

Integrating Language and Content Teaching through Collaborative Tasks¹

Merrill Swain

Abstract: In French immersion programs, it is important to integrate the teaching of language and content. One way in which this can be accomplished is through the use of tasks which, using content-relevant material, encourage students to focus on language form. In this paper, tasks which engage students in collaborative writing and therefore in talking about content and the language needed to express that content, are presented. I present examples of collaborative dialogues between students to show how such tasks provide opportunities for second language learning because, among other things, students may externalize their (sometimes partial) knowledge, allowing them to reflect on it, revise it, and apply it.

Résumé : Dans les programmes de français immersion, il est important d'intégrer l'enseignement de la langue à celui du contenu. Une des façons d'accomplir ceci consiste à utiliser des tâches qui, faisant usage de matériaux ayant trait au contenu, incitent les élèves à se concentrer sur la langue. Cet article présente des tâches qui engagent les élèves dans un exercice d'écriture collaborative, et donc qui les obligent à discuter non seulement du contenu, mais aussi de la langue nécessaire à l'expression de ce contenu. Je présente des exemples de dialogues collaboratifs entre élèves dans le but de montrer comment de telles tâches offrent des possibilités d'apprentissage d'une langue seconde. Entre autres, les élèves ont la possibilité d'exprimer leurs connaissances (parfois incomplètes), ce qui leur permet d'y réfléchir, de les réviser, et de les mettre en pratique.

Introduction

Tasks have been defined in a number of ways. Nunan (1989), in his book 'Designing Tasks for the Communicative Classroom,' provides several definitions of 'task,' showing that they all 'share one thing in common: they all imply that tasks involve communicative language use in which the user's attention is focused on meaning rather than [on] linguistic structure.' (p. 10)

The definition of task that Nunan adopts in his book is similar and reads as follows:

the communicative task [is] a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form. The task should also have a sense of completeness, being able to stand alone as a communicative act in its own right. (p. 10, emphasis in original)

In this paper, I would like to expand somewhat on Nunan's definition. I would like to suggest that Nunan's definition is too limited: that a task can equally as well be *focused on form*. Consistent with Nunan's definition, though, when students focus on form, they must be engaged in the act of 'meaning-making.' In the context of this paper, the act of meaning-making should relate to the academic content under study.

Let me give one example of the sort of task I am referring to. Students, working together in pairs, are each given a different set of numbered pictures that tell a story. Together the pair of students must jointly construct the story line. After they have worked out what the story is, they write it down. In doing so, students encounter linguistic problems that they need to solve to continue with the task. These problems include how to best say what they want to say; problems of lexical choice; which morphological ending to use; the best syntactic structure to use; and problems about the language needed to sequence the story correctly. These problems arise as the students try to make meaning, that is, as they try to construct and write out the story, as they understand it. And, as they encounter these linguistic problems, they focus on linguistic form – the form that is needed to express the meaning in the way they want to convey it.

Of course, there are many variations of such a task. Rather than a series of pictures that tell a story, there could be a series of graphs that relate to a science lesson, or pictures that relate to a math problem, or diagrams that relate to a history lesson, or tables that relate to a political science lesson, and so on. The important feature in common is that students must jointly work out the meaning of the series by talking about them, and then write out their negotiated understanding in their second language as accurately, appropriately and coherently as possible. I will return to the story example later, after I have had an opportunity to explain why we began to experiment with such tasks in the first place.

This paper, then, has three parts. In the first part, I would like to provide some background for our interest in using collaborative tasks in content-based language classrooms. This will entail a brief discussion of French immersion programs in Canada, and a consideration of the

roles output – that is, speaking and writing – might have in second language learning.

In the second part of this paper, I will describe a set of studies undertaken in content-based language learning contexts to suggest that certain types of collaborative tasks – those which require written output from students – are particularly useful for language learning.

Finally, in the third part of the paper, I would like to pull together the first two parts by summarizing insights about language teaching. These insights follow from the particular theoretical perspective and line of research inquiry presented, and, I believe, have relevance for both foreign and second language teaching *per se*, as well as content-based language teaching.

I begin by explaining why we have begun to research the use of collaborative tasks as a means of integrating content and language teaching. The story began quite some years ago as we researched the outcomes of French immersion programs in Canada. French immersion programs are for students who have had little or no exposure to French before starting in the program, and who attend classes taught in French. The grade seven and eight students who participated in the research discussed in this paper, like many other immersion students, were taught entirely through the medium of French until grade three. After that, they received some instruction in English, the native language of most of the students. By grades seven and eight, several academic subjects were still taught using French as the language of instruction.

