Small but Multi-functional: Response Tokens in Content Language Integrated Learning Interaction

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Abstract

This paper is an investigation of language use inside a content language integrated learning (CLIL) classroom at Saudi tertiary level. It examines the difference in language use between teachers and students in four subject-specific classrooms in which English is used as a medium of instruction. The study is informed by corpus linguistics (CL) and uses the principles and theoretical underpinning of conversation analysis (CA). It identifies the most frequent linguistic features of CLIL and examines their diverse interactional functions in this context. Amongst the most frequent linguistic features in CLIL are short response tokens such as "yes" and "no". Using a micro-analytic approach to conversation analysis, a closer look at the data shows the students' ability to use small and limited linguistic resources to accomplish multiple interactional functions such as taking the floor, taking turns and, most importantly, displaying orientation to knowledge. The data reflected the relationship between frequency and meaning construction. With regard to the difference in language use between teachers and students with regard to comes to short response tokens, the study shows some common interactional uses of response tokens between teachers and students, such as agreement, acknowledgement, response to confirmation checks and yes/no questions. On the other hand, it shows some exclusive interactional use of the same token by teachers and students. Finally, the paper emphasises the relationship of language, interaction and orientation to content knowledge in CLIL classrooms. Pedagogically, the findings have implications for teachers' language use and for increased classroom interaction.

Keywords: classroom interaction, CLIL, conversation analysis, corpus linguistics response tokens

1. Introduction

Classroom interaction has become an increasingly important focus of research during the last five decades (Walsh, 2011). However, most of the studies in this field (Hua et al., 2007; Firth&Wagner, 2007; Lyster, 2007; Lyster&Ranta, 1997) have emphasised the importance of interaction inside classrooms for both language and content learning. Nikula et al. (2013), for instance, claim that learning happens through students' "participation in the sequentially structured discourse activities which are determined by local pedagogical designs and afford specific interactional opportunities"(p.6). Hall and Verplaetse (2000), on the other hand, highlight the importance of interactions among teachers and students in creating "intellectual and practical activities" (p.10) that contribute to how and what kind of language students learn. They also link interaction to the processes and outcomes of individual development.

Content language integrated learning (CLIL) is another area of research in which interaction has also gained a foothold. Classroom interaction has gained importance as a result of the increasing interest CLIL is receiving, particularly in Europe and Canada, where it is being viewed as a possible natural and practical approach to language and content learning (Brinton et al., 1989; Dalton-Puffer, 2007; Graddol, 2006; Marsh & Wolff, 2007; Snow &Brinton, 1997; Wilkinson &Zegers, 2007). It is also used as a tool to address the educational problems that have resulted from the increasing influx of immigrants to Europe and the change in the education policy with regard to the number of languages an EU citizen should speak.

The widespread implementation of CLIL at primary to tertiary levels has led to the appearance of an enormous amount of multifaceted research orientations (Nikula et al., 2013). Nevertheless, the more work that examines the CLIL discourse, the greater the need to use combined linguistic models. It has become more important than ever to investigate the underexplored areas of this complicated discourse and to conduct empirical research that is more rigorous and robust in order to be able to draw substantial conclusions. This paper examines CLIL discourse at the tertiary level using a combination of quantitative and qualitative approaches to data analysis. It focuses mainly on the use of short response tokens by teachers and students in the CLIL classroom, with special emphasis on the use of "yes" as an example.

2. Response tokens and interaction

A literature review has shown that researchers vary in their definition of response tokens (RTs). This variation is mainly based on the framework within which RTs are investigated. Nevertheless, there is an agreement among scientists on the crucial role RTs play as an essential discourse feature through which co-participants display their understanding to the current speaker (Gardner, 2001). Moreover, RTs provide the speaker with information about the interlocutor's stance regarding prior talk (Kendon, 1967).

The interest in investigating RTs started with the work by Fries (1952). Since then, RTs have been investigated via different linguistic frameworks such as pragmatics, corpus linguistics and conversation analysis (Yngve, 1970; Ochs, 1988; Ameka, 1992; Zimmerman, 1993; Sorjonen, 2001; McCarthy, 2002). RTs are referred to as deictic and indexical expressions, and include interjections as well as backchannels. Previous studies have contributed greatly to the understanding of short response tokens, as well as to the understanding of their functions. The discourse-pragmatic framework, however, has been criticised for failing to examine the

sequential organisation of response tokens. It has also failed to identify their multi-functionality. Most of the studies that have used pragmatics as a framework within which to investigate response tokens (Yngve, 1970; Ochs, 1988; Ameka, 1992; Zimmerman, 1993) resulted in merely listing and grouping them according to various categories.

The advancement in corpus linguistics did not go unnoticed with regard to response tokens. Oreström (1983),Tottie (1991), Carter and McCarthy (2000), McCarthy (2002) and McCarthy (2003) used corpus linguistics to investigate short response tokens in larger, naturally occurring datasets. Although these studies were successful in identifying different types of response tokens, they failed to reflect their multiple interactional functions based on a turn-by-turn analysis.

