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Enriching language learning through a multimedia corpus

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Abstract

Until recently, use has been made almost exclusively of text-based concordancers in the analysis of spoken corpora. This article discusses research being carried out on Padua University's Multimedia English Corpus (Padova MEC) using the multimodal concordancer *MCA* (*Multimodal Corpus Authoring System*, Baldry, 2005). This highly innovative concordancer enables the retrieval of parts of video and audio from a tagged corpus and access to examples of language in context, thereby providing non-verbal information about the environment, the participants and their moods, details that can be gleaned from a combination of word, sound, image and movement. This is of use to language learners of all levels because if "communication is to be successful, a relevant context has to be constructed by the discourse participants" (Braun, 2005: 52). In other words, transcripts alone are not sufficient if learners are to have anything like participant knowledge and comprehend spoken language. In the article it will be demonstrated how language functions expressed in the multimedia corpus of spoken English are retrieved using *MCA*. Online learning materials based on the multimodal concordances take into consideration not only language, but also the way in which it co-patterns with other semiotic resources, thereby raising the issue of the importance of learner awareness of the multimodal nature of communication.

Keywords: corpus, multimedia, multimodality, materials development, language functions

1 Introduction

The use of corpora is well established in language learning and their use for the compilation of dictionaries (e.g. Cobuild, 2006), grammars (e.g. Biber *et al*., 1999) and teaching materials for the language classroom (Johns, 1991; Partington, 1998; Gavioli & Aston, 2001) is well documented. Calls have been made, however, for a more pedagogic approach to the design of corpora (Braun, 2005) and, indeed, interesting developments in the creation of language learning materials are taking place in various areas of corpus-

based research. This article is informed by previous and ongoing research in a number of areas: spoken corpora (for a review see Leech, 2000), English as a lingua franca (Seidlhofer, 2001), learner corpora (Granger *et al*., 2002) and multimodal corpora (Baldry, Caldirola & Grunther, 2005; Grunther, 2005; Ackerley & Coccetta, 2007). Seidlhofer (2001) states the case for using corpora of English as a lingua franca, pointing out that they should have a prominent role in the description and pedagogy of contemporary English, as its use by native speakers is minimal compared to that by non-native speakers. Learner corpora, on the other hand, can be used to gain insight into the specific difficulties different categories of learners have and can help in decision-making in areas such as curriculum and materials design, classroom methodology and language testing (Granger *et al*., 2002; Zagrebelsky, 2004: 43).

In the context of spoken corpora, Braun (2005) notes that whilst tagged transcriptions of recordings are common in these corpora, at present few provide access to audiovisual material to represent not only features of the spoken language but also surrounding context. The authors of this article discuss how the limitations of the written medium for the study of spoken language can be overcome by use of a multimodal concordancer, which aligns written transcriptions with corresponding audio and video, thereby allowing the user to access both the context and co-text in which the original text was produced, facilitating the observation of the non-verbal features that are so important in meaning-making. According to the researcher or language teacher's needs, different verbal and non-verbal features can be tagged to facilitate the creation of materials, thereby adding pedagogical value to a corpus of basic orthographic transcriptions.

2 Corpora in language learning

2.1 Applying the Common European Framework of Reference to the compilation of a pedagogic corpus

Materials in a general language course should provide students with some kind of exposure to both the target language and its culture. The *Common European Framework of Reference (CEFR)* (Council of Europe, 2001) can be taken as a starting point when making decisions about both the syllabus of a language course and the kinds of texts, speakers, topics and situations to include in a corpus designed with general language learning in mind. For example, the four macro domains (personal, public, occupational and educational) should be covered as well as the various language functions and notions described in detail in van Ek & Trim (1998a; 1998b; 2001). The types of texts found in the corpus affect the kind and quality of the learning materials that can be drawn from it. Therefore, questions concerning the register of texts must be addressed. Relevance and authenticity of texts are also important in the design of a pedagogical corpus. According to Timmis (2005: 118) it is necessary to take into account whether the texts are "plausible as natural interaction" and "have the potential to engage students' interest": topics should be stimulating enough to raise students' interest in the course contents and motivate them to learn, a particularly important issue in an online course.

Aside from the need to create a corpus that is comprehensive in terms of functions, notions and topics, and that can be used across levels of difficulty, it is also necessary to take other learner competences into account. The *CEFR* stresses the importance of

sociocultural knowledge, stating that the knowledge of the society or culture of the community or communities in which a language is spoken "is likely to lie outside the learner's previous experience and may well be distorted by steoreotypes" (Council of Europe, 2001: 102). Knowledge about society and culture may relate to areas such as everyday living, interpersonal relations, values, beliefs and attitudes, body language, social conventions and ritual behaviour. Avoidance of stereotypes may be achieved by the use of authentic texts by speakers of the target cultures and other cultures, rather than the use of texts that have been produced to illustrate what it is thought learners should learn or might expect to learn about a culture. As concerns body language, for example, this can be observed in vivo if a corpus is multimodal and allows access to visual context. Intercultural awareness is another competence advocated by the Council of Europe and is produced not only by a "knowledge, awareness and understanding of the relation (similarities and distinctive differences) between the 'world of origin' and the 'world of the target community'" but is also "enriched by an awareness of a wider range of cultures than those carried by the learner's L1 and L2" (p. 103), an argument which supports the inclusion of texts produced by both native and non-native speakers in a pedagogical corpus. Furthermore, it is necessary for learners to develop general phonetic awareness and skills, which can be addressed if learners have access to the audio recording in a corpus of spoken language. The *CEFR* also suggests that learners should acquire the ability to recognise linguistic markers that include regional provenance and national origin. This may be facilitated if learners can access metadata that provides this kind of information about the speakers in a corpus.