Our research demonstrated quite clearly that in spite of the input-rich, communicatively-oriented classrooms the students participated in, the students did not develop native-like proficiency in French (e.g., Swain, 1985). The results from two decades of research in French immersion classes suggested that immersion students are able to understand much of what they hear and read in the target language even at early grade levels. However, although they are fairly well able to get their meaning across in French, even at intermediate and higher grade levels, they often do so with non-target-like morphology, syntax and discourse patterns. (For overviews of this research, see for example, Genesee, 1987; Swain, 1984; and Swain and Lapkin, 1986. For detailed accounts, see for example, Harley and Swain, 1984; Harley, 1986; Harley, 1992; and Vignola and Wesche, 1991.)

Early observational research

These findings led us back to the classroom to search for explanations of why French immersion students' French was developing in the way

it was. We spent time in a number of grade three and grade six immersion classrooms, observing and recording what actually went on. Among what we observed (see, for example, Allen, Swain, Harley and Cummins, 1990; Swain, 1996), two themes emerged which are of particular relevance here:

1. the nature of grammatical instruction; and
2. student talk, or to use the jargon, student 'output.'

First, then, what did we find out about the teaching of grammar in the French immersion classes that we observed? Our observations revealed that grammar was being taught in immersion classes. However, the main emphasis in these activities appeared to be more on manipulating and categorizing language forms than on relating forms to their meaningful use when teaching academic content. It was a relatively rare occurrence for teachers to refer to what had been learned in a grammar lesson when they were involved in content teaching, and even more rare for teachers to set up content-based tasks for the main purpose of focusing on problematic language forms. Furthermore, in general, there was considerable content teaching that occurred where little or no attention was paid to the accuracy of students' target language use.

A second theme which emerged from our observations was the quantity of student talk - both how much the students talked during class lessons, and the length of student utterances. We found that there were, on average, about two students who talked per minute in the French portion of the day, as compared to about six students per minute in the English portion of the day. Thus these immersion students, who rarely spoke French outside of the classroom context, were also speaking relatively infrequently in French in class.

Furthermore, about 50% of the time the French immersion students talked in these teacher-fronted activities, their utterances consisted of only one or two words. Utterances longer than a clause were infrequent - consisting of about only 14%. As I will be arguing, students should get more opportunities than this for sustained oral use of the target language.

Theoretical considerations

These observations about the nature of grammatical instruction and student output in typical French immersion classes led to certain theoretical considerations. First, the observations about grammatical instruction led us to a recognition that, at least in an immersion setting,

teaching grammar lessons out of context, as paradigms to be rehearsed and memorized, are insufficient for the achievement of grammatical accuracy. The need to integrate language teaching with content teaching was clear.

Secondly, our observations concerning the limited output of students led to a consideration of the role of output in second language learning. There has been much theoretical discussion about the role of input in second language learning. But there has been little discussion about the role of output in second language learning, except as it might enhance fluency. However, the processes involved in producing language can be quite different from those involved in comprehending language (e.g., Swain, 1995). In listening, semantic and pragmatic information assist comprehension in ways that may not apply, or may apply differently in production, in that the semantic and pragmatic information can circumvent the need to process syntax. With output, however, learners need to move from the semantic, open-ended, strategic processing prevalent in comprehension to the complete grammatical processing needed for *accurate* production. Output, then, would seem to have a potentially significant role in the development of syntax and morphology, a role that underlies the functions output may have in the learning of a second language.

I turn now to describe three functions of output that have been proposed which relate to linguistic accuracy rather than to linguistic fluency (Swain, 1995). The three hypothesized functions of output in second language learning are to promote 'noticing,' to formulate and test hypotheses, and to reflect on language use through metatalk.

Noticing

I have suggested that, under certain circumstances, output promotes 'noticing' (Swain, 1995). This is important if there is a basis to the claim that 'noticing' a form in input must occur for it to be acquired (Ellis, 1994).

The important issue here is that it is *while attempting to produce* the target language (vocally or subvocally) that learners may notice that they do not know how to say (or write) precisely the meaning they wish to convey. In other words, under some circumstances, the activity of producing the target language may prompt second language learners to consciously recognize some of their linguistic problems; it may bring to their attention something they need to discover about their second language possibly directing their attention to relevant input. This may trigger cognitive processes which might generate linguistic knowledge

that is new for the learner, or consolidate his or her own existing knowledge (Swain and Lapkin, 1995). Example 1 is taken from a think-aloud session with a grade eight immersion student while he is writing a newspaper article about pollution.

Example 1

Student: La dé...truc...tion. Et la destruction. No, that's not a word. Démolition, démolisson, démolition, démolition, destruction, détruision, détruision, la détruision des arbres au forêt de pluie (*the destruction of trees in the rain forest*). (Swain and Lapkin, 1995)

In Example 1, the student has just written in French 'Il y a trop d'utilisation des chimiques toxiques qui détruisent l'ozone.' (*There's too much use of toxic chemicals which destroy the ozone layer.*) In his think-aloud, we hear him trying to produce a noun form of the verb he has just used. He tries out various possibilities (hypotheses), seeing how each sounds. His final solution, 'la détruision' is wrong, but he has made use of his knowledge of French by using the stem of the verb he has just produced and by adding a French-sounding suffix. This example is revealing, because the incorrect solution reached by the student allows us to conclude that new knowledge has been created through a search of his own existing knowledge. His search began with his own output which he heard as incorrect. He noticed what he did not know and tried to solve it by focusing on both form and meaning in context.

