CALL-enhanced L2 Listening Skills – Aiming for Automatization in a Multimedia Environment

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ABSTRACT

Computer Assisted Language Learning (CALL) and L2 listening comprehension skill training are bound together for good. A neglected macroskill for decades, developing listening comprehension skill is now considered crucial for L2 acquisition. Thus this paper makes an attempt to offer latest information on processing theories and L2 listening comprehension research, as they are the foundations of our methodological proposal. It also establishes a set of criteria for the design and pedagogical exploitation of online and offline listening materials delivered through the latest technology (DVDs and TV satellite recordings) in order to achieve learners’ automatization of L2 input processing. In this vein, we carry out a gradual approach to take the L2 learner from a lower-intermediate to an advanced L2 listening competence. Finally, an L2 listening comprehension training course delivered through the Labint multimedia digital lab and its online branch is also presented.

Keywords: Computer Assisted Language Learning (CALL), L2 listening comprehension skill, automatization, multimedia digital platform or lab, E-lab

1. THE ROLE OF LISTENING IN L2 LEARNING

Despite the fact that as much as 50% of communication time is spent listening (Gilman & Moody 1984), little research has been devoted to the development of this relevant skill. Some even argue that “listening has been treated as the Cinderella of the four macro-skills” (Flowerdew & Miller 2005). There are a number of reasons for this. According to Pérez Basanta (2000a: 1811):

Firstly, it is construed that listening is a “complex, problem-solving skill [...]” (Wipf 1984: 345), difficult to teach and until a few years ago it was not
broadly accepted that it should be taught explicitly. Secondly, traditional listening materials have often been unsuitable for instructing students (Mendelsohn 1994). Thirdly, teachers do not feel very confident about “how to go about teaching”. Personally, we think you need a lot of expertise which in most cases teachers lack.

Only recently has the role of listening been acknowledged by researchers, who now contemplate it as a key element in the process of L2 acquisition (Feyten 1991). We agree with Richards (1993) regarding the view that instructional materials do make a difference when it comes to teaching – therefore we believe that special attention should be paid to the design of materials that are a) based on recent research; b) appropriate to language proficiency; c) motivating and d) technologically state-of-the-art.

Our methodological proposal to train foreign language students in listening comprehension skill is based on recent research (cognition, bilingualism, L2 acquisition, L2 listening comprehension). It follows a gradual approach, progressing from simpler to more complex oral texts and tasks, thus taking the learner from a lower-intermediate to an advanced L2 listening competence. It involves the use of different media, especially video and audio, making it appealing and motivating to learners. Finally, it takes advantage of the latest digital technology both for learning materials and web interface design.

2. RECENT RESEARCH ON L2 LISTENING COMPREHENSION

Present research concerning L2 aural processing is plentiful; and it comes from a variety of research areas, such as: Psycholinguistics, Cognitive Psychology, Bilingualism, and Applied Linguistics, although the boundaries between these fields are sometimes blurred because each one is influenced by the others. The psycholinguistic paradigm typically contemplates listening comprehension in a sequential fashion, where the input or acoustic signal is first processed phonetically, then words are recognized (lower-order processes), then sentences are built by the listener, who finally arrives at discourse level (higher-order processes). This is the view most currently held by researchers in applied linguistics, who also adhere to the interactivity of bottom-up and top-down processes (Vandergrift 2002) to explain L2 listening comprehension.

Special attention is being directed to specific aspects of the L2 listening process which would eventually lead to improving learners’ listening capacity. Reputed psycholinguists are placing a great deal of
emphasis on the problem of phonological decoding, an issue already posited by Pérez Basanta (2000b: 1615):

Unfortunately, since the first exposure to the language almost always is via the written form, the phonological layer is the missing link in students’ instruction. It has been my experience from a lengthy period of teaching listening as a specific subject, that contrary to Field’s (1998) claim that misunderstanding occurs at the level of syntax, the real hurdle is the phonological one.