2.2 Authenticity and data-driven learning

Ongoing discussions on the authenticity of texts and tasks in language learning have raised a number of issues both in terms of the definition of authenticity and its application to language learning. Widdowson's (2003) views are well-known: not only does he argue that authenticity refers to the relationship between the text and the receiver, in which case authenticity depends on the kind of task in which the learner is engaged, but he also questions the use of concordances in learning as, being removed from their original context, they may become meaningless and inappropriate for materials. Since texts in corpora are not modified for learners, their content is often seen as too difficult for many to deal with. If problems are caused by lack of context and difficult vocabulary in written texts, where exposure to authentic *spoken* language is concerned, further difficulties are posed by speed of elocution, accent, speaker overlap, complexity of sentence structure and so on. Another issue to be considered is the observer's paradox (Labov, 1972). As in most cases the speakers know that they are being recorded, it can be argued that the situation and, therefore, the speech produced lose authenticity. On the other hand, there are those who suggest that the term 'authentic' can be applied to "a piece of text that has occurred as part of genuine communicative interactions" (Stewart, Bernardini & Aston, 2004: 12). In addition, according to Buck (2001: 85), authenticity can mean either "taken from the target-language use situation or [having] the characteristics of target-language use texts".

The use of authentic texts in language learning is advocated by teachers, researchers and materials developers alike. According to Mishan (2004: 221) "exposure to authentic

texts can enrich the language experience for learners" because of their cultural linguistic content, motivational aspects and the relevance and appropriateness of language.

However, this desire for authenticity has to be balanced with other important issues. Firstly, if relatively lengthy extracts of a corpus are to be reproduced in teaching materials, then it is necessary to have the consent of the producers of the texts. Secondly, the quest for authenticity also has to be balanced with the need to create pedagogically useful materials: as has been discussed above, an authentic text is not immediately useful to all learners. What is more, if a corpus of authentic texts has not been developed with language pedagogy in mind then the results retrieved may not be of use to learners.

The use of authentic texts is fundamental if materials are to be based on an inductive approach to learning, that is one by which the learners are encouraged to infer rules from evidence by observing, hypothesising and experimenting (Zagrebelsky, 2004: 42). Concordances have been used in the classroom to foster an inductive approach to language learning (Johns, 1991). According to Aston (1997: 55), "concordances of particular phenomena can […] be used as data to engage the learner in hypothesis-testing as to particular rules of language use". A benefit of investigating the language in this way is that students take more responsibility for their own learning (Hadley, 2002), thereby taking essential steps towards learner autonomy. However, a concordance may initially be difficult for students to deal with as "the density and apparent complexity of the concordance can be intimidating at first glance" (Mishan, 2004: 222). Students, therefore, need training in how to approach a concordance (Gavioli, 2001), so that they know how to explore that kind of text, how to identify patterns and how to recognise the types of "clues" to look out for. Tasks specifically designed for data-driven learning should be constructed in such a way that questions guide the less experienced, less advanced learners through the concordance to help them identify relevant features and reach conclusions about how language is used.

In traditional data driven learning tasks, Key Word in Context (KWIC) concordances are retrieved to allow the identification and analysis of patterns, including, for example common collocates and colligates. As shall be discussed below, the materials developed for the project described in this article draw on KWIC concordances for materials creation, but a different approach is taken to corpus analysis by tagging for language function. This tagging allows the retrieval of language functions in context for analysis and subsequent materials creation.

2.3 Spoken corpora

Corpus linguists have drawn attention to the fact that English language teaching materials do not always teach common features of spoken English and that more work needs to be based on spoken corpora (McCarthy, 1998; Timmis, 2005). This lack of attention to spoken corpora could be due to the fact that in the past spoken language was considered inferior to written language (Carter, 2004) and grammar books tended to be based on the written word. Whilst interest is rapidly growing in spoken corpora, their compilation is laborious (Mauranen, 2004). The texts take time to record and, if they are to be used with a concordancer, have to be transcribed. All this leads to several problems. First of all, "the influence and limitations of the written language continue to

impinge on the spoken medium" (Leech, 2000: 678) and, indeed, specialised transcription systems, such as those that record prosodic features of a text, only allow a visual rather than aural representation of the language. In fact, as Kress and van Leeuwen ([1996] 2006: 41) point out, "a spoken text is never just verbal, but also visual combining with modes such as facial expressions, gesture, posture and other forms of self-presentation". While some features of the spoken mode that are not present in the written mode (such as pauses or intonation) can be transcribed, complex transcription conventions are not automatically understood by everyone and the texts can become overloaded with symbols. The removal of a text from its original context poses challenges in terms of its comprehension and, as Mauranen (2004: 90) points out, to considerations of authenticity. According to Mishan (2004: 220) "the very act of transcribing real dialogue into writing distorts it": transcriptions of spoken corpora tend to exclude or marginalize the recording of modalities other than language, with the consequence that the meaning they convey is lost.

