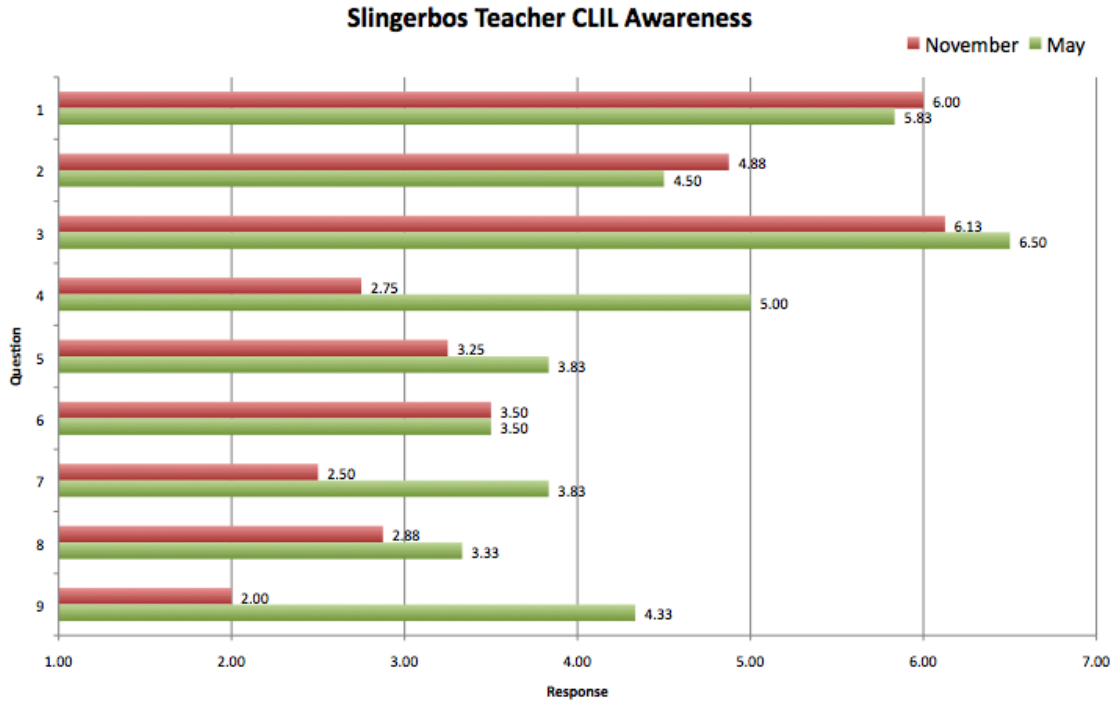


Fig. A

Question 4 stated: ‘I have had instructions on how to use CLIL.’ Question 7 stated: ‘CLIL lessons are more difficult to prepare than non-CLIL lessons.’ Question 8 stated: ‘CLIL lessons are more difficult to teach than non-CLIL lessons.’ Question 9 stated: ‘When I don’t have enough time to prepare a lesson I refrain from using CLIL.’

Pupil questionnaires

As can be seen in figure B, there are no significant differences between the November and May questionnaires.