Hypothesis formation and testing

A second way in which producing language may serve the language learning process is through hypothesis formation and testing. As seen in Example 1, the learner used his output as a way of trying out new language forms (hypotheses). Tarone and Liu (1995: 120-121) provide evidence that it is precisely in contexts 'where the learner needs to produce output which the current interlanguage system cannot handle ... [and so] ... pushes the limits of that interlanguage system to *make* it handle that output,' that acquisition is most likely to have occurred.

In Example 1, the learner was in a situation where feedback from an external source was not available and so there was nothing to test his hypotheses against except his own internalized knowledge. In more usual circumstances, however, learners are able to obtain information useful for testing their hypotheses from other sources - teachers, peers, dictionaries, grammar books, and so on. Where external feedback has

been available, learners have also modified, or reprocessed (Swain, 1993), their output. The fact that learners modify their speech in some, but not in all of their utterances suggests that they are only testing out some things and not others (Pica et al., 1989). It may be that the modified, or reprocessed, output that follows feedback can be considered to represent the leading edge of a learner's interlanguage.

Thus, learners may use their output as a way of trying out new language forms and structures as they stretch their new language to meet communicative needs; they may produce just to see what works and what does not. That immediate external feedback may not help or be forthcoming does not negate the value of having experimented with their language resources. However, feedback is surely important as a source of information to the learner. I will return to this point when we look at the research which examines closely what happens when students work together on a task.

Metatalk

A third function of output is its metalinguistic function. In this case, a learner uses language to indicate an awareness of something about their own, or their interlocutor's, use of language. That is, learners use language to reflect on language use, as *metatalk*. In doing so, although learners may make use of metalinguistic terminology, it is by no means essential as part of the definition of metatalk. In fact, in the case of the data we have collected from grade eight immersion students, the majority of our examples illustrate students talking about language without using any metalinguistic terminology at all. The examples demonstrate, however, how students are thinking about their target language, that is, what the hypotheses are that they hold about the target language. Example 2 is illustrative.

Example 2

Rick: Un bras ... wait ... mécanique ... sort?

(An arm ... wait ... a mechanical [arm] ... comes out?)

Kim: Sort, yeah.

(Comes out, yeah.)

Rick: Se sort?

(Comes out?) [incorrect reflexive form]

Kim: No, sort.

(No, comes out.) [correct nonreflexive form]

(Swain and Lapkin, 1998)

In Example 2, Rick is wondering whether the (non-existent) reflexive form of the verb 'sortir' should be used in this context. His hypotheses are apparent as he first tries out the non-reflexive form 'sort,' then the reflexive form 'se sort.' Kim is able to provide Rick with correct answers to his questions; that is, she provides useful and correct feedback to Rick's hypothesis about the appropriate form to use in this context. This metatalk², happening as it does here – in *the context of making meaning* – may well serve the function of deepening the students' awareness of forms, rules and their relationship to the meaning they are trying to express; of understanding a relationship between meaning, form and function in a highly context-sensitive situation.

My working assumption is that metatalk is a surfacing of language used in problem-solving, that is, it is language used for cognitive purposes. In metatalk, we are able to observe learners' working hypotheses as they struggle towards, for example, solving mathematical problems, scientific problems, or, as we are concerned with in second language learning, linguistic problems. If this is the case, then much of what is observed in metatalk when learners are faced with a challenging language production task and are encouraged to talk about the problems they encounter in doing the task should help us to understand language learning processes. It should help us to understand language learning processes because much of what is observed will be language learning *in progress*. In other words, in metatalk, noticing, hypothesis formation and testing (cognitive problem-solving), and other learning processes (e.g., comprehending) may be made available for inspection. They are available for inspection by researchers, teachers and, possibly most importantly, for students themselves as they engage in second language learning.

Thus, by encouraging metatalk amongst second and foreign language students, we may be helping students to make use of second language acquisition processes. That is, metatalk may be one pedagogical means by which we can assure that language acquisition processes operate. It is essential, however, that this metatalk – this conscious focus on language form – is encouraged in contexts where the learners are engaged in making meaning. Otherwise, the critical links between meaning, form and function may not be formed.

Current research

The metalinguistic function of output has been the most important for us in thinking about the type of tasks in which we could engage immersion students that might help them move beyond their current

state of L2 development towards more native-like performance. In our current research, we have sought to utilize tasks that would encourage output, and so we have used collaborative tasks. We also wanted our tasks to foster the use of metatalk. Thus, we have begun to try out in the classroom different tasks that are communicatively oriented, but where communication is in part, at least, *about* language; that is, where students will talk about – consciously reflect on – their own output. One type of task that we have found effective in achieving these goals is the dictogloss task (see Kowal and Swain, 1994; 1997 for details).