To overcome the shortcomings of such transcriptions, different types of multimodal

Frame	Language	Actions	Sound
	Chiara: You take yoghurt and then you mix it with tandoori special blend.	Chiara finishes emptying yoghurt pot and then takes tandoori special blend Carlo follows Chiara's actions	Sound of spoon on yoghurt pot, then yoghurt pot on table
	In theory, you should actually...	Chiara opens the tandoori pot Carlo follows Chiara's actions	
	In theory, you should actually...	take all the ingredients so you have – um what's that? – paprika and cumin seeds and onion and salt and pepper and – that's cinnamon and garlic.	Chiara points at spices, leaning over to see them better. Carlo follows Chiara's actions

Fig. 1. Multimodal transcription of an excerpt of the Padova MEC.

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transcriptions have been developed that attempt to capture the way in which different semiotic modalities co-pattern at particular moments in the text (see Thibault, 2000; Baldry & Thibault, 2001; Baldry & Thibault, 2006). Figure 1 shows how language is co-deployed with gesture in an excerpt of the Padova MEC. Note the parallelism between the deictic gesture of pointing and the concurrent speech where the language function *identifying* is realized: "what's that? – paprika and cumin seeds and onion and salt and pepper and – that's cinnamon and garlic".

However, "even the most detailed, faithful and sympathetic transcription cannot hope to capture" spoken language (Carter, 2004: 26), especially when one considers the fact that multimodal texts like those included in the Padova MEC are *dynamic*, i.e. they unfold in time. This property, in fact, cannot be fully investigated by multimodal transcriptions which, on the contrary, are *static* and do not allow access to the original audio and video. A tool capable of exploiting a corpus of multimodal texts preserving them in their original form is the multimodal concordancer *MCA* (*Multimodal Corpus Authoring System*) (Coccetta, 2004; Baldry & Beltrami, 2005; Baldry, 2005; and Ackerley & Coccetta, forthcoming). The use of a multimodal concordancer in a data-driven approach to language learning is supported by studies that have shown how the presentation of language through more than one mode can have important implications for learning. For example, research has shown how the use of visual aids can aid listening comprehension (Mueller, 1980), as can the non-verbal information found in gestures and facial cues (Sueyoshi & Hardison, 2005).

3 Creating a multimodal corpus for language learning: The Padova Multimedia English corpus

3.1 Background to the corpus

The development of *Learning Links*, Padua University's online general English course (Ackerley & Cloke, 2005), has led to the need for audio and video texts that cover the different domains of the *CEFR*, provide a range of linguistic content in terms of topics, linguistic functions, interaction types and varieties of English, and are free from copyright restrictions. In order to meet these needs, in 2002 work began on the Padova MEC, with recordings being extended to different kinds of speakers in terms of occupation, origin, age, etc. in a variety of environments. Speakers have given permission for the recordings to be used by the University Language Centre for educational and research purposes and this has made it possible to base a considerable part of the University's online English course on these original multimedia texts. Moreover, the on-going recording of these texts in the past few years has led to the creation of a corpus which is allowing the development of materials based on theories of data-driven learning.

3.2 Corpus description: speakers and authenticity

The Padova MEC is composed of audio and video files and currently stands at around 120,000 words. The corpus serves various purposes: its texts are being used in the fields of language testing, language research, multimodal analysis and language learning.

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While its word-count may as yet be low, the availability of audio, video and the resulting wealth of linguistic and non-linguistic information carried by these modes (see also Ackerley & Coccetta, 2007), means that the corpus can provide revealing information that may not be conveyed through text concordances retrieved from larger corpora.

As stated above, motivation is important for language learners. In particular, in order to increase their motivation the texts included in the corpus should, in some way, be relevant to university students' interests and needs. Because much of the corpus includes unscripted video and audio recordings of conversations and interviews with young adults (and students in particular), it is possible to base a considerable amount of the materials on matters that concern their lives, interests, experiences, university studies, expectations and future careers. In fact, the topics covered in the corpus are mainly ones that students can identify with and may well wish to talk about themselves.

The Padova MEC includes recordings of English-speaking colleagues at the University of Padua; other English speakers living and working in Italy; exchange students in Padua; people who speak languages other than English as their L1; and bilingual (English/Italian) students. Recordings are not limited to a specific speech community (such as the speech of British speakers living in Italy), but have been extended to include speakers of various ages and backgrounds living in Great Britain, the United States and Australia.

The corpus is subdivided into spoken language produced by native speakers, by learners of English, and by speakers of different languages using English as a *lingua franca*. An advantage of having access to texts produced by native speakers of English from different regions and countries is that students can be exposed to a range of accents and varieties of English. On the other hand the increase in the use of English in international contexts means that non-native speaker English cannot be ignored. Therefore, the inclusion of texts by non-native speakers using English as a lingua franca will also expose learners to the kinds of international English they are likely to encounter in real life, where the language used is often very different to that exemplified and taught in text books. As illustrated below, use of texts produced by non-native speakers, including learners of English, provides useful opportunities for error analysis and comparison with the English of native speakers.