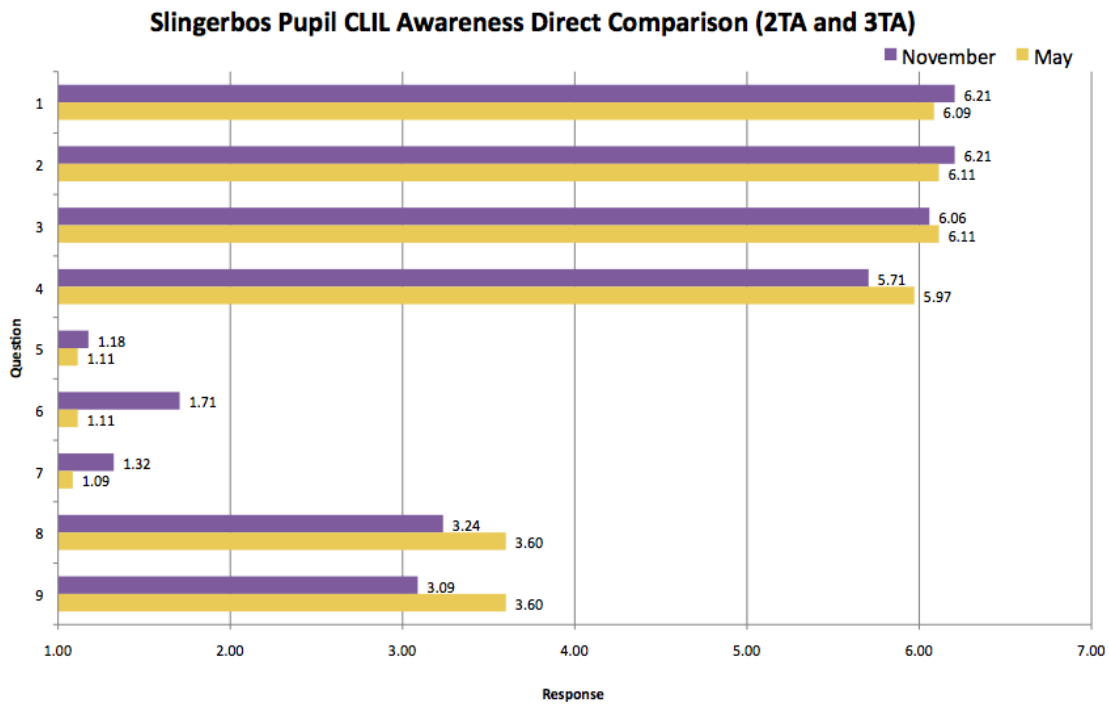


Fig. B

Pupil responses to questions 8 and 9 indicate neutrality or an inability to answer, as pupils are unable to evaluate what they do not know. Pupil responses to questions 1-4 indicate positive valuation of bilingual education. Pupil responses to questions 5-6 indicate unawareness of CLIL as such.

Teacher and pupil responses can also be compared using question 4 from the pupil questionnaire and questions 2 and 6 from the teacher questionnaire. Question 4(p) asks the pupils to value the balance between content and language within subject lessons: essentially this asks them to value CLIL, regardless of their knowing the term. Question 2(t) asks the teachers whether they actively use CLIL principals in their lessons, and question 6(t) asks them if they believe CLIL is well-implemented at the school.

As can be seen in figure C, there is a discrepancy in results.

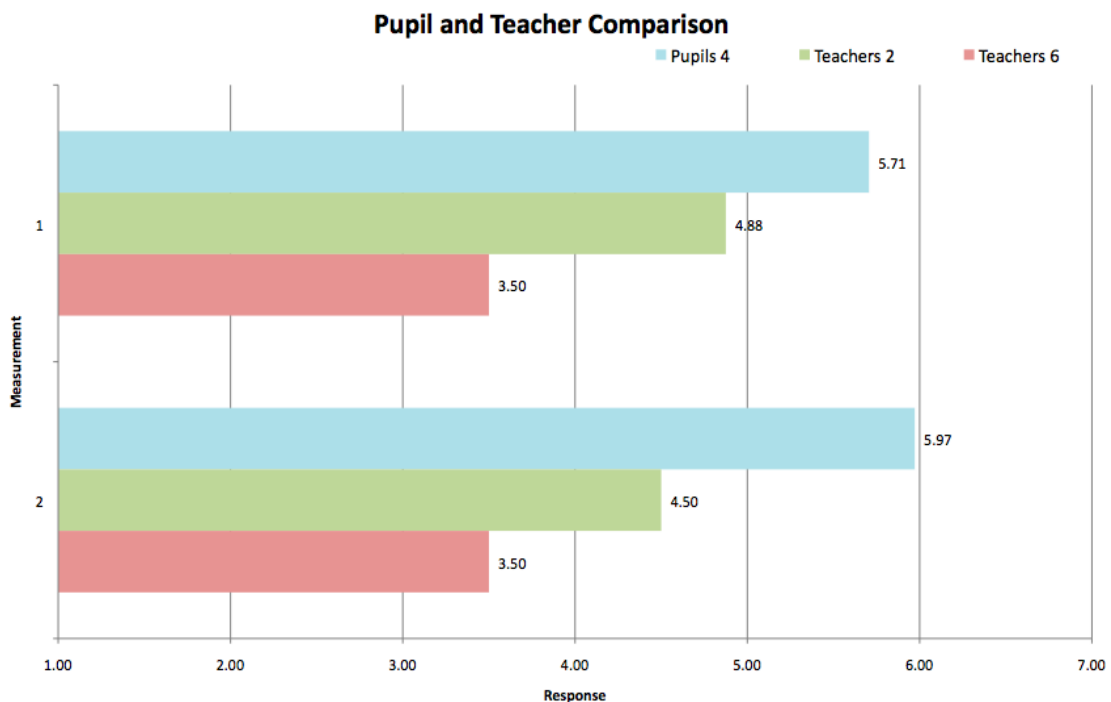


Fig. C

In November (measurement 1) pupil responses indicate a positive valuation of the balance between subject and language learning within subject lessons. Teacher responses indicate some use of CLIL principles, and an average valuation of CLIL implementation at the school.

The teacher responses to question 2 (“I actively use CLIL principles in my lessons”) and 6 (“Do you believe CLIL is implemented well at RSG Slingerbos”) have not significantly changed from November to May. Pupil responses to question 4 (“There is a good balance between language learning and content learning in lessons”) also show no significant change between November and May.