The interest in response tokens within the broad field of CA also varies (Fishman, 1983; Goodwin, 1986; McCarthy,2010; Dushku, 2010).For instance, using a CA framework of analysis, Schegloff (1982) draws attention to the different functions of short responses tokens such as "yeah" in mundane contexts. He confirms the multi-functions nature of response tokens, and adds that response tokens such as "yeah" do not function only as acknowledgement and confirming understanding, but can also be used to demonstrate agreement. CA, unlike other approaches to response tokens, does not treat RTs as a block to undifferentiated items. By contrast CA treats each token according to the social action it performs in a particular context. It also goes as far as to show how response tokens are understood by the co-participants, as proved by the subsequent turn (Jefferson, 1981; Heritage, 1984).

This study emphasises the importance of context in understanding the interactional function of response tokens. It is an addition to the body of work that uses CA to highlight the importance of the listener's role in maintaining the flow of the conversation in talk-in-interaction inside the classroom.

3. Significance of the study
The interest in understanding interaction in CLIL classrooms stems mainly from the importance given to the studies that examine classroom interaction as "the medium through which learning is realized and an object or pedagogical attention" (Hall &Walsh 2002: 186-203). It has also gained in significance as the interest in CLIL has increased over the last two decades. However, there is still scarcity in the studies that investigate the finer details of classroom interaction within CLIL using a micro-analytical framework that takes social interaction as another facet of learning into account. With the exception of a few studies such as those by Dalton-Puffer (2007), Pehkonen (2008) and Nikula (1997; 2005), research on CLIL, particularly at the beginning, focuses on the products of CLIL as a learning environment rather than on the process of how learning takes place in such a context. Dalton-Puffer's (2007) work represents a shift in research focus from the product to the process, as she takes a micro analytic approach to the context.

Dalton-Puffer and Smit (2007) and Dalton-Puffer et al. (2010) represent a comprehensive review of research on CLIL during the last decade. Dalton-Puffer and Smit (2007) also provide framework that categorises studies of CLIL as micro versus. Macro, process versus product and language versus content. Some research, they state, falls into the intersectionsof these

dimensions. Linares et al. (2012) investigate CLIL by combining Systematic Functional Linguistics (SFL) and CA. The study is categorised as a process-oriented micro study, a type that Nikula et al. (2013) support because it strikes a balance between language and content in CLIL.

This paper investigates a CLIL classroom within a framework that views learning as a social act. It treats language learning in CLIL as a process rather than as an outcome. It aims to explore discourse aspects in CLIL university classrooms in the Saudi context. It also provides insight into how teachers and learners co-construct meanings in this context using RTs as an example. Using quantitative and qualitative approaches to the data, this paper reflects the relationship of language, interaction and the orientation towards scientific knowledge.

The paper shows how the differences in language use between students and teachers are manifested, projected and responded to in a step towards understanding the "interactional architecture" (Seedhouse, 2004) of the Saudi higher education CLIL.

Finally, it shows how conversation analysis and corpus linguistics can be incorporated to provide a better understanding of the macro and the micro aspects of classroom interaction in general and in the Saudi context in particular (Walsh et al., 2011).

4. Research questions
This work has been motivated by the following research questions:
1. What are the most frequent linguistic features of CLIL university classrooms in a Saudi context?
2. What are the interactional functions of the identified most frequent linguistic features of CLIL?
3. How do teachers and learners co-construct meaning in CLIL using the identified most frequent linguistic features?

4. Research methodology
The study was conducted in two phases, one qualitative using the principles of conversation analysis (CA), and the other quantitative using corpus linguistics (CL). According to Walsh et al. (2011), the use of CL and CA in an iterative way assists in understanding not only the way in which the interactants construct meaning in the educational setting, but also "the inter-dependency of words, utterances and text in the co-construction of meaning" (Walsh et al., 2011:1).

Conversation analysis, as an approach to discourse investigation, has been chosen instead of other methods, such as discourse analysis (DA) because of its ability to examine the mechanism of situated interaction in a connected discourse. While DA investigates classroom discourse as cycles consisting of three sequences (Initiation-Response-Feedback/Evaluation), CA reveals the resources the interactants use to establish intersubjectivity or mutual understanding in a step towards achieving predetermined pedagogical agendas in the classroom (Huth, 2011). Such an approach to classroom discourse makes CA a better tool to obtain for a detailed picture of the finer details of talk-in-interaction. However, because of its inability to be generalised to a larger context (Walsh et al., 2011), CA is combined with CL.