Although sub-corpora of scripted and semi-scripted texts are present in the corpus, they are not taken into account in this discussion of data-driven learning and multimodal concordancing. Most of the corpus is composed of 'authentic' spoken English (currently around 105,000 words). Here the definitions of authenticity reported above (Stewart, Bernardini & Aston, 2004, and Buck, 2001) are used for the purpose of evaluating the genuineness of texts in the Padova MEC. Creating a spoken corpus in a country where the target language is not the native language is problematic as the supply of native speakers is limited. However, attempts are made as far as possible to include a wide variety of speakers and to create situations where natural spontaneous discourse can be recorded. Though it may be argued that the *situations* in which the recordings are made may not be authentic, the *kind* of language has a high probability of occurrence in real communication and therefore may be considered 'authentic' language. For example, even though the speakers might be having a conversation only for the purpose of being recorded, they usually have real communicative goals to accomplish: in some cases they

have never met before and are genuinely interested in finding out about each other; in other cases the speakers are friends engaged in casual conversation about their everyday lives. The exchange of information about lives, experiences, needs, plans and hopes, can result in the production of authentic speech. Some of the texts, on the other hand, have been classified as 'semi-authentic' (for a full discussion of levels of authenticity in the corpus, see Ackerley & Coccetta, forthcoming). In semi-authentic texts the discourse may be natural and spontaneous, but the communicative goal is not genuine because the speakers may have been asked to speak about specific topics that, in ordinary circumstances, they may not have discussed. The texts, however, may be considered interesting for the language learner both in terms of linguistic and cultural content. These two sub-corpora are usually analysed together because people who were not involved in the recordings and do not know the speakers would not be able to distinguish between these authentic and semi-authentic texts in terms of the naturalness of the language used. As this unscripted speech is closest to what may be considered 'authentic' language, this has been used for the creation of inductive materials.

3.3 Tagging the corpus

The Padova MEC has been transcribed orthographically, each text having associated metadata indicating details about file type, speakers, quality of sound, number of words, and levels of authenticity. In addition, some texts have been selected and analysed primarily for language functions. The model applied is based on the descriptive tool developed by Coccetta for the analysis of a film corpus (Coccetta, 2004; Ackerley & Coccetta, forthcoming). The starting point of Coccetta's approach is van Ek and Trim's functional model (1998b) which lists the language functions learners at the B1 level of proficiency need to be able to express to survive in everyday transactional situations. As van Ek and Trim's model is not exhaustive, the descriptive model was adapted for the film corpus by adding functions expressed in the texts but not included in the original list. Two examples of added functions are *making appointments for meetings* and *breaking appointments politely*.

In applying Coccetta's model to the Padova MEC, it was necessary to make modifications in order to correspond to the needs of the users and the characteristics of the corpus. First of all, the grammar was amplified by adding notions to some functions. For example, general notions such as *time, place, manner*, etc., were added to the function *giving information* and specific notions such as *name, age, address*, etc., were added to the function *identifying* (see Table 1). According to the specifications for the A1 level in the global scale of the *CEFR* (Council of Europe, 2001: 24), A1 level learners need to learn how to express such simple functions.

Even though some new functions such as those described above were added to meet the needs of lower level learners, some restrictions needed to be imposed: a high number of searchable parameters, in fact, could make the use of the corpus too complicated, especially for beginners, and also mean that searches might not produce enough hits.

Besides increasing the number of functions, the metadata included in the transcriptions were added as parameters and plans are being made to tag the corpus for levels of difficulty. These parameters can be useful for both materials developers and language learners using the corpus in a DDL context. For example, the possibility of

Table 1. *Specific functions for the identifying function*

1. Imparting and seeking factual information
1.1. identifying (defining)
1.1.1. identifying (personal information)
1.1.1.1. identifying a person's address
1.1.1.2. identifying a person's age
1.1.1.3. identifying a person's date and place of birth
1.1.1.4. identifying a person's name
1.1.1.5. identifying a person's nationality
1.1.1.6. identifying a person's occupation
1.1.1.7. identifying a person's origin

restricting searches to utterances in the corpus produced by non-native speakers allows teachers and language learners alike to analyse the kind of language, and possible errors, produced by non-native speakers.

4 The multimodal concordancer MCA (Multimodal Corpus Authoring System)

MCA is an online multimodal concordancer (http://mca.unipv.it/) that, besides functioning as a text-based concordancer, allows users to retrieve recurrent patterns in a corpus of multimodal texts preserving them in their original form (for more information on *MCA* and its use see Coccetta, 2004; Baldry & Beltrami, 2005; Baldry, 2005; and Ackerley & Coccetta, forthcoming). There are five steps to making a corpus searchable in *MCA*. These are summarized in Figure 2 (top row) in relation to the tools used in *MCA* to implement such a process (bottom row).

First of all, in the *Grammar Definition* tool the *grammar* for a corpus is defined. The term grammar refers to the set of parameters that describe the features of the corpus to be exploited. In the Padova MEC, for example, the *grammar* is made up of the tags described in Section 3.3.

Once the *grammar* has been created, in the *Media Indexing* tool the corpus can be divided into sequences of any length. The texts of the Padova MEC have been divided into phases, i.e. meaning-making units characterised by consistency in the selection of semiotic modalities, and utterances. Such division of the texts allows users to exploit the corpus on an utterance level and then analyse the context in which each utterance is produced. Then, using the *Grammar Selection* tool some (or all) the parameters created

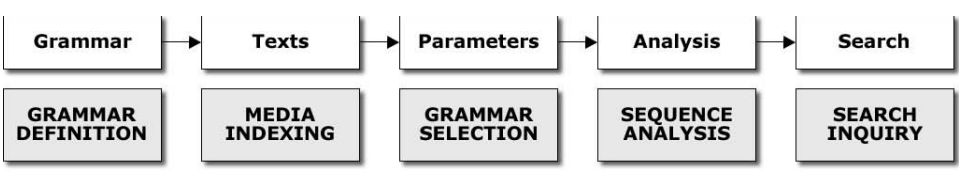

Fig. 2. Steps to making a corpus of multimodal texts searchable (adapted from Baldry, 2004: 25)