3.2 Interview results

The interviews conducted with the TTO teachers and the team leader gathered information in the following categories: understanding of CLIL; implementation of CLIL at the RSG Slingerbos; hopes and expectations; what teachers say they do; and, how could/should CLIL be emphasized.

Understanding of CLIL

In the November interviews, TTO teachers were first asked their opinion on bilingual education. The prevailing sentiment was that CLIL was relevant and has practical use. When asked this question, respondent 2 stated *“It’s a good way of getting pupils to learn [...] the English language.”* Respondent 1 suggested that the emphasis on speaking English was of particular added value. *“I think that’s the most important thing, to actually start speaking.”* Some teachers expressed concern with the structure of bilingual education in the Netherlands, as expressed by respondent 2: *“The question is whether you reach your goal or not, because of course they have to do Dutch state exams [...] they have to relearn everything in Dutch.”* The TTO teachers were generally positive about bilingual education.

Teachers were asked to describe what CLIL was, in order to make the link between bilingual education and CLIL methodology explicit. Teachers were familiar the CLIL acronym, though they had difficulty providing a concrete, practical definition. According to respondent 2, you *“teach the language as well, in your lessons on another subject. You can do that in many ways, of course.”* Some examples of tools were given, such as glossaries, grammar explanations, and corrective feedback. Comparing interview responses with questionnaire results, the TTO teachers we polled were confident in their questionnaire response (to the question ‘I understand what CLIL is’) but less so in the interviews.

Implementation

In the November interviews the TTO teachers expressed disappointment with the implementation of CLIL at RSG Slingerbos. They felt more could be done to support and utilize CLIL. Referring to the then-current state of implementation, respondent 1 stated: *“I don’t think there is a lot of implementation.”* This is also reflected in the questionnaire response to question 6, ‘Do you believe CLIL is implemented well at RSG Slingerbos’. These teachers also suggested, however, the connection between modern teaching methods and CLIL and conveyed a general sense that CLIL could be in use without awareness.

“Everyone does use CLIL and in different ways, but I think modern ways of teaching have CLIL in there without knowing sometimes that it is CLIL. You just do it without referring to it as CLIL.” (Respondent 2)

This belief, that CLIL has been present as an intrinsic thing yet could use more implementation and support was also echoed in the May interview with the TTO team leader:

“CLIL is the methodology of the TTO, which we’ve been doing since 1997. In the first instance more subconsciously, or consciously but less planned out, and now we’re taking a more structured approach.”

Hopes and expectations

Teachers were also asked in November for their hopes and expectations of the renewed emphasis on CLIL. Generally the teachers felt that CLIL had not been supported sufficiently or explicitly enough, and required additional emphasis. Meetings and seminars were seen as potentially useful, and explicitly mentioned in the interviews as being included in the new emphasis. Teachers were positive about meetings and seminars as they might provide *“some general ideas about what you could use and what you have to do in your lessons.”* Respondent 2 also expressed some discomfort at the idea of a top-down approach to emphasizing CLIL use:

“I don’t know if it’s a very wise idea to do it top-down, because then it’s something you have to do, and I think it’s better to get it [...] mouth to mouth and colleagues talking about it to each other and telling the success stories of course. But also being realistic and telling what’s not working. So, a couple of people are working with it and then it starts to spread, I think that’s a better way of implementing it.”

Respondent 1 expressed in November an explicit hope that there would be more top-down support, and in May stated that this hope and expectation was not met. *“I had expected more information from [...] the team, some more input.”*

What teachers say they do

In the November interviews teachers also stated what they were already doing to use CLIL in their classes: glossaries, grammar explanations, and corrective feedback. Teachers felt they could do more, which is reflected in the questionnaire result for question 2 ‘I actively use CLIL principles in my lessons’. The nearly unchanged result for this particular question in the questionnaire is echoed in the May interviews, as the teachers continue to emphasize that there is room for improvement.

In the May interviews teachers expressed that they had integrated some more CLIL into some of their lessons.

“Because all my lessons are already prepared and in my computer, it’s only for two new classes that I have to make new lessons [...] and that I integrate CLIL more, and am more aware that I have to do that than before.” (Respondent 3)

Rather than having learned new tools or methods, some teachers feel they have been made aware of their existing teaching methods and strategies being CLIL.

“It’s not quite that I learned something new, as that I maybe put it in the frame of being CLIL. It reminded me a lot of what I learned during my studies [...] it was more confirmation of what I already try to do in my lessons.” (Respondent 2)

This connects to the general perception that teachers may already have been doing CLIL without knowing it explicitly.

How could/should CLIL be emphasized

In the November interviews the TTO teachers explicitly stated that the renewed emphasis on CLIL would be supported through workshops and team meetings. There was, however, a sense that time constraints could cause it to fall short.