The dictogloss, quite different from a dictation exercise, is a procedure which encourages students to reflect on their own output (Wajnryb, 1990). As Wajnryb says about the dictogloss task, 'Through active learner involvement students come to confront their own strengths and weaknesses.... In so doing, they find out what they need to know.' (1990, p. 10)

During a dictogloss task, a short, dense text is read to the learners at normal speed; while it is being read, students jot down familiar words and phrases; then the learners work together in small groups to reconstruct the text from their shared resources. The final versions the students have produced are then analyzed and compared in a whole class setting in order to provide students with teacher feedback on student performance. The initial text is intended to provide practice in the use of particular grammatical constructions. In second language medium teaching situations as in French immersion programs in Canada, the contents of the text can also be related to academic material the students are currently studying in class.

We have tried using dictogloss tasks in grade seven and eight immersion classes (Kowal and Swain, 1994; 1997), and have found that they have elicited the sort of student talk we hoped they would elicit: talk about the language of the text they were reconstructing, that is, metatalk. We observed students noticing things they did not know or could not say to their own satisfaction, and we observed these same students formulating hypotheses and testing them out using the tools at their disposal: themselves; each other; their dictionaries; their 'verb' book; their teacher; their L1. Additionally, students ignored some of the errors they made; they often functioned at a semantic level, wanting to use the right word as well as thinking about correct inflections and relationships between words; and they focused on many other points of grammar than the one Kowal, the teacher, had in mind in developing the particular dictogloss.

We therefore felt assured that the dictogloss had created opportunities for metatalk, which these immersion students took up. The question

of interest which this raises is, of course, does this metatalk support second language learning? Or, even, is the metatalk, itself, evidence of learning occurring?

To begin to address these questions, we have conducted two additional studies. To restate, our goals for this research are both theoretical and pedagogical. Pedagogically, our research is aimed at considering teaching strategies which might focus immersion students' attention on the accuracy of their spoken and written L2, while still maintaining the 'philosophy' of immersion education – that is, that second language learning be embedded in a contextually rich, content-based, curriculum. This has led us to consider tasks that would lead immersion students to focus on form while never losing sight of the meaning they are trying to convey. And theoretically, our interest is in the role that output might have in the process of second language learning.

The first study that I would like to discuss was conducted by Donna LaPierre (1994) as her MA research and involved grade eight early French immersion students. Her study served as a pilot study (see also Swain, 1998) to the research we have just completed and that I will describe shortly. In LaPierre's study it was hypothesized that when L2 learners engage in a task in which they need to talk about the language they are producing (metatalk) to complete the task, that metatalk may be a source of second language learning. The task the students engaged in, in her study, was a dictogloss.

Second language learning was tested by means of tailor-made dyad-specific post-tests. We examined what aspects of language students talked about as they reconstructed the dictogloss passage in pairs. On the basis of these episodes, test items were constructed. Thus, every pair of students had a set of test items that reflected what they specifically had considered in reconstructing the passage. These tests were administered approximately a week after the students had done the task.

Of course, as the students encountered a linguistic problem and tried to solve it, their solution could be correct or incorrect. The results show that when the students solved the linguistic problem correctly, which for these students, at least, was most of the time, approximately 80% of the relevant post-test items were correct. Furthermore, and equally as telling, when the solutions the students arrived at through their metatalk were incorrect, approximately 70% of the answers on the post-test were wrong, although they matched the solutions the pairs had arrived at. In other words, the students tended to 'stick with' the knowledge they had constructed collaboratively the previous week. These results suggest rather forcefully that these language-related episodes, where students

reflect consciously on the language they are producing, may be a source of, or even an occasion for, second language learning. These results also show the importance of teacher follow-up to task activity to provide feedback to students concerning their hypotheses.

The second study, which my colleague, Sharon Lapkin, and I have been working on, differed from LaPierre's in that two tasks were used: a dictogloss task and a jigsaw story construction task. The story construction task was like the one I described at the beginning of this paper. Additionally we attempted to use a pre-test/post-test design.

One goal of the study was to see if one type of task led students to focus on form with greater frequency than the other. Our original prediction was that the dictogloss task would lead students to focus on form with greater frequency than the jigsaw task. This was because our results to date using the dictogloss had clearly led students to focus on form; and our reading of the relevant literature had suggested that jigsaw tasks - one in which each participant has some, but not all, the information needed to complete the task - is the type of task where opportunities for meaning negotiation are most likely to be generated (e.g., Pica, Kanagy and Falodun, 1994). In other words, we assumed our jigsaw task represented a typical communicative task as defined by Nunan where 'attention is principally focused on meaning rather than form.'

