

A Multimodal Approach in the Classroom for Creative Learning and Teaching

Lorena Marchetti and Peter Cullen

Abstract: A multimodal approach in the classroom can be a source of creativity for both teachers and students. It draws upon available visual, audio, and kinaesthetic modes and does not necessarily rely on technology. This paper will briefly define what modes are and outline the origins of multimodal studies in the New London Group (1996). Through a multimodal lesson using video, we can identify modes and how these correlate not only to contemporary society but to specific cognitive processes. This combination allows for creativity and flexibility in teacher-student interaction and can enhance the learning environment.

This paper considers the work of Kress and Jewitt and their research in multimodal studies, and applies these concepts to higher education and the undergraduate experience in second language learning. It focuses on the combination of text, audio and image as individual modes and how these can be creatively combined to produce meaning, encourage interaction and learning in the classroom. Engaging students in course content requires strategies of communication that a) focus and maintain attention, and b) work past the simple cognitive styles of information recognition to activate deeper forms of memory creation. Multimodal approaches tend to do this naturally and as the research results demonstrate, the students responded favourably to multimodal input. The majority of students preferred visual stimulus or a combination of visual and text stimuli for acquiring new lexis and for enhancing oral production.

Key words: multimodality, communication, language learning, cognitive interaction

Abstrakt: Dieser Beitrag gibt eine kurze Definition der Modusformen (Modi) und umreißt dann die Ursprünge der multimodalen Studien der New London Gruppe (1996). Durch eine multimodale Vorlesung mit Video können die Modi, sowie ihre Korrelation mit der heutigen Gesellschaft und insbesondere mit spezifischen kognitiven Prozessen, identifiziert werden. Diese Kombination ermöglicht Kreativität und Flexibilität in der Lehrer-Schüler-Interaktion sowie eine Verbesserung der Lernumgebung.

Abstrakt: Multimodální přístup může být zdrojem kreativity jak pro učitele, tak pro studenty. Čerpá z dostupných vizuálních, audio a kinestetických módů a nespolehlá nutně na technologii. Tato studie stručně definuje, co to jsou módy, a shrnuje počátky multimodálních studií v New English Group (1996). Prostřednictvím multimodální lekce používající video můžeme identifikovat módy a jejich vztah nejen k současné společnosti, ale i ke specifickým kognitivním procesům. Tato kombinace umožňuje kreativitu a flexibilitu v interakci učitel–student a může zlepšit studijní prostředí.

Tato studie posuzuje práci Kresse a Jewitta a jejich výzkum v oblasti multimodálních studií a aplikuje tyto koncepty na vyšší vzdělávání a zkušenosti studentů při učení se druhému jazyku. Zaměřuje se na kombinaci textu, poslechu a obrazu jako jednotlivých módů a ukazuje, jak mohou být tyto kreativně kombinovány za účelem poskytnutí významu a podporování interakce a studia ve třídě. Zapojení studentů do tvorby obsahu kurzu vyžaduje komunikační strategie, které 1) zaměří a udrží pozornost a 2) přesahují jednoduché kognitivní styly rozpoznávání

informací za účelem aktivace hlubších forem paměťového procesu. Multimodální přístupy toto dělají většinou přirozeně, a jak výsledky výzkumu ukazují, studenti na multimodální výuku reagují příznivě. Při získávání nové slovní zásoby a zlepšení mluveného projevu dává většina studentů přednost vizuálnímu stimulu nebo kombinaci vizuálního a textového stimulu.

Introduction

This paper argues that a multimodal approach can enhance the classroom experience by improving interaction between teachers and learners, learners and input materials, and classroom communication in general. Ensuring fluid interaction and optimizing communication by appropriate selection and combination of modes by the teacher provides a framework for creative learning. Particularly in the case of second language learning in university contexts, this offers a springboard to satisfy all learning styles and cognitive differences, as well as to achieve individual and general aims and objectives. We begin by defining a few different modes, discussing the origins of the multimodal approach and develop the argument with results from research carried out on Italian undergraduate students. The example of a multimodal lesson using video, lends itself to identifying the modes used by teachers and students and how these correlate not only to contemporary society but to specific cognitive processes. This combination (use of multiple channels) allows for creativity and flexibility in teacher-student interaction and can enhance the learning environment. The issues at stake are: the impact of our multidisciplinary twenty-first century, the evolution of communication within and outside of the classroom, interaction including and consciously considering modes employed and how these affect learning and the cognitive process of language acquisition. Parallel issues are multiliteracies and the contribution of recent neuro-cognitive research.