“I think we just need more time and more of those meetings to sit down and compare lessons and discuss different options that we have [...] but it all depends on how much time we can spend on this as a team and how much [the team] can motivate us to do this.” (Respondent 3)

"[We] didn't have enough time to do what we originally planned to do, which was a lot more." (Respondent 6)

Interesting is how the teachers' perception of the renewed emphasis differs between November and May: when looking at the questionnaire data, CLIL appears to be viewed more as an additional burden in May than in November, something that is also reflected in the interviews.

Roundtable discussion

In the roundtable discussion, held with four TTO teachers and the TTO team leader, there was acknowledgement that the renewed emphasis had fallen short of its goal. *"I think we haven't done enough [...] I'm sure we can do much better."* (Respondent 4) Though it was on the agenda for this school year, *"it didn't work in the way we had planned it."* (Respondent 9) Time was considered a factor, not only in applying CLIL to lessons but also in learning more about CLIL and developing teacher understanding of it. *"We all want to, but time [...] we always start with the best intentions."* (Respondent 2) The teachers expressed a desire for more theory and background information in order to understand CLIL more fully, explicitly mentioning the CLIL observation tool penta-pie (Graaff, Koopman and Westhoff) used in this research. *"With theory it's much easier to understand what CLIL is supposed to be, or different things you could do with CLIL."* (Respondent 3) There was general agreement that TTO teachers require a clear idea of what CLIL can mean for them, and that theory plays a role in this. *"I think, if we have more theory, if we could just discuss that during a meeting at the beginning of the school year, and say 'this is really at the basis of what we're trying to do here', it can work."* (Respondent 3) Moreover, while the teachers felt that additional meetings were useful in sharing of experiences and best practice examples, it *"did not clarify to everybody what we were supposed to do."* (Respondent 2) While the teachers all expressed a firm endorsement of bilingual education, in their questionnaire responses as well as their individual interviews, there was again some uncertainty about CLIL: *"we're not convinced it's a good thing, that it can work for us yet, but we need more theories"* (Respondent 4) in order to assess its use in the classroom. Moreover, some teachers expressed the subconscious level at which CLIL teaching may already be taking place.

"I think that, more or less, I do CLIL things without thinking about it [...] but I think it would be a good idea to have something to work from. I think it's a good idea to have a better understanding about what CLIL is. I might be doing it without putting the name CLIL to it. Maybe you're doing more than you say you know." (Respondent 2)

In terms of acknowledging shortcomings and room for improvement, respondent 4 states *"we've created more awareness of that."*

Looking forward, the teachers suggested that it would be important to observe CLIL usage, implementation, and how lessons have changed, by looking not only at input and support but also by examining results. In short, teachers feel that a more holistic approach to CLIL would be most effective in improving understanding and use. *"Now that we've created more awareness [...] we need to think about what would work [...] peer assessment, visiting each others' lessons, giving each other tips and feedback [...] It would work, but time-wise [...]"* (Respondent 4)

3.3 Observation results

Observation – Respondent 3 (History)

| CLIL category | Observed behaviour |
|---|--|
| 1 Input-based processing | Teacher speaks slowly, clearly and uses simple language. |
| 2 Meaning focused-processing | Students are given the opportunity to write. |
| 3 Form-focused processing | The teacher provides no language framework for writing a letter and assumes the pupils are able to do this by themselves. Some mistakes are addressed, but there is no explicit correction. |
| 4 Facilitation of output production | The pupils are asked to write a letter, which allows them to produce English. This process is supported by providing a list of content demands. Pupils are not encouraged to talk in English; no 'steering.' Pupils are not encouraged to share their ideas. |
| 5 Teacher facilitates use of strategies | - |
| Other CLIL components | - |
| Post-observation interview | |
| <p>The example overhead projector sheet was made by the teacher. However, there has not been much attention for the material preparation.</p> <p>Lessons usually have three parts: checking homework, an activity, doing homework. This lesson was mentor lesson, different approach. Some lessons are "more CLIL" and include visual aids.</p> <p>No rating. It was in English, some writing, but no language goals. If she would do it again, she would check the letter writing skills with English section colleagues.</p> <p>The teacher taught this class for two years and is also mentor this year.</p> | |