Corpus linguistics, on the other hand, was chosen in order to take advantage of the computer advancement and the flexibility of the corpus-based software to address quite sizable data in an iterative way (Walsh et al., 2011). Dealing with a relatively big data to identify patterns of interaction is a difficult and time-consuming job, let alone comparing the data to other corpora. CL enables an accurate reading of the occurrence of words and their frequencies. Moreover, it gives the researcher the ability to locate the investigated item in its actual context in big data. I believe that combining CA with CL in this study helped to provide evidence that contradicts the "scepticism towards the applicability of corpus-based techniques to issues beyond the clause boundary" (Conrad, 2002; as cited in Adolphs & Carter, 2007, p.3), as well as to indicate the importance of combining CA with other quantitative approaches. In this study, CL is used not as an end in itself, but as a tool to identify the most frequent words in a large dataset and as facilitator to locate these items in part of a second something that, as Walsh et al. (2011) highlight, is not possible when using manual processes.

Combining CA with CL is a departure from the traditional methods via which CLIL has been investigated. In fact, combining the two methods provides a better understanding of interactions inside the CLIL classroom. It highlights the macro and micro aspects of learning as a socialisation process.

5. Data collection and analysis

To answer the questions mentioned previously, 12 hours of data were collected, consisting of video/audio recordings of classes (see Table 1). The data consist of four contentsubjects taken from a Saudi university at which English is used as a medium of instruction. The result of transcribing these (12) hours is a corpus of more than 51,000 tokens. The corpus consists of a balanced number of tokens taken from subjects such as physics, chemistry, information systems and early child education (see Table 1).

Table1. *The data(Jawhar 2012)*

Subject	Number of hours
Physics	3
Early childhood Education	3
Information system	3
Chemistry	3

The corpus is called the Saudi Content Language Integrated Learning (SCLIL). SCLIL is analysed using Wordsmith Tools (Scott, 2011) and a word frequency list is generated. However, to validate the results and to ensure that the linguistic items identified are characteristic of SCLIL, the researcher used BASE, which stands for the British Academic Spoken English Corpus, as a reference corpus. The frequency feature in the Wordsmith programme was used to generate a list of the most frequent words in BASE. Following this, the keyword function is used to compare the generated list to its counterpart taken from SCLIL. The keyword function helped in showing the words that were used significantly less or more often in SCLIL in comparison to BASE.

In general, the ranking of the linguistic items identified in SCLIL is not significantly different from those in BASE. The list of identified keywords in SCLIL suggested an answer to the first research question regarding the most frequent linguistics features in CLIL. However, the list did not specify whether the identified features were used mainly by the teachers or by the

students. For this reason, two new sub-corpora were generated by isolating the students' turns from those of the teachers. The result is the sub-corpus SCLIL-T for teachers' turns and SCLIL-S for those of the students. Both corpora, SCLIL-T and SCLIL-S, were subjected to word frequency processing using the Wordsmith programme in order to identify the most frequent linguistic features in each corpus. The generated lists were modified based on relevance to the present study. They were then compared to the list generated previously from BASE using the keyword function in the Wordsmith programme. This was done to discover whether the identified items would maintain their rank when applied in a bigger context. Finally, the two lists containing the most frequent keywords in SCLIL-T and in SCLIL-S were compared to each other to generate a list of the words that were used markedly more or less by the students than they were by the teachers in SCLIL. This phase of the analysis answered the first research question with regard to identifying the SCLIL linguistic features more accurately and provided more detail regarding the users of the most frequent words.

The final list showed that there was a significant difference between the students' and the teachers' use of specific linguistic features such as response tokens.

The reason for choosing the response tokens "yes/yeah and no" was not only due to their occurrence as the second and third items on the list. In fact, "yes/yeah and no" are chosen because they are among the few interactional devices that have not received sufficient attention in the CA research despite their importance in the flow of the interaction and the contribution they make in shaping the speakers' next turn, as explained earlier. Choosing response tokens as the main focus of this paper is the departure point from which the researcher moved to the second phase of the analysis, which was based on the principles of CA. The microanalysis of the data using the principles underpinning CA provided a clearer picture of the immense interactional role that those small devices played in maintaining the flow of the interaction by performing various interactional functions based on a turn-by-turn analysis. In the light of the students' limited linguistic resources, RTs were used as the main linguistic resource to display epistemic stance, to negotiate meaning and to establish interasubjectivity.

6. The results

As explained in the previous section, dividing the corpus into two sub-corpora generated two unequal corpora with a ratio of 8 to1 in favour of the teachers' corpus. This indicates an asymmetric relationship between the teachers and students, a common feature of teacher-led classroom interaction. However, a closer look at the distribution of turns in the corpus revealed unexpected results, as the students instigated more turns than did their teachers. The students' turns represented 57% of the total number of turns produced in this corpus. The fact that the students produced more turns than did their teachers falsifies the previous assumption and suggests the need for further investigation into the nature of these turns.