Space does not allow me to consider the details of the full study (see Swain and Lapkin, 1998; 2001 for details). What is important to know is that in order that the two groups be treated as similarly as possible, a pre-recorded mini-lesson on French reflexive verbs was shown on video. This was followed on the video with two students shown working collaboratively on the relevant task - dictogloss or jigsaw. This served as a model for what the students were to do immediately following the viewing of the videotape when a new jigsaw task or dictogloss was introduced for the students to do. The conversation of each pair of students in the class was tape-recorded as they did their task. About a week later, these students were tested on, among other things, aspects of language that they had talked about while they carried out the task.

What were the results?

First, and to our considerable surprise, the percent of form-based language-related episodes (LREs⁴) produced by the students was the same for both tasks. As shown in Table 1, approximately 60% of the language-related episodes generated were form-based whether the task

TABLE 1
Language-related episodes (LREs)

	Class J			Class D			Sig. ³
	<i>N</i>	<i>X</i>	<i>SD</i>	<i>N</i>	<i>X</i>	<i>SD</i>	
Count of total episodes	12	8.8	8.0	14	9.2	4.2	NS
Count of lexis-based LREs	12	4.0	3.7	14	3.7	2.3	NS
Count of form-based LREs	12	4.8	4.5	14	5.5	2.9	NS
Per cent lexis-based LREs	12	41%	21%	14	40%	19%	NS
Per cent form-based LREs	12	59%	21%	14	60%	19%	NS

was the dictogloss or the jigsaw. On reflection, we believe there are two reasons for this similarity.

One reason is that the mini-lesson on reflexive verbs given prior to actually doing the task served, as we had expected, to focus students' attention on language form. This is shown clearly in Example 3.

Example 3: (Class J, pair 4)

- B: Yvonne va à l'école.
(*Yvonne goes to school.*)
- A: Se part à l'école.
(*Yvonne leaves [uses non-existent reflexive form] for school.*)
- B: Oui. Elle ... se marche.
(*She walks [uses non-existent reflexive form]*)
- A: Se part, parce que....
(*Leaves [uses non-existent reflexive form], because*)
- A: Est-ce que c'est part ou se part?
(*Is it leaves or leaves [in the non-existent reflexive form]?*)
- B: Part.
(*Leaves.*)
- A: Part? Just part?
(*Leaves? Just leaves?*)
- B: Ya.
- A: Ok. Yvonne part à l'école, um....
(*Yvonne leaves for school.*) (Swain and Lapkin, 2001)

Here the two students talk about the correct form of the verb *partir*. They wonder if it should be a reflexive verb. In fact, the French verb *partir* does not exist in the reflexive form; but clearly these students are hesitating, most likely because of the mini-lesson they had seen on the

video just preceding their doing the task. A asks B if the verb should be 'part' or 'se part,' that is, should it be in the reflexive form or not? B supplies the correct answer, and that is the form A then uses.

The second, and perhaps more important reason, is that the tasks had in common the necessity to produce written language. It was as the students wrote that they questioned each other about how to write, focusing their joint attention on form. The activity of writing collaboratively led students to discuss their own language use as they encountered problems. They brought to conscious attention gaps in their own knowledge and worked out possible solutions through hypothesis formation and testing, relying on their joint linguistic resources.

A second major finding was that there was a wide range of student behaviour in doing the tasks. For example, although an average of 8.8 LREs were produced by student pairs in the jigsaw task, there was a rather surprisingly high range of 26 to 1 LREs produced by individual pairs. The average number of form-based LREs was 4.8 with a range of 15 to 1, and the average number of lexis-based LREs⁵ was 4.0 with a range of 12 to 0.

Similarly, there was a wide range of time spent on task. Again using the jigsaw task as an example, the average time students spent on task was approximately 10 minutes out of a half-hour that they were given to do the task. However, the range of time spent on task varied from 23 minutes to a rather low 3.5 minutes.

A third major finding concerns the texts produced by the students. They were rated according to content, organization, vocabulary, morphology and syntax. The average rating of the jigsaw pairs was similar to that of the dictogloss pairs. However, the range of scores for the dictogloss pairs was much smaller than that for the jigsaw pairs, suggesting that the language model provided by the dictogloss focuses and constrains students' language production. Because the reflexive verb was the focus of the mini-lesson, we counted instances of correct and incorrect reflexive verb use in the written texts of the jigsaw and dictogloss students. Of the reflexive verbs used by the jigsaw students, approximately 60% were correct. In contrast, approximately 90% of the reflexive verbs used by the dictogloss students were correct, underlining the importance of the dictogloss in providing grammatically accurate input.

Our fourth major finding was that, like LaPierre, we found evidence of the importance of metatalk as reflected in the language-related episodes for second language learning. Example 4 is richly illustrative.

The first LRE in Example 4 relates to the use of 'réveille-matin': turns 2 through 4, 9, 55-72 and 92-95 were all considered as part of this single

LRE. Turns 66 through 72, and 92 to 93 also constitute part of a second LRE focusing on the noun 'le sonnement.'