What are modes?

Underlying a multimodal approach are *modes*, which are visual, audio, text or speech, and movement channels used in a classical classroom situation. There is nothing revolutionary about multimodality. Historically, communication has always involved different modes, but what has changed and is in evolutionary flux is communication in society at large. Through technology induced interaction and connectivity, multimodality provides resources that challenge traditional forms of communication and even language itself.

In the last few decades, the most noticeable shift has been from page to screen (Kress, 2010, p. 6), for example from chalk to PowerPoint, greatly influencing design and selection of resources. Research has documented changes in school textbooks (Kress, 2010, p. 47), and evidence shows how images in 1930s textbooks were used to supplement the text, while today 'image' is the 'carrier' of meaning. These changes occurred without strong influences from digital technologies whereas today's scenario is marked by multimedia images, and many modern textbooks contain links to online

and supplementary digital material (see Appendix A for a selection of ELT textbooks). In addition, it is not unusual for institutions to have digital facilities in the classroom. As the British Council has found, '...new technologies such as overhead projectors, interactive whiteboards, laptop computers and wireless internet have opened up the classroom to the outside world'. (Peacock 2013 p.2). The full impact of these technologies and computer mediated learning cannot be dealt with in this paper, although some reference to this field will be discussed.

Changes in communication inevitably lead to changes in language and require the language teacher to be aware of and contemplate the implications of these complex phenomena. A multimodal approach is complex indeed, due to its interdisciplinary nature, drawing on diverse fields of enquiry such as educational history, sociolinguistics, design and perhaps primarily social semiotics. In Jewitt's (2006) examination of classroom communication, she claims that it is not technological resources alone, but the interrelationship and interaction with multimodal semiotic resources that make the difference in the learning situation by providing effective input to stimulate communication. Investments and technological resources have increased the potential offered to teachers for selecting input materials but require careful re-thinking of the learning process, which is still based on the traditional view of literacy centred on oral and written language. (Jewitt, 2006).

Crucial to an understanding of multimodal studies is interaction not only between teachers and students but also with input materials, the classroom environment and external and abstract factors such as students' cultural background, identity, and relationships with the external world.

Historical background

The origin of the terms *multiliteracies* and *multimodality* was established in a seminal article by The New London Group (1996), who discussed how changes in communication sparked by new technologies urgently needed to be addressed regarding teaching and learning through conventional print-based media:

The authors argue that the multiplicity of communications channels and increasing cultural and linguistic diversity in the world today call for a much broader view of literacy than portrayed by traditional language-based approaches. (The New London Group, 1996, p. 60).

The central argument was to consider future requirements of their contemporary society in a globalized world and the place of literacy. They consider education as a 'mission' to provide students with the necessary skills and benefits, opening equal opportunities and access to their chosen paths in society. (The New London Group, 1996, p. 60). Their view of traditional literacy, relying on the printed text, was as a limited and restrictive approach and they saw the necessity to expand to new forms in order to engage students and face all available resources, to 'account for

the burgeoning variety of text forms associated with information and multimedia technologies'. (The New London Group 1996 p.61). More recently, Kress and Van Leeuwen analysis of language and visual communication claims that essential skills are not being taught in institutions – and as far as visual literacy is concerned, they produce 'illiterates'. (Kress and Van Leeuwen, 2006, p. 17).

One of the crucial relationships discussed is that of text and image, which during the 1990s was cause of anxiety among educators and is even more relevant to today's communicational landscape. At that time, debates on language and literacy claimed the primacy of grammar and classical literature, while changes and exchanges in cultural and linguistic heritages were ongoing. Hailing from different academic experiences and representing the international English speaking world, The New London Group was intent on finding equitable solutions to pedagogy for future students despite the complexities of contextual reality. They agreed on the social basis of language learning and acknowledged the cultural and linguistic changes that were taking place. They decided upon the term multiliteracies as a development away from traditional language based literacy. 'A pedagogy of multiliteracies, by contrast, focuses on modes of representation much broader than language alone' (The New London Group, 1996, p. 64). A major issue was to make a contribution through pedagogy to empower learners with necessary qualities to fit in with ever-changing social demands. Particularly significant were cultural diversity and the resulting multilingual societies and the changing role of citizenship within this society. The authors claimed that consideration of the future was essential and viewed each individual as having a 'lifeworld'. (The New London Group, 1996, p. 64).