In support of this view of L2 aural input processing, Cutler (2000/01) presents sound evidence that the L1 phonological system of childhood dramatically impinges on our ability to process aural L2 because it is constantly interfering with or dominating it. She suggests that intensive listening training to overcome L1 influence on L2 processing would be highly beneficial to L2 learners. This is particularly important in pairs of languages, which do not share the same prosodic patterns, as is the case with English and Spanish. In such cases specific measures should be taken when designing an L2 listening comprehension module. In order to overcome such hindrance, Pérez Basanta (personal comment in Blasco-Mayor 2007) recommends intensive training using pronunciation training materials, since such materials are based on the assumption that listening and speaking are intertwined activities and articulating L2 sounds enhances decodification. As Gilbert (1994) suggests, we should reconsider the interrelationship between listening and pronunciation training and how the two skills are aspects of the same communicative system. Furthermore, Blasco-Mayor’s (2005a, 2007) findings after an experiment involving interpreter trainees which showed very low L2 listening comprehension ability as measured by TOEFL (even for subjects with good results in the grammar and reading comprehension sections of the test) further support the need for intensive L2 listening training.

Sufficient evidence now exists that sound training in L2 listening comprehension should be included in any L2 programme – the question now is what this training should consist of. We firmly believe contents of such a training course should be aimed at promoting automatization of input processing, whatever the L2 level of the learners. If, as is the case with university students enrolled in a modern languages or translation & interpreting degree, L2 learners’ command of their B language is to approach what has been called mastery, surely their L2 training should target an advanced or near-native level on the whole, and specifically of listening comprehension competence.
3. **L2 Listening Comprehension as a Process**

In his view of language acquisition, Ellis (2001) supports a constructivist approach which he considers a matter of mostly unconscious and implicit processes of sequential information analysis. In this sense, for example, vocabulary learning includes, amongst other things, recognizing sound patterns and word sequences. He quotes Melton (1963), who proved that the more often digits are repeated in short term memory, the deeper the trace in long-term memory for those elements. Repetition of sequences in phonological memory therefore reinforces these sequences in long term memory, pointing to the idea that the same cognitive system used to remember phonological sequences is also employed to improve their perception: Thus, the “cycle of perception” (Neisser 1976) is also the “cycle of learning;” bottom-up and top-down processes are in constant interaction (Ellis 2001: 42).

If we apply this model to what an L2 learner does, s/he would be perceiving acoustic input, in many cases new to him/her, while learning at the same time. Of course, there are differences between beginners and advanced learners: less proficient ones need to pay attention to more sequences in order to process language, due precisely to lack of familiarity with it or lack of automaticity. In many cases, though, L2 proficiency cannot be taken as an indicator of L2 listening ability. As Pérez Basanta (2000a) explains, most Spanish students are hardly exposed to the oral form of English in or outside the classroom, which would account for their poor listening proficiency.

Schmidt (1992, 2001), DeKeyser (2001) and MacWhinney (2001) also follow this cognitive view of language where acquisition would occur through wide exposure to practice and repetition. MacWhinney (2001) goes as far as saying that although language acquisition depends on several variables such as the learner, the input and the context, in the case of L2 acquisition hours of autonomous practice in a language laboratory are necessary, since the social context does not offer opportunities for practice, and just attending L2 lessons would only be a small part of the picture.

Solid supporters of repetition also include Jensen & Vinther (2003), who defend *exact repetition* as a way of developing L2 learners’ ability to use their working memory first to extract meaning from the utterance and, then, to focus on form. They base their experiments on previous research by Gass et al. (1999), who suggest that it is possible to extend L2 learners’ contact with the language by means of repetition:

It is assumed that if an utterance reenters (identically) a learner’s working memory at a point when the utterance has already been decoded for
meaning, its situational context will still be present in working memory, and the learner will have time to focus on problems localized earlier in the string of sounds. In this way, we believe, a learner, during subsequent listening(s) to the same utterance, is free to expend available resources on the processing of form. (p. 379)

These researchers have also been inspired by the work of Sharwood-Smith (1986) and VanPatten (2002) in that they believe that for forms to be acquired by L2 learners, they need to be made salient by teachers in graphic form. Also following this trend is Shawback & Terhune’s (2002: 91) CALL materials design work, which includes colour-coded keywords of high cultural content to be used in post-listening exercises.

Still, to complete the picture of L2 listening training design, top-down and bottom-up processes must also be taken into consideration. As Celce-Murcia (1995: 365) argues, top-down processes consist of schematic knowledge and contextual clues. Schematic knowledge is of two types: 1) Content schemata or background information on the topic and relevant sociocultural knowledge, and 2) formal schemata or knowledge about how discourse is organized with respect to different genres, topics and purposes. On the other hand, contextual knowledge pertains to an understanding of a specific listening situation (participants, setting and topic) and non-verbal clues (body movements, gestures, grimaces, proxemics, i.e. social distance). In our experience schematic knowledge plays a fundamental role in the comprehension of authentic texts, since it touches on the cultural component of language learning which also needs to be developed in conjunction with the pure listening skill, as it acts as a facilitator of the higher order mental processes involved in comprehension.