Example 4

Turn 2: Kim: On peut pas déterminer qu'est-ce que c'est.
(*One can't figure out what it is.*)

Turn 3: Rick: Réveille-matin.
(*Alarm clock.*)

Turn 4: Kim: Et il y a un réveille-matin rouge ... sur une table brune, et le réveille-matin dit six heures, et c'est tout.
(*And there is a red alarm clock ... on the brown table, and the alarm clock says six o'clock, and that's all.*)

This exchange continues for another 4 turns with Kim using 'réveille-matin' three more times, and Rick once more; Rick then for some reason switches to 'la/le rêve-matin' in turn 9. His hesitation in producing it suggests his uncertainty.

Turn 9: Rick: Elle est en train de dormir après que ... la rêve-matin est encore sonné. Et le rê- ... rêve-matin dit six heures un.
(*She is sleeping after the alarm clock rang again. And the alarm clock says one minute after six o'clock.*)

This uncertainty continues.

Turn 55: Kim: ... il y a un réveille-matin.
(*... there is an alarm clock.*)

Turn 56: Rick: Réveille-matin?
(*Alarm clock?*)

Turn 57: Kim: Réveille-matin.
(*Alarm clock.*)

Turn 66: Rick: Se réveille à cause ... du son ...
(*Wakes up because ... of the sound ...*)

Turn 67: Kim: Réveille-matin.
(*Alarm clock.*)

Turn 68: Rick: A cause du ...
(*Because of ...*)

Turn 69: Kim: Du réveille-matin qui sonne? Does that sound OK?
(*Of the alarm-clock that rings? Does that sound OK?*)

Turn 70: Rick: Or what about ... Jacqueline se lève a cause du ... du réveille- ... yeah, qui sonne.

(Or what about ... Jacqueline [the girl in their story] gets up because of the ... of the alarm- ... yeah, that rings.)

Turn 71: Kim: OK. Or you can say, du réveille-matin, or du sonnement du réveille-matin.

(OK. Or you can say, of the alarm clock, or the ring of the alarm clock.)

Turn 72: Rick: No, réveille-matin qui sonne.

(No, alarm clock that rings.)

Turn 92: Rick: Sur la rêv.. rêve-matin.

(On the alarm clock.)

Turn 93: Kim: Sur le réveille-matin pour arrêter le sonnement.

(On the alarm clock to stop the ring.)

Turn 94: Rick: Rêve-matin?

(Alarm clock?)

Turn 95: Kim: REVEILLE-matin.

(Alarm clock.) [Stresses component meaning 'wake.']

(Swain and Lapkin, 1998)

We do not know why Rick sometimes used 'rêve-matin' after he, himself, initially suggested using 'réveille-matin' to Kim (turn 3). However, it is clear from the dialogue that Rick is uncertain as to which is the correct vocabulary item. This is indicated by the pauses prior to, or even during, the use of 'rêve-matin' (turns 9 and 92) and 'réveille-matin' (turn 70); by his need for reassurance before writing 'réveille-matin' (turn 56); and finally by overtly asking if 'rêve-matin' is OK (turn 94) and getting immediate feedback from Kim that it should be 'RÉVEILLE-matin.' In writing the story, Rick correctly uses 'réveille-matin' three times, though it is misspelled each time as 'réveil-matin.'

Key to our understanding of what might have resulted from this metatalk is a relevant multiple-choice pre- and post-test item. Students saw a picture of an alarm clock and were asked to choose the best response from: 1. Voilà mon horloge. 2. Voilà mon réveille-matin. 3. Voilà mon rêve-matin. 4. Voilà ma cloche. As a pre-test item, Kim correctly chose 'réveille-matin' and Rick chose 'rêve-matin.' But, in the post-test, both students chose the correct response.

In this collaborative dialogue, we are able to 'observe change' in Rick's use of the correct term for alarm clock. It is not a one-time shift from wrong to right, but a wavering between alternatives. The source of his learning is not only input although Kim used 'réveille-matin' seventeen times during their entire conversation. Nor was the source of his learning only output, although it was probably Rick's attempt to

write it (turn 56) which focused his attention on his own uncertainty about which term to use. We see here the two students engaging in talk about their own language use, stimulated by Rick's uncertainty which he realized only when he had to produce 'réveille-matin' in writing. Having noticed this gap in his knowledge, he questions Kim. Here Rick's questions serve as hypotheses, and Kim's responses serve to confirm or disconfirm them.

The 'sonnement' LRE (in turns 66 to 72 and continued in turns 92 and 93) is particularly interesting because 'le sonnement' is not a word in French ('le son' or 'la sonnerie' are the relevant words here). Although the word 'sonnement' does not exist in French, Kim, in creating this word, applies a productive rule in French ('ment' is a suffix which marks many masculine nouns). Elsewhere in the transcript, Rick questions whether it is 'la sonnement' or 'le sonnement,' and Kim immediately assures him that it is 'LE sonnement.' In producing le sonnement, we see Kim and Rick applying rules to new contexts, albeit incorrectly. They solve a lexical problem in much the same way as native speakers might coin a new word, by using their existing language knowledge as a tool to create new knowledge.