Observation – Respondent 5 (Physics)

| CLIL category | Observed behaviour |
|---|---|
| 1 Input-based processing | Teacher uses body language to support language, showing sequences and movements. There are also visual representations of the electrical circuit. Teacher adapts language, but also includes so new words and terminology and shows the meaning of the words by pointing at objects. Language is both literal and figurative. |
| 2 Meaning focused-processing | At the beginning of the class, pupils' understanding of the terminology is checked using control questions. The teacher uses similes to explain the content, comparing the electrical circuit to shopping malls. Next, they do a practical exercise, working together in English. There is practice time. |
| 3 Form-focused processing | The teacher corrects one mistake by echoing (correct -> correctly), but ignores some other mistakes. Pupils cooperate in their assignments, but do not seem to be conscious of their English. |
| 4 Facilitation of output production | The teacher asks questions and encourages pupils to share their findings with the teacher and each other. The teacher displays many small affirmations (e.g. good job, well done, now try this). Pupils display a lot of code-switching. This is only explicitly addressed once. Teacher keeps talking in English, sometimes with emphasis. |
| 5 Teacher facilitates use of strategies | At the end of the class, the teacher asks the pupils what they learned and evaluates the answers. The teacher repeatedly stresses that pupils have to take notes during the exercises. |
| Other CLIL components | Visual aids present. Content aims, but new vocabulary is also addressed. |
| Post-observation interview | |
| <p>The introduction talk was a standard introduction to the topic, although it is sometimes supported with a PowerPoint presentation.</p> <p>This was an average class. The blackboard was used frequently and they had learned something at the end and the teacher is happy with the result.</p> <p>A "CLIL activity" that is frequently used is a crossword assignment, where pupils have to fill in the questions instead of the answers.</p> <p>The teacher finds it hard to judge the level of CLIL in this class, but settles for a seven. CLIL is a confusing term, which makes it hard to consciously implement. If there were ten more minutes available, the teacher would have spent more time on evaluating the answers at the end.</p> <p>The teacher has been teaching this group since the beginning of the year.</p> | |

Observation – Respondent 6 (English)

| CLIL category | Observed behaviour |
|--|---|
| 1 Input-based processing | The teacher has adapted a clear, simple form of classroom English. The teacher switches to Dutch at times, since the method is in Dutch in this case. |
| 2 Meaning focused-processing | The teacher asks pupils for the meaning of English words. When provided with a translation, the teacher asks for an explanation in English. |
| 3 Form-focused processing | The teacher points out difficult words in the text and asks for their meaning. If unknown, she explains them. The teacher explicitly corrects pronunciation of the word 'disciplined.' |
| 4 Facilitation of output production | The teacher has different people read out parts of the text. The teacher delegates questions if a pupil does not know the answer. For one question, the teacher asks pupils to raise their hand once they know the answer and waits until nearly everyone has the answer. One correction of use of Dutch. |
| 5 Teacher facilitates use of strategies | The teacher explains a little about reading strategies. The pupils scan a text. |
| Other CLIL components | - |
| Post-observation interview | |
| This was not a regular lesson, but a reading exam practice lesson. Normally, there is more interaction and more content to be taught. She would not have done it otherwise, since this is just something that needs to be practiced. Not very CLIL, since it was just language teaching. | |

Observation – Respondent 8 (Mathematics)

| CLIL category | Observed behaviour |
|--|---|
| 1 Input-based processing | The teacher has adapted language pace and word choice to the level of the pupils. Some words are written on the blackboard and there are a few visual aids in the form of physical objects and drawings on the blackboard. |
| 2 Meaning focused-processing | The teacher asks questions to pupils, ranging from "Is that clear?" to "What do you think...?" Most are skinny questions checking pupil attention. However, there are also some more open questions regarding the outcome of the experiment. The pupils work on the exercise in pairs and are allowed to speak and write together. |
| 3 Form-focused processing | The teacher spends time on the introduction of new subject related terminology and connects the words to other words learned prior to this class. The teacher goes into the pronunciation of the word 'circumference' and explains why it is pronounced this way. |
| 4 Facilitation of output production | The teacher asks open questions. The teacher tells pupils to discuss the questions together and come up with an answer. They have time to practice their English. There are some remarks concerning the use of English during the pair work exercise, both corrective and complimenting ("well pronounced"). |
| 5 Teacher facilitates use of strategies | The exercise is deductive. Pupils' have to explain a phenomenon themselves and are helped along in the process. |
| Other CLIL components | Activating activity: pupils need to create the knowledge themselves. Cooperative working format. Pupils need each other and the other groups to distil the formula from the data. |
| Post-observation interview | |
| The materials have been provided by the method used (Noordhoff), but the teachers work together to make additional material. This lesson was not like the others. It was more "hands-on," which was decided only the day before in a conversation with another teacher. It is normal, however, for pupils to choose their own homework. This has been done last year as well and works very well for both smarter and weaker pupils. The teacher also very consciously asks question, but does not provide the answer right away. First, pupils are asked to think of the answer themselves, and in some cases, the answer will not be provided at all. The teacher taught this group last year and has only recently started teaching them again, after the previous teacher left. | |