Meanwhile, bottom-up processes entail knowledge of the language system, as the listener is obliged to perceive/understand the acoustic or phonological signals (segments and suprasegments), words, phrases, clauses and sentences which make up a coherent and cohesive text. In our view, phonology and pronunciation training are of the utmost importance, but vocabulary and grammar knowledge play a most relevant role as well, and they should have a prominent place in any L2 listening comprehension training programme. If the programme aims at the advanced or near-native level, we should turn to Bongaerts (1999), who has looked at highly proficient L2 learners and found that:

1. they had had intensive L2 training,
2. were highly motivated, and
3. were constantly and massively exposed to L2 input
We believe with Bongaerts that any sound L2 training programme should be designed along these lines, and of all the methodologies currently available, it cannot be denied that CALL fulfils all these requirements to a much larger extent than other, strictly textbook-and-CD-oriented programmes.

4. **LISTENING THROUGH CALL.**

In today’s technologically-obsessed society, where an enormous variety of multimedia gadgets are within easy reach of just about any budget, the use of technology-driven L2 learning materials should seem quite obvious. Academically, it has been widely endorsed that the use of different media, especially video to enhance L2 listening training, “can and does enhance language teaching by bringing the outside world into the classroom, and in short making the task of learning a more meaningful and exciting one” (Pérez Basanta 2000a: 1816). Apart from providing context, digital video as a teaching resource can offer the following advantages: 1) authenticity; 2) motivation, interest and confidence; 3) the sociolinguistic and pragmatic level of language; 4) nonverbal features, such as gestures and body language; 5) active involvement and participation; 6) real vocabulary acquisition (cf. Pérez Basanta 2000b).

It has to be said, though, that digital videos do not provide all these benefits *per se*: a sound pedagogical exploitation based on learners’ listening processes and strategies must be designed in order to make the most of its potential learning features. The way to accomplish this is by proposing a number of activities around a video fragment which should be chosen in accordance with the target audience’s skills and proficiency level. When choosing a video fragment, therefore, we must take into account the differences between skilled and unskilled learners and how they will approach the listening task:

<table>
<thead>
<tr>
<th>Skilled Listeners</th>
<th>Unskilled listeners</th>
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</thead>
<tbody>
<tr>
<td>Greater flexibility of listening strategies</td>
<td>Rely on one or two listening strategies</td>
</tr>
<tr>
<td>Effectively use world and discourse knowledge</td>
<td>Overdependent on previous knowledge</td>
</tr>
<tr>
<td>Listen for main points</td>
<td>Listen for details</td>
</tr>
<tr>
<td>Not distracted by unknown words</td>
<td>Easily distracted by unknown words or extraneous factors</td>
</tr>
</tbody>
</table>

In order to help learners bridge the gap from unskilled to skilled listening comprehension competence, we must thus supply what is missing in their training, namely:
1. A wide range of listening strategies, such as predicting, guessing, recognizing discourse markers, using context clues, making use of nonverbal clues, recognizing how stress and intonation affect meaning (for a thorough review of listening strategies see Buck 2001). They should also include metacognitive strategies as advised by Vandergrift (2006).

2. Instructions as to how to be informed or find the information necessary to form schemata to comprehend fragments. This includes all sorts of valuable information regarding a) the fragment itself, such as its source, genre, year of release, names of presenters or actors who appear in it, cultural components; and b) the language used in the fragment, such as keywords. The importance of previous knowledge to L2 aural text comprehension (especially cultural references) is thus brought to light.

3. The ability to summarize information. This may be enhanced by asking learners to provide the gist of a fragment, for example by asking them to give a brief oral account of what they have heard; or asking them to outline the main ideas in the fragment; and teaching the differences between main (ideas) and secondary information (explanations, examples, anecdotes, lists of things).

4. Focus on form. Students may be asked to direct their attention to acoustically and graphically presented new or relevant L2 items that need to be tackled, such as keywords, idioms, phrases, grammatical features; making sure learners repeat these items several times to enhance L2 phonological memory and thus L2 acquisition and automatization.