Summary of insights

I now turn to the third part of this paper in which I will try to summarize insights about language teaching that follow from our research and particular theoretical perspective.

1. In an immersion-type setting where students are to learn the academic content of school through the medium of a second language, provision of input-rich, communicatively-oriented instruction is not enough for students to develop native speaker levels of proficiency in the second language.
2. Teaching grammar *per se*, disconnected from the content it conveys and the functions it serves, also is not enough to develop native speaker levels of proficiency in the second language.
3. Language instruction needs to be systematically integrated into content instruction. There are many ways to do this (see, e.g., Day and Shapson, 1991; Harley, 1989; Mohan, 1986; Snow, Met and Genesee, 1989). The use of carefully planned and structured collaborative tasks is one means.
4. Characteristics of these collaborative tasks are:
 - a) students work in pairs thereby 'forcing' participation.
 - b) a final product of written text (or oral presentation) is required.

- c) students focus on language form as they work to express content accurately, coherently and appropriately. They are, therefore, communicative tasks. However, different from communication tasks as they are usually defined, students communicate about both language form and content.
5. Collaborative tasks provide opportunities for second language learning because:
 - a) students notice gaps in their linguistic knowledge as they try to express their intended meaning leading them to search for solutions (formulate and test hypotheses).
 - b) students externalize their knowledge allowing them to reflect on it, revise it, and apply it.
 - c) all students participate actively and the resulting output allows them to increase their use and knowledge of the target language.
 6. Collaborative tasks generate unintended consequences. Students carry out tasks according to their own needs and goals. They may not learn what the teacher intended them to learn, but nevertheless they learn what, given their state of content and language knowledge, they are able to learn. Often together, students accomplish what they could not have accomplished alone.
 7. Teachers, researchers, testers and the students, themselves, have much to learn by studying the substance of collaborative talk.
 - a) Teachers can gain insights into the hypotheses students hold about language and content, helping them to orient their instruction towards erroneously held hypotheses.
 - b) Researchers can gain insights into the processes of language learning as students engage in linguistic problem solving.
 - c) Testers can gain insights as to what to test, and why students perform well or badly on a particular test. If the students did not consider the issues the test deals with, why should they perform well on it? Furthermore, students may have learned other things which were not tested – a credit to themselves, but not to the tester.
 - d) Students can gain insights into their own linguistic shortcomings and develop strategies for solving them by working them through with a partner.
 8. Collaborative tasks should not be seen as ‘stand-alone’ activities. Teachers’ availability during collaborative activities, and their attention to the accuracy of the final product subsequent to the completion of collaborative activities, are potentially critical aspects for student learning.

In conclusion, the research I have discussed is just a beginning: just a beginning in a program of research aimed at examining pedagogical strategies that will enhance the second language learning of, in our case, French immersion students. We have begun to accumulate evidence to suggest the usefulness of collaborative tasks that lead learners to reflect on their own language production as they attempt to create meaning. Such tasks not only stimulate output that can serve to focus attention and to formulate and test hypotheses, but they also provide opportunities for output to function as a metalinguistic tool. On the basis of our results to date, we see the desirability of incorporating collaborative, form-focused tasks – of the sort used in this study – in second language curricula as part of a language class, or in second language medium contexts to support academic-specific language development.

Merrill Swain is a professor in the Department of Curriculum, Teaching and Learning at the Ontario Institute for Studies in Education of the University of Toronto. Her interests include bilingual education (particularly French immersion education) and communicative second language learning, teaching and testing. Her present research focuses on the role of collaborative dialogue in second language learning. She was President of the American Association for Applied Linguistics in 1998–99, and is currently a Vice President of the International Association of Applied Linguistics.

Notes

- 1 Most of the research reported in this paper was supported by a grant to Merrill Swain and Sharon Lapkin from the Social Sciences and Humanities Research Council of Canada (#410-93-0053). The current paper is a slightly revised version of an article which appeared in 1999 in C. Ward and W. Renandya (Eds.), *Language Teaching: New Insights for the Language Teacher*, RELC Anthology Series 40, pp 125-147.
- 2 Metatalk is often signalled by intonation and/or stress (prosodic features).
- 3 Two-tailed t-test.
- 4 A language related episode is any part of a dialogue where students talk about the language they are producing, question their language use, or other- or self-correct.
- 5 Lexis-based LREs involve students seeking French vocabulary and/or choosing among competing French vocabulary items. Form-based LREs involve students focusing on spelling or an aspect of French morphology, syntax or discourse.