Observation – Respondent 7 (Biology)

| CLIL category | Observed behaviour |
|---|--|
| 1 Input-based processing | The teacher uses a model of a leaf to illustrate new terminology. The teacher repeats instructions and homework to make sure it is understood. |
| 2 Meaning focused-processing | The teacher checks regularly if the pupils have any questions. The teacher repeats her instructions. Pupils have time to practice with the microscope. They are supposed to work in English. |
| 3 Form-focused processing | The teacher repeats, shows and explains difficult terminology. Some words are translated. The teacher stresses form of the word stomata: "stomata: one stomata, two stomata." |
| 4 Facilitation of output production | The pupils review their homework in pairs. They check their answers verbally. Clear 'steering': the teacher frequently reminds pupils to talk English, using several phrases (e.g. Dutch! I hear Dutch over there. Hey... English is good.) |
| 5 Teacher facilitates use of strategies | The pupils are encouraged to help each other. "They have a nice one in the back if you don't know what you're looking for." The teacher structures group work. |
| Other CLIL components | Activation of prior knowledge from last lesson. Visual aids, especially leaf model. Different working formats: practical, theoretical, vocabulary, understanding. |
| Post-observation interview | The materials used in class are part of the English method, which is an adaptation from the Dutch curriculum. There is no adaptation by the teacher. Not all lessons are this practical – most lessons are more group or pair work. When asked about the level of CLIL in this lesson, the teacher answered: "I don't know the definition of CLIL, it's unclear to me. I teach in English and teach them the terms/lesson in English." The teacher has been teaching this class since the beginning of this year. |

4. Analysis

4.1 Questionnaire analysis

In the teacher questionnaire, question 4 stated: 'I have had instructions on how to use CLIL.' The increase from the November response to that measured in May can be explained by the TTO team's additional emphasis on CLIL education among TTO department teachers, through workshops and photocopy handouts. The increase from November to May in questions 7, 8, and 9 suggests that the teachers experience CLIL as an additional burden rather than an integrated feature of teaching. Time constraints become the primary consideration, and CLIL falls by the wayside. Of course, this has to be reconciled with the additional emphasis on CLIL that has been given by the TTO team: perhaps the feeling of additional pressure is related to the method of instruction and emphasis on CLIL that took place this year.

In the direct comparison between pupils from the second and third year TTO classes, there is a positive valuation of bilingual education in general, and for the balance between content and language learning within subject lessons. In the pupil questionnaire, question 6 states: 'I am aware that lessons are given using CLIL methods.' Pupil unawareness of this fact raises the interesting question of whether or not awareness among pupils is desirable: should CLIL be made explicit in the classroom, should there be transparency, or does the TTO team reserve the right to keep their methods to themselves, as a good magician never reveals his tricks?

The data collected from these questionnaires shows a discrepancy between pupil perception of CLIL and teacher confidence in and with CLIL. While pupils apparently perceive a good balance between language and content in subject classes, they are unable to identify this as being CLIL. What remains is a consideration of how pupils would respond to such a question with knowledge of CLIL: are pupils capable of understanding CLIL in the same way as teachers?; does pupil perception of balance between subject and language truly mean that CLIL is in action, or that pupils simply identify this as best because they lack comparative material? The question to consider is whether transparency or an explicit statement of CLIL usage is desirable, and the possible pros and cons of such a decision. The data suggests that teachers acknowledge additional

training in CLIL while concurrently finding it more burdensome to utilize CLIL in preparation and teaching. What should be considered here is the manner of additional training in CLIL, and how TTO teachers experienced it.

While there are some notable differences in teacher questionnaire results between November and May, these are mostly restricted to the practical application of CLIL: preparation, teaching and time considerations. The questionnaires would suggest a more developed understanding of CLIL from November to May, as there is a significantly more positive response to question 4 'I have had instructions on how to use CLIL.'

4.2 Interview analysis

There are minimal differences in teacher understanding and use of CLIL as far as interview responses are concerned, however. Teachers state that they generally teach in the same way, but are now aware that it can be labeled as CLIL. Some teachers state that they are thinking more explicitly about how a certain method is CLIL. The general sentiment that the renewed emphasis on CLIL has fallen short is most striking, particularly when considering that the teacher questionnaire shows an increase in received CLIL instruction. One teacher, when asked what could have been done more effectively in supporting the renewed emphasis on CLIL stated simply "team meetings." (Respondent 3) Other teachers responded with uncertainty:

"I think the main problem is that it's not high on our priority list, so if you put more attention, if you spend more time on it, if we all agree in the TTO team that this should be one of our priorities then [...] I guess we've got the tools, we've got the people who know enough about it to incorporate it better." (Respondent 6)

"We didn't really get a clear explanation about what it is and how you can really implement it in a simple way [...] if you know how to do that, then you can use it. I think I expected a little bit more." (Respondent 2)

When asked if the new emphasis on CLIL gave some new knowledge or insight, respondent 2 answered: *"not that I'm aware of, but that's also because we unfortunately didn't have enough time to do all the meetings that we wanted to do."*

4.3 Observation analysis

Observations were conducted across several different groups, years and teachers, yet there are some similarities between all lessons. None of the lessons is completely absent of CLIL-elements. All teachers apply some CLIL principles, as defined in this research. All teachers have adapted their language to the pupils' level. It is also common for teachers to ask questions of pupils, most of which check the understanding of lesson content. Additionally, most teachers address difficult words or new terminology to some extent. Some teachers explicitly correct or explain language functions that play a role in their subject area. In all classes, pupils were given time to work on their own or in pairs in the target language.