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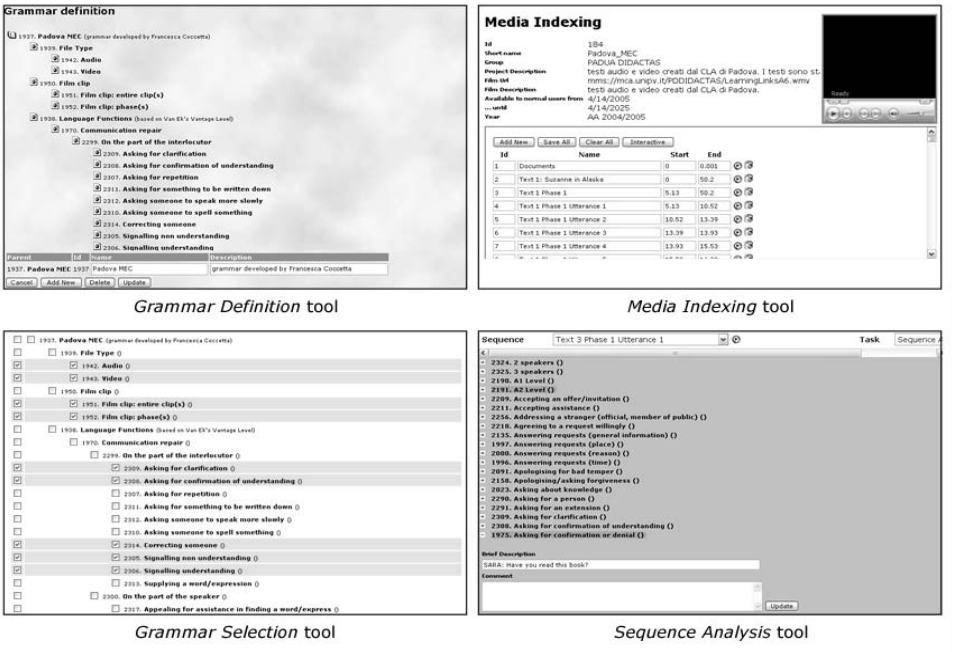

Fig. 3. Tools in *MCA* used to make a corpus searchable

with the *Grammar Definition* tool are selected. Note that the selected parameters are highlighted. Finally, in the *Sequence Analysis* tool each single sequence is linked to the parameters that characterize each one. This enables the users of the corpus to retrieve the sequences sharing the same characteristics by using the *Search Inquiry* tool (Figure 4).

5 Multimodal data-driven learning

5.1 The learning context

Work on the development of *Learning Links*, the online English course developed at the University of Padua Language Centre, began in 2002 to provide students following blended English courses at the University with quality materials in an online learning environment. The course ranges from Level A1 to B2 of the *CEFR* and promotes an autonomous, constructivist approach to language learning (Ackerley & Cloke, 2005). From the earliest stages of the course students are exposed to examples of authentic language and are encouraged to explore language use. While, on the one hand, early exposure to authentic language is challenging and motivating, on the other hand the use of authentic texts with lower level language learners is a problematic issue and many examples of the naturally-occurring discourse in the Padova MEC are simply too difficult for beginner students to be able to deal with. However, such difficulties can be overcome by selecting suitable texts and by providing transcriptions, optional translations, feedback and images that help students with comprehension (see Ackerley & Coccetta, 2007).

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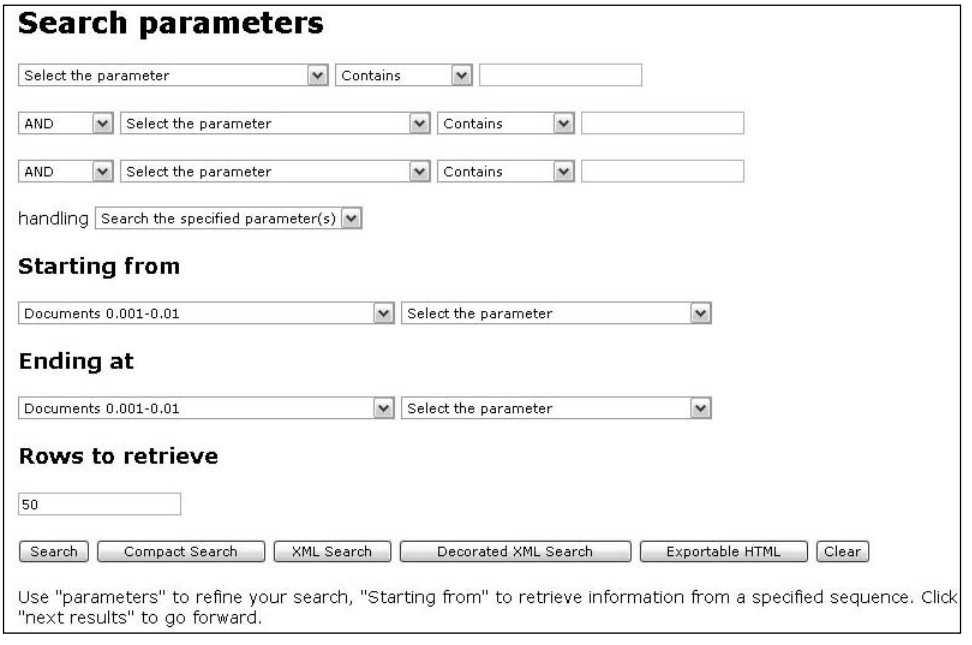

Fig. 4. *Search Inquiry* tool

The development of communication skills is also promoted through the provision of short conversations that present one or more language functions. In the following section it will be shown how the multimodal concordancer *MCA* can be used to retrieve examples of language functions, with the possibility of illustrating their use in context. The searches illustrated in the following sections have been carried out by materials developers involved in the creation of tasks for *Learning Link*s. The same searches can also be carried out by students themselves with accompanying questions to lead to discovery learning. Indeed *MCA* has been used by more advanced learners working on Coccetta's film corpus with positive results (see Coccetta, 2004; Ackerley & Coccetta, forthcoming).