As a step towards a further understanding of the corpus, the average number of words spoken by the students in each turn was compared to that of their teachers. The results showed that, although the teachers produced fewer turns than did their students, their turns were much longer as they produced an average of 46.91 words per turn. The students, by contrast, produce an average of 4.7 words per turn (see Table 2). The teachers' turns were found to be composed of multiple units while the majority of the students' turns were singlewords. The different nature of

the teachers' and the students' turns presented an answer to the reason for the difference in the corpora size of SCLIL-T and SCLIL-S. This initial finding confirmed that which CA had established previously with regard to the teachers' tendency to extend their turns to perform multiple functions in the same turn (Seedhouse, 2004). Althoughthis result answers the study first question, it does not reveal much about the construction of the turns or the interactional and pedagogical functions they perform. For this reason, a further analysis was conducted.

Table2. *General statistics about the data (Jawhar, 2012)*

	SCLIL	SCLIL-T	SCLIL-S
No of tokens	51.869	45.791	6.078
No. of turns	2273	976 (42.93%)	1297 (57.061%)
Means of spoken words	22.81	46.91	4.68

The micro analytical part of the analysis answered the second question in this paper regarding the interactional function of the most frequently identified linguistic features. It also provides a detailed picture of the way in which teachers and learners co-construct meaning in the SCLIL context. The investigation is limited to the response tokens "yes, yeah and no" in a turn-by-turn analysis each time they occurred.

The case-by-case analysis has shown that teachers and students use RTs to carry out different social actions such as dis/agreements, acknowledgments, responses to confirmation checks, and to answer yes/no questions. However, the findings also show that there were some social actions that were exclusive to students, such as responding to other-initiated repairs and respondingto requests to display epistemic access to information. Others, exclusive to teachers, included giving positive/negative evaluations and allocating the next speaker's turn. These functions demonstrated the relationship between interaction and pedagogical focus (Seedhouse, 2004) and confirmed the teacher's predetermined institutional role. The next section presents an example of the results obtained from this dataset. It shows how CA and CL were combined to enhance our understanding of CLIL classroom interaction. The examples are taken from SCLIL corpus and they represent only one set of the multi-social actions for which RTs are used in a teacher-led institutional interaction.

6. Discussion and examples of the results
A. The general use of "yes"
The data show that there were two types of use for "yes" in this dataset. The first is its use as a freestanding token in a turn on its own. Within this set of examples, the students used "yes" more often than did their teachers (191.2 times in every 1000 words produced). In other words, the students' use of "yes" as a freestanding token in a turn on its own occurred59.3% of the time. The teachers, in comparison, used "yes" 16.35 times in every 1000 words they produced. Of that number, "yes" was only used 5.3% of the time as a freestanding token.

The overall picture indicated the students' interactive role in co-constructing meaning in the SCLIL classroom. However, it also showed the students' tendency to use the minimum linguistic resources and the teachers' tendency to use extended turns when they responded to the students (Seedhouse, 2004).

The second dataset was related to "yes" when it was used with other components. Within this set of examples, it was also observed that the teachers used initial "yes" turns almost 44.2% of the time, compared to 55.8% of the time in the middle of the turn. When
used in the middle of an extended turn, "yes" was followed by discourse markers such as "and", "okay" and "so"(18.3%). The use of discourse markers following "yes" was mainly to perform the social and pedagogical actions of shifting the topic.

The students, on the other hand, used "yes" followed by other components to express agreement and to display access to epistemic knowledge. The following section provides detailed examples of the use of "yes" by teachers and students.

1. "Yes" as a continuer
Using "yes" as a continuer was one of the main characteristics of the students' corpus. They used "yes" as a freestanding token during the teachers' turn to indicate that they did not have problems understanding the on-going discussion Using RTs as continuers is a common action of response tokens in this sequential position, namely during the current speaker's turn. However, what is interesting about this dataset is the students' use of "yes" during the teachers' turn to perform more actions than to just display understanding or passing the floor (see Excerpt 1).

In fact, they used"yes" to display their epistemic stance from the on-going talk. The next excerpt (Excerpt 1) is taken from an information technology class (IT). The teacher is making an announcement by telling the students about a new trend in IT according to which the former English HTTP protocol is now written via the use of languages other than English.

Excerpt (1)

```
        1   T:    >See that is interesting,n↑ow< if you
        2         have to change HTTP,HTTP is
        3         Specifically(1.1)m↑aps to a protocol.
                  ((teacher looking at the left side of
                  the class where S1 is setting))
    →   4   S1:                                 ↑Yes
        5   T:    HTTP is a ↑protocol=
        6   S1:   =↑Yes=
        7   T:    =So n↑ow that protocol in Arabic.
        8         >would it be[I do not]know now<
        9   S1:      Yes(0.5)[I think]
```

The teacher expected this piece of information to be news to the students and that they would not have epistemic access to it (Stivers et al., 2011). He uses the yes/no question to preface the announcement. However, a student (S1) uses "yes" to display having epistemic access to the teacher's assertion in the prior turn. The proof for this claim is found in the next turn. The student (S1) waits until the teacher's turn comes to completion to nominate herself, takes the floor, and adds to what the teacher has just said(line 9). By contributing to the on-going topic in the same sequence in which "yes" is used initially, the student displays more than just understanding. It can also be seen here that the student did not use any "newsmaker' devices, such as "oh" or "really", which confirms having epistemic access. Schegloff (1982) states that response tokens demonstrate understanding only when there is a problem in communication, whereby making a repair become an inevitable action.