5. In addition, the technology know-how of L2 learners should not be overlooked. The popular belief is that most people, especially young L2 learners, are conversant with all kinds of devices for their L2 learning endeavours: DVDs, TV satellite reception, Internet sites and so on. However, a deeper look will reveal that L2 learners are hardly profiting from the enormous availability of technological aids, as can be deduced from the sociological profiles of L2 learners obtained by Blasco-Mayor (2005, 2007), where in a group of fifty L2 learners only three made use of technology on a habitual basis to improve their language skills. From this it can be inferred that L2 learners need clear instructions regarding the use of technology to enhance their language learning and listening comprehension skills, and how to integrate technology-driven L2 listening practice into their everyday routines.
5. CRITERIA FOR L2 LISTENING MATERIAL SELECTION IN A CALL ENVIRONMENT

Many researchers within the CALL field are now advocating the use of digital video for language teaching. Jones (2003) has shown that the use of multimodal media in CALL helps the learner comprehend acoustic input. Class observation by the author shows that a high number of learners, especially the least proficient, benefit from both acoustic and visual text cues to increase their comprehension performance. Hoven (1999: 88) advocates looking at more traditional areas of L2 learning to integrate their findings in L2 CALL, and argues that, especially when using authentic texts, the difficulty of both texts and tasks should be graded according to learners’ capacity. Hoven quotes Kellerman (1992) and Hurley (1992) when it comes to the selection of materials: these authors “advocate the use of target-language audiovisual material containing a range of different interaction types to enhance awareness of the verbal, prosodic, kinesic, and non-verbal features used by members of the speech community” (p. 90).

King (2002: 510), moreover, supports the use of films and DVDs on the grounds that they offer an authentic context from which to practice and learn all sorts of linguistic and paralinguistic features of language. At the same time they are something to be enjoyed rather than strictly a lesson to be learnt. When it comes to the selection of materials, there are two approaches, namely:

1. the whole film approach
2. the short sequence approach

We firmly believe that spending a whole teaching session just viewing a film does little more than promote passive viewing, and that only highly proficient learners benefit from it, whereas those with lower ability spend valuable learning time merely guessing at what is going on in the movie. We therefore favour the short sequence approach. Regarding the question of viewing with or without captions, we propose using the captioned version only after the non-captioned one has been viewed, so that learners first try and draw from their own L2 resources to make sense of the text. They may then listen and read at the same time and as many times as each of them needs to make full sense of the text.

Luckily enough for those teaching English as a Second Language, multimedia resources for teachers to create their own listening materials are plentiful and of high quality – it could be said we are “spoilt for choice.”
In terms of design, L2 listening materials are pedagogically exploited according to the criteria prescribed by many L2 scholars: pre-listening tasks, while-listening tasks and post-listening tasks. In pre-listening tasks the aim is to cognitively prepare the listener for what is to come so that she will form her own schemata. To this end, many different techniques can be used: brainstorming, word mapping, lists of keywords, oral repetition and explanation of vocabulary items amongst others. If the excerpt is loaded with cultural content that the teacher wishes to exploit and learners need to acquire, it is advisable to give learners a previous task that consists of searching for information related to the subject on the Internet, always giving them the exact sources they need to look up (i.e. giving the exact Internet site address).

The while-listening stage can vary according to learners’ proficiency: for intermediate level learners, questions that focus mainly on gist are advised; for upper-intermediate to advanced, questions should aim at learners’ understanding of both the gist of the material presented and certain important details in order to develop aural acuity. Finally, advanced learners should be perfectly able to summarize the fragment in written form. It should be born in mind that in order to carry out this task effectively, students will need clear guidelines as to how to summarize oral texts.

The post-listening phase is there for learners to consolidate the language they have encountered in the previous phases, and therefore they should work on the language items that the teacher wishes to highlight for further learning: pronunciation, vocabulary, grammar, discourse features and cultural items. A final task could be a transcription of a particular speech fragment judged to be especially relevant to their L2 development.

It goes without saying that both the listening and post-listening phases require several viewings/hearings (never under three times for each, and many more if transcription work is involved). Most of the time, this depends on the degree of L2 listening expertise of each learner. That is why there is need for an online platform where all materials are permanently available to learners, so that autonomous practice is undertaken by each student in order to develop automatization of language features and L2 listening skill.