5.2 Multimodal concordancing for language functions

As stated above, parts of the Padova MEC have been selected and analysed for language functions. Using *MCA* it is possible to exploit the corpus to retrieve those sequences where one or more functions are expressed. What is more, as *MCA* enables users to watch/listen to the sequences retrieved, they can glean information about the context of situation in which the functions are produced and see whether the functions are realized linguistically, by other semiotic resources such as gestures, facial expressions and sound, or in a combination of ways. This can be seen in the identifying function example shown above (Figure 1).

To see if a specific language function is expressed in the corpus the *Search Inquiry* tool is used (Figure 4). Figure 5 shows the concordances of the spelling out a word/ expression function retrieved with *MCA*.

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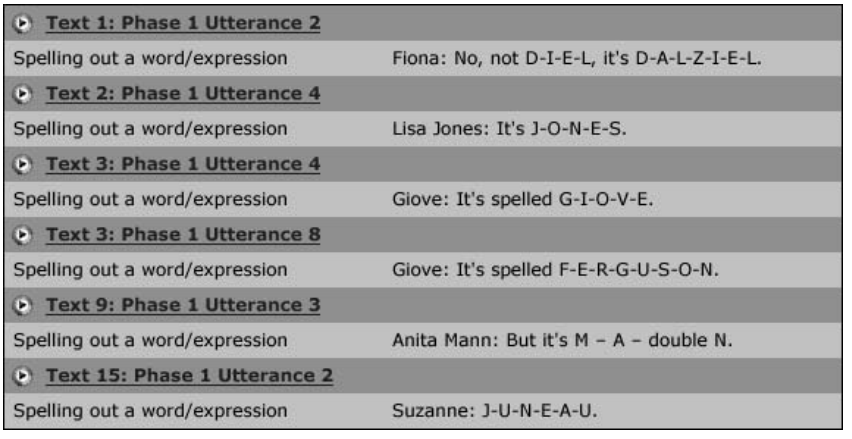

Fig. 5 Set of results for the spelling out a word/expression function retrieved with *MCA*

By clicking the *Media Player* button the users can access the original file and listen to how a word or expression is spelt, which is essential when learning the abovementioned language function and the pronunciation of letters in particular. As the texts have been divided into phases (see paragraph 4 above), the users can retrieve the whole phase in which the utterance is produced, and contextualise it both linguistically and visually. For example, in the phase where the utterance "J-U-N-E-A-U" is produced the user can also retrieve the corresponding question to that answer (for adjacency pairs see discussion below).

Rachel: I didn't know that Juneau was the capital of Alaska.
Suzanne: Yeah, it was named after a French man who went there, uh, for the gold rush.
Rachel: Uh huh.
Suzanne: And he found, uh … found gold, and established a gold mine, and then, from there it, it grew.
Rachel: So, how do you spell Juneau? I – I really don't know.
Suzanne: J-U-N-E-A-U … Like French

Note that, because of the tagging by language function, the results retrieved with *MCA* are neither 'messy', nor ambiguous or misleading: in all the concordances, in fact, something is spelled (a proper name in "It's spelled G-I-O-V-E" and in "It's J-O-N-E-S" or the name of a city in "J-U-N-E-A-U"). On the contrary, the KWIC concordance for *spel** retrieved using a text-based concordancer (Table 2) includes some examples where nothing is spelled such as in "I'll spell it for you" and "I spell things funny" which may not respond to the user's needs. Another basic search in *MCA* is given in Figure 6, which presents the set of results for the expressing dislike function. Note that some ways of expressing dislike, such as "it was disgusting", "I (…) really despise" and "I can't stand it", are less immediate for students of lower levels, but thanks to speaker

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Table 2. *Set of results for spel* retrieved with a text-based concordancer*

1	How do you **spell** it?
2	How do you **spell** Ferguson?
3	How do you **spell** Juneau – I really
4	I spell things funny. I **spell** things not in the
5	How do you **spell** it?
6	How do you **spell** "Meneghetti"?
7	a funny pronunciation. I **spell** things funny.
8	Anita Mann. I'll **spell** it for you
9	It's **spelled** G-I-O-V-E.
10	It's **spelled** F-E-R-G-U-S-O-N.

intonation, and the focus of the camera on facial expression or head movement, the learners can infer the meaning of these expressions. An example is given in Figure 7, which shows the frame where the utterance "The techno – I can't stand it" is produced. Note that while expressing his dislike for that kind of music through language, the speaker also shakes his head in disapproval.

The *Search Inquiry* tool in *MCA* includes three 'select-the-parameter' menus that allow a combination of up to three different parameters. Therefore, with *MCA* it is possible to retrieve not only a single language function, but also sequences of functions such as adjacency pairs. An example is the sequence *seeking identification (of a person's age)* ^ *identifying (a person's age)* (see Figure 8).