The teacher responds to the students' use of "yes" as a continuer by proceeding with his talk using an extended turn. Following this, the student takes the floor again and adds something related to that which the teacher had said earlier. Here, by using "yes", the student is confirming her epistemic stance as knowing the information and signalling the teacher to proceed. In this type of use, the students do not overlap with the teachers to take the floor. By contrast, they wait for the teacher's turn to come to an end.

2. "Yes" as an acknowledgment
Similarly to when using "yes" as a continuer, the students used "yes" to acknowledge the teachers' assertion. In this case, their use of "yes" was followed by other components to indicate having epistemic access to the topic under discussion (Heritage, 1984). They used it towards the end of the teachers' turn and exactly at the borderline at which transition was a possibility. The next excerpt (Excerpt 2) is taken from an information technology class (IT). The teacher is informing the students that Google was sold or bided to be bought by someone. S1 latches with the teacher's turn and uses "yes" turn initially followed by a degraded assertion, using " I think" as a stance device that shows uncertainty (Aijmer, 1997).

Excerpt (2)

```
1     T:    can you believe that that((sniffing))
2           (1.0)they sold- I think Google s::old
3           or(0.5)Google was bided to be bought
4           out by someone else for two billion
            ((teacher moves his eye from the
            floor to the left side of the class))
6           dollars(.) or something like That=
7     S1:   =Yes, I think Microsoft
8           (0.3)
9     T:    No, they never bought it, they never
10          got it but they were ↑bidding at some
11          point, I do not know was it Microsoft
12          or was it-
```

In this set of examples, in which " yes" is used as an acknowledgment, it can be seen that the students follow "yes" by further talk, either in the same turn or waiting until the teacher'' turn is finished to add to what the teacher had said. In this example, the students are saying, "we know what you are saying and this is the proof". The difference between the use of "yes" as a continuer and as an acknowledgment is that the students show more involvement in the case of acknowledgment.

3. "Yes" as an agreement
The teachers and students used "yes" with other components to demonstrate agreement with prior assertion. When used as an agreement device, "yes" was mainly placed in the initial position of the relevant TCU, followed by other components to display affiliation with what had been said (Pomerantz, 1984). However, the difference between teachers and students lies in what comes after "yes". The students, for instance, followed "yes" with an assessment (see Excerpt 3) that was aimed to display epistemic access to the topic under discussion (Pomerantz, 1984). The teacher's response to agreement was usually a pre-closure discourse marker followed by a shift

in the topic.The following example is taken from an early child education classroom (ECD). The teacher is talking about the importance of allocating a specific reading time for children and making it a type of routine.

Excerpt 3:

```
1    T:   ↑yes, so, that way they understand
2         that this is now ↑reading time↓, they
3         find it so special and you will see
4         kids, they even get upset because
5         someone took their spot, they get so
6         comfortable(.) in that spot,
7         ↑right(.) "this is ↑my spot for
8         ↑reading,you move"(( hand gesture))
9         (.)okay↓, ↑so, we want to have this
10        comfortable environment (.), you need
11        to expose them to new ↑books((reading
13        from the slide))(0.1)I remember I was
14        was telling you this different
15        ↑genres and there is even different
16        styles of books, can you imagine if
17        you were Tea- reading this((showing a
18        book))to students, they would be so
19        ↑excited, 'The Big Red ↑Hen'  is
20        Actually a big book (0.7) big red
          ((looking at the book))
21        book, how fun is ↑that=
→   22  S1:  =yes, [this is a very attractive] to
23        your children
```

S1 latches with the teacher and self-selects quickly by using "yes" to display alignment and agreement with the teacher's assertion in the previous turn. In fact, she goes further and adds her own assessment of the book that the teacher pointed at by adding, "this is a very attractive to your children". By self-selecting, the student displayed not only agreement, but also her epistemic access to the on-going talk. Pomerantz(1984) states that, by offering assessment, the second interlocutor displayed previous knowledge of the referent.

4. "Yes" as a response to a confirmation check

The teacher used "yes" as a response when asked for confirmation by the students. "Yes" is placed in the initial position of the relevant TCU of the second pair of a question-answer adjacency pair followed by other components (see Excerpt 4). This excerpt is taken from an IT classroom. The teacher is explaining hologram technology to the students.