The Physics, Mathematics, and Biology lessons show a variety of working formats that address different learning styles and language use. These lessons all contain elements of all five observation categories. The teachers in these classes all used visual aids and body language to enhance communication and understanding. There were no obvious communication problems in any of the classes.

It is noteworthy that pupils have a tendency to speak Dutch when working in groups. This is corrected at times, but certainly not the norm. This makes the 'practice time' less valuable than it would be if pupils were to write, speak, and work in English more consistently.

None of the teachers stated to have actively created or adapted lesson materials used. This may not be necessary in all cases, especially since most teachers use specifically designed working methods, but nevertheless it shows either a disinterest or an unawareness of this important aspect of CLIL theory.

On the whole, most teachers display some CLIL strategies in their lessons. However, no teacher shows an awareness of the five categories of the penta-pie, as most categories contain only a few concrete examples. None of the observed lessons fully implemented or explicitly addressed all five categories. There were only a few perfect examples in any of the subcategories, which suggests that teachers are not aiming to fulfill these criteria. Instead, there seems to be a general idea of teaching bilingually that includes the checking of understanding and the awareness that pupils need time to practice their English in different contexts.

This is reflected in the post-observation interviews. Most teachers are hesitant to rate their lessons in terms of CLIL or state that they are unsure of how to apply CLIL theory to their lessons. Most of the lesson elements that are considered CLIL have not been implemented consciously, but are a part of the bilingual teaching style most teachers have adopted. Most teachers would not change their lessons, even though there might be room for CLIL improvement. Teachers are unable to refer to possible additions of CLIL to their lesson, indicating unawareness of CLIL theory or teaching strategies. The CLIL elements present could be labeled as 'subconscious CLIL use' as the teachers indicated in interviews, rather than a conscious effort to apply CLIL.

5. Discussion

What has been done at RSG Slingerbos to further raise the awareness and use of CLIL in the TTO department?

The TTO department of the RSG Slingerbos appointed one teacher, Respondent 8, to become an in-house specialist in CLIL by sending her to the University of Utrecht to acquire more knowledge on CLIL. She would then share her acquired knowledge with the other TTO teachers. Additionally, two other TTO teachers were enrolled in a separate CLIL learning course. At the conclusion of the eight regularly scheduled TTO team meetings during the school year, she would share her knowledge of CLIL and its application in short training sessions.

During the 2010-2011 school year, however, the TTO team only met three times due to unforeseen circumstances. The TTO team was only able to meet for three of the originally eight scheduled sessions.

The focus of these three sessions were: how to define CLIL; which elements of CLIL methodology are already in use, consciously or otherwise; how to use input strategies, and how to elicit language output; and, how activating prior knowledge can be used to support CLIL learning. Exercises and strategies from the book *CLIL Skills* were used in these sessions. The TTO team found these sessions informative and successful. The provided tools and strategies could easily be applied in the individual teachers' lessons. The variety of tools and strategies provided lent themselves to many different subject classrooms. The sessions were predominantly focused on the practical considerations of applying CLIL strategies, rather than CLIL theory. Practical considerations were: how can CLIL be used to create a variety in lessons; how do TTO team colleagues use CLIL within their lessons; how is a typical CLIL lesson prepared; what role can or should the English department play in supporting CLIL learning within the TTO stream. The lack of follow-through meant that these learned tools were subject to quick decay.

Generally, the interviewed TTO teachers felt that the intended emphasis on CLIL during the 2010-2011 school year fell short of expectations. The TTO teachers did indicate that what had been

done was satisfactory in itself and that such an approach should be included in future emphasis on CLIL.

When comparing the concepts that have been introduced at RSG Slingerbos to the list of CLIL elements as stated in the observation tool, it is clear that not all aspects have been dealt with. The teachers have been explicitly informed about activating prior knowledge, adapting input and stimulating output. Most teachers were aware of the idea of synchronizing language and content learning objectives within a learning unit. Nevertheless, three important aspects of CLIL theory and teaching strategies have not been addressed: the teaching of learning strategies, meaning-focused processing, and form-focused processing.

Additionally, multi-modality of input and output has not yet received the requisite attention. It has not been stressed that different working formats are also a part of CLIL theory. As a result, CLIL elements such as alternating individual and cooperative work, written and spoken assignments, and catering for different learning styles have not been mentioned during the CLIL learning sessions. These aspects may have been addressed previously, however.