This search tool and tagging system allow materials developers to present learners with language functions from authentic texts in a variety of contexts. The ability to retrieve these kinds of multimodal results is important when materials are being developed to teach about language functions, because the access to the aural and visual elements of the text reduces its difficulty, especially when learners of lower proficiency are involved (Mueller, 1980; Hoven, 1999; Sueyoshi & Hardison, 2005). In addition, as

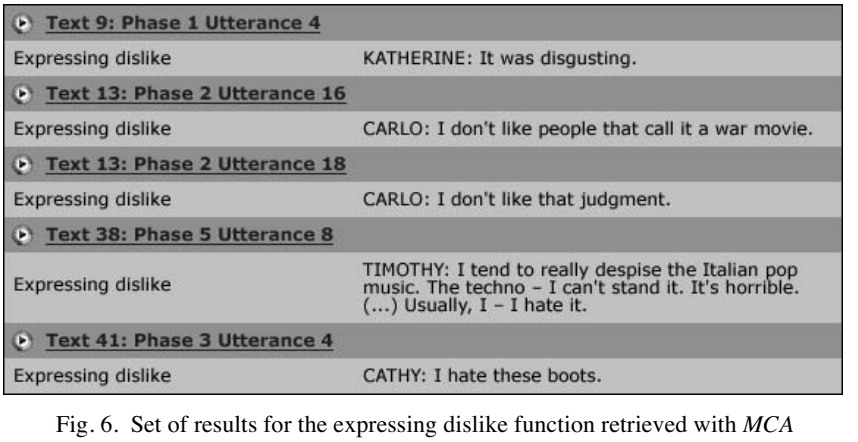

Fig. 6. Set of results for the expressing dislike function retrieved with *MCA*

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Fig. 7. Head shaking accompanying linguistic expression of dislike "I can't stand it".

Text 4: Phase 1 Utterance 1	
Seeking identification (of person's age)	Ms. Eckton: Now how old are you?
Text 2: Phase 1 Utterance 4	
Identifying (a person's age)	Mr. Hutchinson: I'm 30 now.
Text 5: Phase 1 Utterance 1	
Seeking identification (of person's age)	John: And she is - how old is she?
Text 5: Phase 1 Utterance 2	
Identifying (a person's age)	Shawn: She's 7 years old.
Text 7: Phase 1 Utterance 1	
Seeking identification (of person's age)	John: How old was she?
Text 7: Phase 1 Utterance 2	
Identifying (a person's age)	Julie: She was six when I went there.
Text 10: Phase 1 Utterance 1	
Seeking identification (of person's age)	Mariana: Yes... (laughs) How old do you have to be to vote?
Text 10: Phase 1 Utterance 2	
Identifying (a person's age)	Alessandra: 18.

Fig. 8. Set of results for the concordance seeking identification (of a person's age) ^ identifying (a person's age)

well as enhancing understanding through contextual information, the accompanying video also serves to motivate learners.

5.3 Using the concordances for materials development

The corpus is used to provide both complete multimedia texts for language presentation and comprehension activities and text-based or multimodal concordances. Exercises are

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designed to encourage students to reflect on the language and, through answering questions that encourage them to identify patterns, they are helped to explore the target language. Although it has been suggested that corpus-driven tasks are more advisable with advanced learners (Zagrebelsky, 2004: 43), the *How old are you*? task below illustrates how students can be encouraged to examine authentic data from an early stage, even at an A1 level. This is possible where elementary grammar and basic language functions are addressed and if the tasks are accompanied by questions and feedback that give the learner enough guidance and support.

'Seeking identification of a person's age' and replying to such a request for information are amongst the most elementary language functions (see Table 1), yet even beyond A1 level there may be problems with verb choice, with L1 interference showing in some Italian students' preference for "I *have* __ years old" over "I'*m* ___". Understanding numbers uttered in authentic discourse is also a problem for beginners.

Figure 9 shows an exercise based on a concordance for the functions *seeking identification of a person's age* and *identifying a person's age* retrieved from the Padova MEC. Students are presented with eight extracts (6 video-based, 2 audio-based) from the corpus and for each one some simple information is provided to contextualise the situations.

After watching the short videos or listening to the audio files, students are required to complete the dialogues with the age. The initial aims are for A1 level students to familiarise themselves with the question form and to practice their listening skills. Follow-up tasks based on concordances require students to focus on other questions concerning form, i.e. *be* vs *have*; *I'm 19* vs *I'm 19 years old*.

Whilst it may be argued that a text-based concordance may suffice for the identification of linguistic information and that audio files alone can be used to practice listening, it is important to consider the role of multimedia texts in language learning in terms of student motivation and the extra-linguistic information that is conveyed. The *CEFR* (Council of Europe 2001: 72) highlights the importance of both linguistic and non-linguistic information in the application of receptive strategies. Both native and

Fig. 9. Part of the How old are you? exercise: text completion task.

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non-native speakers should be able to identify the context and apply world knowledge when listening to a text. For example, when asking someone their age, people usually have an approximate idea of what the answer may be because they can see their interlocutor and can expect a response that is more likely to be 30 than 40 (numbers that may be confused by students listening to the texts). So when watching a video, learners can use visual information to activate their world knowledge, and a combination of predicting skills and listening skills play a part in comprehension.