Excerpt 4:

```
1    T:   ↑where you can just see me walking
2         around doing exactly what I am doing
3         in my office in Toronto (.) <while
4         [I am here>].
5    S1:  [What is] called?
6    T:   Ha? (.) hologram
7    S1:  Hologram?
→   8  T:   yeah hologram ah:: imaging sort of
9         thing, and ah:: (1.2) you know, you
10        will hear my ↑voice, you will hear
11        everything that I am doing and (.)
12        you won't see the difference, you can
13        ↑touch me but=
```

In this excerpt, the teacher is explaining to the students how the new technology will allow them to see him in Saudi Arabia even if he is as far away as Canada. S1 overlaps with the

teacher in what she might have understood as a possible TCU to ask about the name of the new technology. The teacher answers the student's question in line 6. In line 7, the student asks for confirmation that the answer that she had heard was correct by repeating the word "hologram" with rising intonation. The teacher responds to the confirmation request by an initial "yes" turn followed by the word in question.

We notice here that, unlike the students, when the teachers are asked for confirmation, they use "yes" followed by other components to ensure that the students understand the task or the issue about which they are asking. The students, on the other hand, use "yes" as a response to a confirmation check, but as a freestanding token in a turn on its own, after which the right to speak returns to the teacher. This can be explained by the predetermined institutional role of the teacher as the source of information in the classroom.

5. "Yes" as an answer to a polar yes/no question

The teachers and students used "yes" to answer a polar yes/no question. It was placed as the second pair in a question-answer adjacency pair, as can be seen in excerpt 5. This excerpt is taken from a physics class. The teacher is doing some exercises with the students.

Excerpt (5)

```
1     T:    for B. and if there are ten of them
2           we will find the X and Y for each one
3           of them
4     S7:   [do we take ]this later sine ((for
5           confirmation))?
6     S?:   [°you just said-°]
7     S?:   °↑yes°
→ 8   T:    °Yes° So what we have for ↓B we
9           are going to find B- X equal((writing
            on the board))(1.0) B- cos↓ine
10          ((vector)) B (0.4) which ↓is-
11    S8:   Thirty, cosine, minus thirty seven↓
```

The teacher is explaining a physics problem when S7 interrupts and asks, "do we take this later sine?" Another student tries to paraphrase the question to the teacher in line 6. A third reiterates the same question in what seems to be alignment with S7 and confirmation of the source of the problem with the teacher's explanation. In line 8, the teacher responds to the student's question with a turn initial "yes". It can been seen that the students' questions to which "yes" is used as a response by the teacher are usually either content or procedurally related; thus, they are always followed by other components in order to illustrate the areas about which the students are asking.

B. Students' exclusive use of "yes"
1. "Yes" as a response to an initiated repair

In this dataset, the students used "yes" to respond to other initiated repairs in order to show acceptance of this repair. They used "yes" in the initial position of the TCU of the unit in which

the repair was carried out. They used it followed by a modified version of their original answer based on the repair introduced in the previous turn, as explained in Excerpt 6. This excerpt is taken from an early child education classroom. The teacher is asking the students why they cannot leave children to read books on their own.

Excerpt 6:

```
1     T:    okay, so why not just have them read
2           It (0.6) for themselves?
3           (0.9)
4     S1:   ↑no, because the way how(.) different
5           a::<individuals read it>, the way::
6           it is: ↑even though with the same
7           text (.) or with the text(.) or the
8           same ah:: content(0.5) but the way
9           how they demonstrate it is-
10    T:    the delivery
→  11    S1:   Yes deliver it=
12    T:    it is the delivery and do not forget
13          also the ↑pronunciation of the words
```

The student self-selects and answers the teacher's question offering a justification of why children should not read books alone; however, she fails to use the correct term, "delivery". In line 10, the teacher offers the least favoured trajectory of repair, namely other-initiated repair (Seedhouse, 2004). Schegloff (2007:117) refers to this kind of sequential use as "post-expansion", or when expansion in the talk takes place after the occurrence of the second part of the adjacency pair, in this case the question- answer pair. The student accepts and carries out the repair using "yes" turn initially, followed by the modified answer as presented by the teacher in the previous turn.

2. "Yes" as a response to an explicit request to display epistemic access

A CLIL classroom is similar to any other classroom in which the students are expected to display having epistemic access to the topic under discussion on occasion in order for the teachers to proceed with the pedagogical agenda and to introduce a new topic. However, the teachers sometimes used rhetorical questions to accelerate the pedagogical agenda and to understand the students' positions in the on-going discussion, as can be seen in Excerpt7.

This excerpt is taken from a physics class. The teacher is explaining the difference between two equations related to falling objects and time. In lines 1-22, the teacher uses various resources to explain the difference between the two equations to the students, including a drawing on a board and hand gestures.

In line 15, the teacher checks for understanding using the discourse marker "okay", followed by a relatively significant pause of 2.7 seconds. When students did not respond, the teacher followed the pause with an explicit request for a display of understanding "so sonow do we understand why this victor did not change size".