What do teachers want to learn about CLIL?

The TTO teachers at RSG Slingerbos have expressed that there are still areas in which they would like to develop their CLIL knowledge. Teachers expressed a desire to be educated more explicitly in CLIL theory. The focus has been predominantly on the practical application of CLIL. Teacher responses to such considerations varied greatly due to the various levels of CLIL experience within the TTO team: some teachers have been active in the TTO for several years, while others are relatively new to TTO. Respondent 7 is new to the TTO team, and expressed that she did not understand CLIL as thoroughly as she would like. Respondents 3 and 8, however, expressed confidence in their knowledge and personal application of CLIL teaching strategies within their lessons. They expressed that, while some additional CLIL theory could be useful, they would particularly like to learn how to educate their TTO team colleagues in CLIL teaching strategies.

Most of the TTO teachers felt that additional practical tips and tools in preparing and teaching CLIL lessons are necessary. Teachers expressed that the availability of a standardized form or checklist to measure the CLIL contents of their prepared lessons would help ensure consistency in CLIL teaching.

Respondents 1, 2, and 3 indicated that observation of their TTO team colleagues, or TTO teachers at other schools, would help in their understanding of CLIL use. Respondents 5 and 7 were unclear about the distinction between CLIL teaching and simply teaching their subjects in English. Respondent 8, given a position of responsibility in implementing CLIL at the RSG Slingerbos, indicated a desire to hold more sessions with the TTO team, to improve effective CLIL teaching for the whole TTO. Respondents 1 and 8 suggested that the English teachers could take a larger role in CLIL education within the TTO team, and particularly in the special sessions. Their hope is that the English teachers' thorough understanding of language acquisition strategies and eliciting of language output from pupils would help enhance understanding of such strategies among the subject teachers.

6. Reflections

This research would have benefitted from some additions or alterations: a roundtable session with pupils; observations of lessons in November; and, attendance of some of the CLIL sessions held for the TTO teachers at the RSG Slingerbos. A pupil roundtable would have given more insight into

pupil perception of bilingual education and CLIL in action. Observing lessons in November would have allowed for direct comparison between teaching prior to and after the CLIL learning sessions. Attending the CLIL sessions would have allowed for first-hand evaluation of the process and value of these sessions.

7. Recommendations

The TTO team at RSG Slingerbos can do several things to ensure effective CLIL use in the coming school year. First and foremost the team can make use of the knowledge within their ranks: English teachers can play an important supportive role; there is a wealth of experience and practical examples to be shared within the TTO team, and there need not be a heavy emphasis on guest speakers or external courses; TTO teachers need to share the responsibility for improving and maintaining CLIL; theoretical and practical resources should be readily available and accessible to all TTO teachers to support CLIL understanding and its practical application.

English teachers can and should play an important role in supporting subject teachers in their use of CLIL. The language acquisition strategies that English teachers use in their lessons are particularly applicable in the CLIL classroom, and this is one easily accessible resource that can strengthen the RSG Slingerbos' use of CLIL. Workshops given by English teachers, or a structured opportunity to approach these teachers with questions, would allow other TTO teachers to tap this knowledge.

The team-based structure of the school in effect creates a microcosm of relatable and comparable experience: the existence of a specific TTO team means that experience and practical examples often apply across subjects. As such, the emphasis does not have to be on guest speakers or external courses in CLIL. If there is a clear understanding of CLIL at least for some of the TTO teachers, a sharing of their experiences and understanding with less experienced teachers will go a long way to emphasizing and applying CLIL methods. Team meetings focused on experience sharing would improve the shared understanding of CLIL, could potentially shape a more cohesive approach to CLIL, and spread responsibility among the team members. In order for CLIL improvement and maintenance to be effective, TTO teachers need to make it a team goal and responsibility. An individual approach will not be as effective, as it would ignore the most valuable asset available: the supportive potential of the other team members.

Theoretical and practical resources should be available and accessible to all TTO teachers. Reading materials on CLIL theory, video analysis sessions of best-practice examples from outside and within the school, and peer-observation using specific CLIL observation tools could improve understanding of CLIL and an increased awareness of CLIL in action.

The feasibility of these prescriptions depends on the TTO teachers: without their effort and dedication CLIL teaching strategies cannot take hold. Furthermore, such strategies are not exclusive to any particular school: they apply generally to TTO schools. Some TTO teachers at the RSG Slingerbos suggested observations of best practice CLIL teaching from other schools, something that could perhaps be fostered in an inter-school exchange. In such an exchange, best practice and strategies could strengthen CLIL at participating schools: the prescriptive measures suggested in this research could then be applied to other TTO schools. Generally, prescriptions as those above can be applied to any TTO school, as they exemplify a valid and concentrated approach to improving CLIL teaching which should be present in any TTO school.