Being able to view a file allows the student access to further information about the participants, including their moods, attitudes and social relations. Such information is conveyed not only by spoken language, but also by gestures, facial expressions, proximity, intonation and gaze. For example, gaze can be used to demand something (Kress and van Leeuwen, [1996] 2006), facial expressions give details about the nature of emotions (Ekman and Friesen, 1969) and intonation, among its various functions, signals the speaker's attitude toward his/her message (Taylor Torsello, 1992). Figure 10 shows the set of results for the *reporting* function retrieved with *MCA* in the Padova MEC. Note that in the first line of the concordance *I've told you, I've already told you that, I've told you I've connected my computer into the phone line*, the transcript alone is not sufficient to understand the illocutionary force of the utterance. Here, in fact, the speaker, is not only stating that she has told the computer assistant that she has connected her computer, but she is also losing her patience. Only when the learners watch the video can they fully understand the force of her words, which is also conveyed by the speaker's tone of voice and the strained expression on her face.

Students are encouraged to focus on these features when they carry out a multiple-choice task based on the video text (Girotto, 2007). The feedback to an incorrect response in Question 3 encourages the students to pay attention to the visual and aural clues in the text, whilst, in the case of a correct answer, explanatory feedback is offered (see Figure 11).

6 Conclusions

This article has discussed how the integration into an online course of data-driven learning, based on concordances from the Padova Multimedia English Corpus, can

Text 8: Phase 18 Utterance 7	
Reporting	ANITA MANN: I've told you, I've already told you that. I've told you I've connected my computer into the phone line.
Text 12: Phase 2 Utterance 7	
Reporting	SUZANNE: You said you had 2 on your back.
Text 13: Phase 1 Utterance 5	
Reporting	SARA: You said that you were getting a DVD.
Text 13: Phase 2 Utterance 7	
Reporting	SARA: Some of my friend said that it's a bad movie because it's so violent.
Text 13: Phase 2 Utterance 13	
Reporting	SARA: You say full of symbolism.

Fig. 10. Set of results for the reporting function

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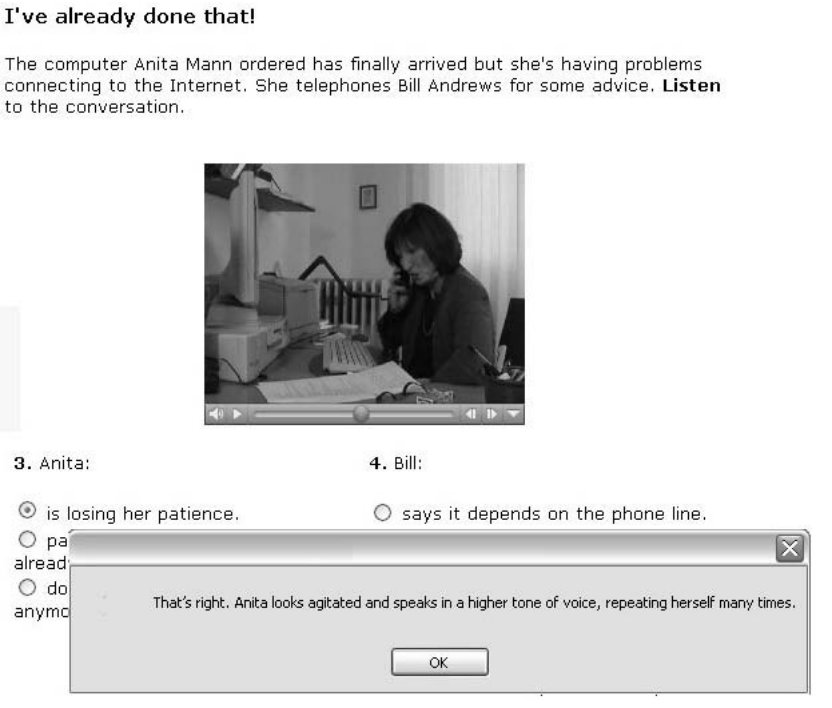

Fig. 11. Exercise "I've already done that!"

contribute to giving students a view of spoken English language as it is actually used. We have illustrated how watching video clips retrieved through use of the multimodal concordancer *MCA*, can give greater access to more of the "linguistic, situational, social, psychological, and pragmatic factors that influence the interpretation of any instance of language use" (Biber *et al*., 1999: 4) than text alone can. In fact, what is lacking in terms of contextual information in the set of results retrieved with a text-based concordancer can be provided through access to the context of situation of lines in a multimodal concordance. The potential for materials development, particularly as far as data-driven learning is concerned, is promising. However, further research needs to be carried out in the field to determine the extent to which the visual representation of the spoken word, with all the non-verbal information such as body movements, nods, gestures, facial expressions, gaze, posture and interpersonal distance can contribute to context-setting, increased understanding of the speakers' communicative intentions and potentially enhanced learning.

This article has shown materials development for lower levels using an online course, but previous research has demonstrated that students have appreciated hands on use of *MCA* (see Ackerley & Coccetta, forthcoming). There is the need to investigate how a more direct hands on approach can be integrated into the online environment, with more advanced learners using the multimodal concordancer to explore the corpus for themselves.

Words alone are not the only meaning-making resource in spoken language but, as has been illustrated in this article, are co-deployed with other resources including gesture (Figure 1), head-shaking (Figure 7), facial expression, and tone of voice (Figure 10) to create the overall meaning of the text. In addition, a learner's knowledge of the world and

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access to visual clues in the speakers' surrounding environment play a significant part in the comprehension of a text. Whilst the multimedia corpus has been used to provide materials that focus on these, it is planned to carry out further research on the abovementioned multimodal resources featured in the Padova MEC in relation to the language functions analysed. It is strongly believed that an increased awareness of the multimodal nature of communication could encourage materials developers to enrich language learning activities. This, in turn, can influence the strategies learners adopt in dealing with L2 texts, strategies that can be transferred to communicative situations of everyday life.

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