Although the teacher directed the question at the entire class, S4 self-selected and answered using a freestanding "yes" that was not followed by any further components that might serve as

further proof of having epistemic access to the subject being explained. This use of a freestanding "yes" was understood by the teacher to be insufficient and, consequently, requiring further explanation as can be seen in the next turn (26- 33).

Excerpt (7)

```
1    T:   equations for each set. The only
2         connection between ↑this ((pointing
3         at the board))and ↑that (.) is
4         ↑that the ↑time is going to be the
5         same (0.5)because ↑as the objects
6         have the ↑same time to go <up and

7         down> ((hand gesture)) (.) it takes
8         ↑that time to ↓go ((hand gesture))
9         (0.1) horizontal↓(0.5) So ↑time in
10        this equation and time in that
11        ((point at the board))equation are
12        the same↓ (0.2) other than that
13        ((pointing at the board)) there is
14        ↑no (.) connection(.) and that
15        will make life easier↓(1.0) ↑okay
16        ((looking at the students))
17        (2.7)
18        ↑so(.)so now do we understand((moving
19        towards the board)) (.) ↓why this
20        vector((pointing at the board))
21        did not change ↑size ((looking at the
22        Whole class))
23        (0.8)
→ 24    S4:  Yes
25        (1.0)
26    T:   It stayed((pointing at the board))
27        the ↑same(.) while ↑this ((point at
28        the board)) vector along the Y↓(0.3)
29        ((looking towards the students)) it
30        was ((hand gesture)) ↑going ↑up (0.1)
31        zero and then coming ((hand gesture))
32        back↓ So it was <shrinking,
33        Shrinking...
```

In this excerpt, we can see that, when "yes" is used to respond to a request from the teacher to display epistemic access to knowledge, it is placed as the second pair in a question-answer adjacency pair. This pair is initiated by the teacher to ratify shared knowledge as something that had already been shared in some way. This epistemic work is associated with a larger sequence and activity, and is always relevant to continuation. Using these types of display questions is common in classrooms, as they are used as "structuring devices to drive the talk forward, introduce new topics and generally direct the focus of the interactants" (Dalton-Puffer,

2007:123). They are relevant to the continuation of the on-going talk; hence, to the acceleration of the pedagogical agenda. This type of "yes" is very common in these data.

In the same category is the students' use of "yes" to respond, as a group, to the teacher's request to display access to knowledge. This form of the use of "yes" accounted for 18% of the cases identified in the dataset. It was found that "yes" in this case was usually placed as a freestanding token in the response move in a question-answer adjacency pair. In this case, the teacher asked the students yes/no questions to guide them through the lesson in preparation to present new information. This kind of question usually takes the form of a confirmation check or a direct request to display epistemic access to shared knowledge. Usually, after obtaining the preferred positive answer the teachers were seeking, they proceeded with their pedagogical agenda. However, in the event of disagreement amongst the students, the teachers suspended the agenda and tried to solve the interactional problems before returning to the business of demonstration. The teacher's questions were usually formed using positive words, such as "good", "okay", "right" and so on.

C. Teachers' exclusive use of "yes"

1. "Yes" to select the next speaker.
It was noted in this dataset that the students tended to self-select more often thanthey were elected by the teachers. However, in the few cases in which teachers allocated the next speakers, the students showed an orientation towards participation by establishing a mutual gaze with the teacher or by attracting the teacher's attention by raising a hand in to request permission. The following excerpt is taken from a physics class. The teacher asks the students if they remember what was said in a previous lesson as it is related to the problem they are solving. She notices what she understands as an orientation by S2 to answer; thus, she terminates the question and uses "yes" with a gaze towards S2 in what is understood as a selection for the next turn.However, S2 was not prepared to answer the question. In fact, she was ready in herself to ask for an explanation. Caught with her guard down, S2 paused for (2.3) seconds and displayed a weak epistemic position by using three consecutive incomplete sentences, followed by prolonged hesitation markers such as "ah".

Excerpt (8)

```
    1     T:      remember what we ↑said- ((look at
→   2             S2 ))↑yes((distraction))
    3             (2.3)
    4     S2:     ah there is ↑two ah:: questions in
    5             chapter- ah:: in the- about this
    6             falling objects (0.5) I did not know
    7             how to solve it↓
```

S2 is hesitant to show a lack of knowledge regarding the chapter they are discussing.
In this set of segments, the teacher places "yes" mainly at the end of the last TCU of his turn immediately after noticing the student's orientation to take the floor. Sometimes, however,

the teachers delay giving the turn until the end of their talk; nevertheless, they acknowledge the students' orientation by establishing a mutual gaze.

2. *"Yes" as positive evaluation*

In CLIL, as in other classrooms, the students' contributions are always subject to evaluation. However, it is noted that, in this context, evaluation is usually given by using "yes" to show agreement and alignment with the students, as can be seen in excerpt 9.