References

- Allen, P., Swain, M., Harley, B. & Cummins, J. 1990. Aspects of classroom treatment: Towards a more comprehensive view of second language education. *The Development of Second Language Proficiency*, ed. by Harley, B., Allen, P., Cummins, J. & Swain, M. (pp. 57-81). Cambridge: Cambridge University Press.
- Day, E. & Shapson, S. 1991. Integrating formal and functional approaches to language teaching in French immersion: An experimental study. *Language Learning*. 47, 25-58.
- Ellis, R. 1994. *The Study of Second Language Acquisition*. Oxford: Oxford University Press.
- Harley, B. 1986. *Age in Second Language Acquisition*. Clevedon, Avon: Multilingual Matters.
- Harley, B. 1989. Functional grammar in French immersion: A classroom experiment. *Applied Linguistics*. 10, 331-359.
- Harley, B. 1992. Patterns of second language development in French immersion. *Journal of French Language Studies*. 2, 159-183.
- Harley, B. & Swain, M. 1984. The interlanguage of immersion students and its implications for second language teaching. *Interlanguage*, ed. by Davies, A., Criper, C. & Howatt, A. (pp. 291-311). Edinburgh: Edinburgh University Press.
- Kowal, M. & Swain, M. 1994. Using collaborative language production tasks to promote students' language awareness. *Language Awareness*. 3, 73-93.
- Kowal, M. & Swain, M. 1997. From semantic to syntactic processing: How can we promote metalinguistic awareness in the French immersion classroom? *Immersion Education: International Perspectives*, ed. by Johnson, R. K. & Swain, M. (pp. 284-309). Cambridge: Cambridge University Press.
- LaPierre, D. 1994. *Language output in a cooperative learning setting: Determining its effects on second language learning*. MA thesis, OISE (University of Toronto).
- Mohan, B. 1986. *Language and Content*. Reading, MA: Addison-Wesley.
- Nunan, D. 1989. *Designing Tasks for the Communicative Classroom*. Cambridge: Cambridge University Press.
- Pica, T., Kanagy, R. & Falodun, J. 1994. Choosing and using communication tasks for second language instruction. *Tasks and language learning: Integrating theory & practice*, ed. by Crookes, G. & Gass, S. (pp. 9-34). Clevedon, Avon: Multilingual Matters.
- Pica, T., Holliday, L., Lewis, N. & Morgenthaler, L. 1989. Comprehensible output as an outcome of linguistic demands on the learner. *Studies in Second Language Acquisition*. 11, 63-90.

- Snow, M. A., Met, M. & Genesee, F. 1989. A conceptual framework for the integration of language and content in second / foreign language instruction. *TESOL Quarterly*. 23, 201-217.
- Swain, M. 1984. A review of immersion education in Canada: Research and evaluation studies. *Studies on Immersion Education: A Collection for U.S. Educators*. Sacramento: California State Department of Education, 87-112.
- Swain, M. 1985. Communicative competence: Some roles of comprehensible input and comprehensible output in its development. *Input in Second Language Acquisition*, ed. by Gass, S. and Madden, C. (pp. 235-253). Rowley, MA: Newbury House.
- Swain, M. 1993. The output hypothesis: Just speaking and writing aren't enough. *The Canadian Modern Language Review*. 50, 158-164.
- Swain, M. 1995. Three functions of output in second language learning. *Principle and Practice in Applied Linguistics: Studies in Honour of H.G. Widdowson*, ed. by Cook, G. & Seidlhofer, B. (pp. 125-144). Oxford: Oxford University Press.
- Swain, M. 1996. Discovering successful second language teaching strategies and practices: From program evaluation to classroom experimentation. *Journal of Multilingual and Multicultural Development*. 17, 89-104.
- Swain, M. 1997. Collaborative dialogue: Its contribution to second language learning. *Revista Canaria de Estudios Ingleses*. 34, 115-132.
- Swain, M. 1998. Focus on form through conscious reflection. *Focus on Form in Classroom Second Language Acquisition*, ed. by Doughty, C. & Williams, J. (pp. 64-81). Cambridge: Cambridge University Press.
- Swain, M. & Lapkin, S. 1995. Problems in output and the cognitive processes they generate: A step towards second language learning. *Applied Linguistics*. 16, 371-391.
- Swain, M. & Lapkin, S. 1998. Interaction and second language learning: Two adolescent French immersion students working together. *MLJ*. 83, 320-337.
- Swain, M. & Lapkin, S. 2001. Focus on form through collaborative dialogue: Exploring task effects. *Researching pedagogic tasks: Second language learning, teaching and testing*, ed. by Bygate, M., Skehan, P., & Swain, M. (pp. 98-118). London, UK: Longman.
- Tarone, E. & Liu, G-Q. 1995. Situational context, variation, and second language acquisition theory *Principle and Practice in Applied Linguistics: Studies in Honour of H.G. Widdowson*, ed. by Cook, G. and Seidlhofer, B. (pp 107-124). Oxford: Oxford University Press.
- Vignola, M-J. & Wesche, M. 1991. Le savoir écrire en langue maternelle et en langue seconde chez les diplômés d'immersion française. *Etudes de linguistique appliquée* 82, 94-115.
- Wajnryb, R. 1990. *Grammar Dictation*. Oxford: Oxford University Press.