6. INTEGRATING IT ALL: AN E-LAB FOR L2 LISTENING TRAINING

At present we have integrated all L2 listening resources into a digital platform called Labint which has served a variety of purposes. While
its original function was to act as a guide for all lab users, that is, teachers, students and technical staff alike, it gradually developed into a sort of virtual Languages Resource Centre (LRC) or E-Lab. The physical lab is now used for Interpreting classes and English as a Second Language, as well as the provision of a considerable number of self-access activities. The online branch of Labint is a digital language lab for students taking courses in second-year English. It has been running in the lab for only three years.

Figure 1. Labint main screen

Once students enter the site - and after introducing their user name and password - they may select the course they are taking, the lesson they are looking for, as well as any resources associated with the lesson, be it word documents, audio or video files:

Figure 2. Resources for the English course available in Labint (only authorized students)
The following are available for use and/or acquisition in this platform:

1. **Recorded satellite TV broadcasts**: An in-house technician in charge of the computers and language learning laboratories – also used for translation and interpreting tasks – regularly records programmes featured on BBC1, BBC2, BBC World and CNN. Both BBC1 and BBC2, which are received on their own separate satellite dish, are also broadcast in the captioned version so we often have access to both the captioned and non-captioned versions of a programme, thus saving teachers the time and bother of having to do tiresome transcriptions. BBC World and CNN can also be recorded to be used at an advanced level of aural L2 processing, since they involve knowledge of world affairs and the presenters’ speech rate is higher than average. After watching the programmes, the teacher decides which sequence or fragment she wishes to use and the technician then proceeds to its editing and digitalisation using Pinnacle Studio video editing software.

2. **DVDs** published by the BBC with their most salient and popular programmes; we favour those with a high cultural input. The same procedure as above is followed except that the teacher avoids the cumbersome task of handling video tapes and works straight from the DVD. There is plenty of choice, as shown in the following examples:

   - Documentaries on DVD (such as *History of Britain* by Simon Schama, *Kings and Queens*, *How We Built Britain*).
   - TV series on DVD (comedies such as *Absolutely Fabulous*, *The Catherine Tate Show*, *Little Britain*, *The Office*, and historical fiction such as *Pride and Prejudice*, *Miss Austen Regrets*, *Lark Rise to Candleford*).
   - British films on DVD, such as comedies (*Notting Hill*, *Bridget Jones*, *Four Weddings and a Funeral*); historical non-fiction (*The Queen*) and any other production which is interesting from a cultural point of view.
   - Programmes recorded, edited and sold independently, such as *Jamie’s Christmas*, which can be bought online from the all-popular chef’s web site.

7. **Conclusion**

Since the actual time-on-task devoted to developing L2 listening comprehension skill in class is clearly insufficient, we contend that a substantial part of a listening course should consist of autonomous learning,
both in the lab and online, in accordance with the new guidelines set by the European Higher Education Area. Thus, in the physical lab, students can work through a number of modules devoted to L2 phonological awareness, an essential component of listening skill and also to other linguistic and semiotic components (lexical, socio-cultural, paralinguistics, etc.).

Having used Labint to teach English for three years, it is our experience that this new technology has proven to be a vital tool to enhance L2 listening skills. Interestingly, however, the need for a more flexible, powerful, and user-friendly environment emerged during the development of the course. New modules on culture are now being designed, and there is still need to expand the grammar and vocabulary modules of the course in order to offer a learning framework which takes L2 learners from an intermediate to an advanced level of language competence, and which will eventually allow high achievers to reach the Superior-Distinguished levels if they wish, especially in the aural skills.

By and large, this paper describes some nuts and bolts of the listening skill together with the use of the platform Labint online with updated recordings targeted to literally “bombard” learners with L2 aural input – and get them into the habit of keeping up to date with L2 culture and affairs – so that their task-on-time allowance increases exponentially. Through this platform learners can also deliver written summaries of the audio excerpts using the sending facility in Labint (both word and audio).

![Image of Labint platform]

Figure 3. Students send their weekly assignments through Labint

NOTES

1. Extracted from an anonymous Internet source no longer available
2. Labint online platform has been created by Víctor González, our in-house lab technician, who is also its webmaster.
3. We are currently using a Tandberg Educational (now Sanako) multimedia digital languages and interpreting laboratory.
4. There is a “lessons” module with all the L2 resources seen in class with the lecturer.

REFERENCES