This excerpt is taken from an early child education classroom. The teacher is asking the students how they introduce the lesson to children.

Excerpt (9)

```
1    T:    how do you [introduce it?] (1.0)
2          ((looking at S4))
3    S4             [((XXXXX ))
4    T:    What did you say?
5          (0.7)
6    S4:   °ah::° (0.8) °Ob[jectives°]
7    T:                    [yes] (.) yes=
8    S1:   =The ↑objectives
9    T:    ↑yes, the objectives, the objectives,
10         Your objective will (.)ah come wh-
11         when you state your ↑objective(.)
12         they will start where (.) they will
13         get a clue of what they are supposed
14         to do, Same as ↑ you .so that we do
15         not go too far,((hand gesture)), we
16         take the book (.) and you isolate
17         ((XX)) ↑this it for ↑this that is
18         how (( I interpret XX↓))
```

The teacher asks the students how they introduce their lessons. By looking at S4 and establishing a mutual gaze, the teacher is practicing an establish routine for the next speaker's turn in many classrooms, as noted in the data. The student takes the floor and whispers the answer in line 3, which results in a breakdown in communication. In line 4, the teacher repairs the breakdown by asking the student what she had just said. The student repeats her answer inline 5, preceded by a prolonged hesitation mark "ah::" Due to the hesitation, the teacher overlaps with the student and gives positive feedback in the form of a repeated "yes". This "yes" precedes the part of the students' answer with which the teacher agrees and gives a positive evaluation. SCLIL, however, is not a context in which evaluation is given overtly. In fact, positive evaluation is understood from the way in which the teachers respond to the students' participations. The teachers in this data used "yes" at an initial position in the relevant TCU's in the third move following the second of a question-answer adjacency pair to give positive evaluation. Negative evaluation takes place rarely in this data and, when it does, it is mitigated and delayed (see Jawhar, 2012).

3. *"Yes" as a discourse marker*

Because the teachers used extended monological of turns, they needed several types of connectors and discourse markers to maintain the flow of the lesson. One of the devices used in this case was "yes", which was used extensively in the middle of extended turns, mainly to connect an idea that was discussed earlier to that which was mentioned later.

This kind of "yes" is found as part of a cluster of discourse markers used to return to the original topic following a slight diversion due to expansion. "Yes" is also used, in this case, to remind the recipients of the speakers' original position regarding the issue under discussion, which is agreement and has relevance to topic closure. Thus, "yes" functions here as a connector between what is being said and what has already been said previously in the same turn. It is used with a cluster of discourse markers including "okay", "so" and "yes" to return to the main topic before the insert expansion (Schegloff, 2007).

8. Conclusion

This paper represents an example of the potential for producing a detailed picture of classroom interaction resulting from the combination of CA with CL as the main method of investigation. The use of corpus linguistics, for instance, allowed us to identify the most frequent linguistic features of CLIL classroom successfully, and to locate them in a big dataset. Meanwhile, the high frequency of the identified linguistic features directed the research towards the important role they play in the construction of meaning CA, on the other hand, helped to show the micro details of the moment-by-moment unfolding of interaction, particularly in those moments in which the identified linguistic features were used. It also showed how the students carried out diverse social actions using limited linguistic resources in a way that revealed the omnipresence of patterned orientation with regard to learning. It also helped in the understanding of how participants negotiated meaning and displayed mutual understanding using the linguistic features identified. The use of CA particularly allowed me to answer the second and the third questions in this paper, which were related to the ways in which teachers and students co-constructed meaning.

The sequential analysis of the data revealed several features of interaction in a CLIL classroom that might otherwise have gone unnoticed. It also indicated how teachers and students used response tokens to carry out some common social actions such as dis/agreement, acknowledgement, and response to confirmation checks and answers to a polar yes/no question. At the same time, the data shed light on some exclusive uses of "yes" by teachers, as well as by students. Some of the social actions identified are similar to those discovered by researchers in SLA classrooms, while others are believed to be exclusive features of CLIL classroom interaction.

In addition to the previously mentioned theoretical significance of this paper, it has other pedagogical implications. On one hand, this paper reflects the students' ability to use their limited linguistic resources not only to interact, but also to maintain the successful flow of conversation. On the other hand, it shows that the apparently successful marriage of the students' limited linguistic resources and their ability to show a reasonable degree of interactional competence does not necessarily indicate successful content-subject learning. In fact, it has been noticed in this dataset that there is an absence of evidence suggesting that the students learned processes such as identification, comparison drawing conclusions and finding similarities and differences, which are considered to be requirements for learning in CLIL (Coyle, 2006).

The picture portrayed by the moment-by-moment unfolding of the talk-in-interaction in this context points towards the importance of increasing the teachers' awareness of the

importance of creating an increased interactional space for students if they want to maximise their students' opportunities to learn.

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