The New London Group considered the classroom a good place to develop communication and awareness of discourse practices, providing real opportunities for students to express their individual cultural experiences while building on their linguistic resources so they could become active participants and interact with the social context, whether it be a work or private context (The New London Group, 1996, p. 69). Social semiotics emphasizes the social context of communication and how meaning is shaped through an individual's choice of resources whether text, image or a combination of resources. The focus is on the process rather than on the system. Kress answers the question of why people make their choices (2010) in the concept of '*interest*' and how this leads to choices of which mode to foreground in a specific instance and how these decisions are embedded in social and cultural origins.

A Multimodal Video Lesson

The example of using video in the classroom encompasses a variety of modes, primarily visual, and can exclude or include text as required by the teacher and dependent on the teacher's choice. There is also great choice available in the audio or speech modes, and finally the mode of movement which occurs within the video. For example, there is an exciting possibility offered by kinetic typography, which is a combination of

text, movement, sound with or without image (see appendix B for a small selection of video links). The teacher's conscious decision in selecting and evaluating material is fundamental in the development of critical awareness of the visual media by both teachers and students alike.

The video chosen for the sample lesson featured several crucial input characteristics, exemplified in the visual, text and audio modes. (See <https://www.youtube.com/watch?v=B11kASPfYxY>) The visuals were social semiotic icons, easily recognizable by a large audience, using very little text but providing prompts and enough background factual information to state the argument clearly, coupled with a lively, cheerful tune attracting and maintaining attention throughout the minute or so length of the video. The importance of the choice of suitable input material ultimately lies with the teacher but can easily be extended to students, who can participate in choosing suitable materials with the teacher's guidance. Interest and purpose are essential ingredients and necessarily ought to fit in with curricula and institutional requirements as well as immediate and long-term objectives. The above chosen example of video was used effectively for teaching English as Second Language to business students in Italian universities on different occasions, both at B1 and C1 level, by varying tasks accordingly. (See appendix C).

Research in an Italian University ESL Class

To test multimodal effectiveness in the Italian case, the authors surveyed a sample of 60 students registered in first, second and third years of a business language course in an Italian university. Each cohort consisted of approximately 20 students. Data was collected using a structured questionnaire of 20 questions relating specifically to students' preferences for in-class spoken interaction channels as well as their general communications preferences. Questions related to use of text, image, audio, proxemics and combinations thereof applied in spoken interaction during language lessons.

The results illustrated students' preference for learning new language from image prompts. As seen in Figure 1, the majority of students preferred to connect vocabulary to a picture or image, or to a combination of text and image. Figure 2 reinforces the above-mentioned student preferences for the role of video and the visual stimulus in making it easier to participate in speaking activities in class.

Figures 3 and 4 illustrate students' individual communication habits, both inside and outside the classroom. Although face to face communication was by far the most popular, it was closely followed by communication through a variety of technological tools. As shown in Figure 4, a modern use of connectivity which was not included nor intended as part of the lesson, nonetheless interestingly made a positive contribution to classroom activity. How can we account for this type of flipped-classroom input?

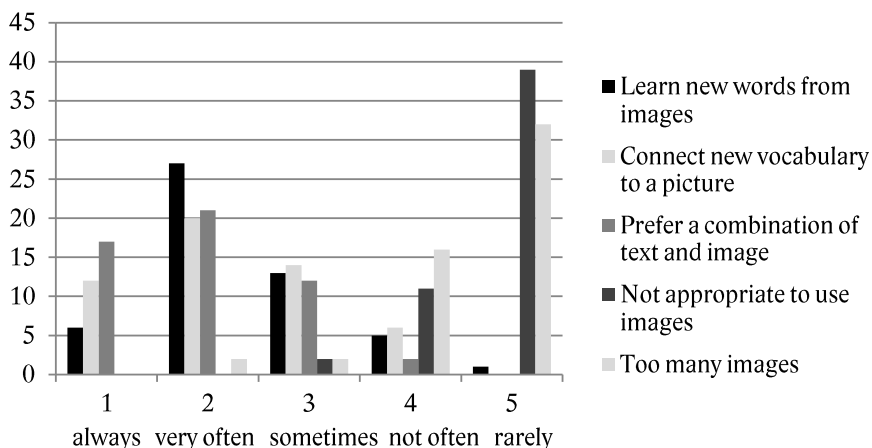


Fig. 1: Student preferences with images

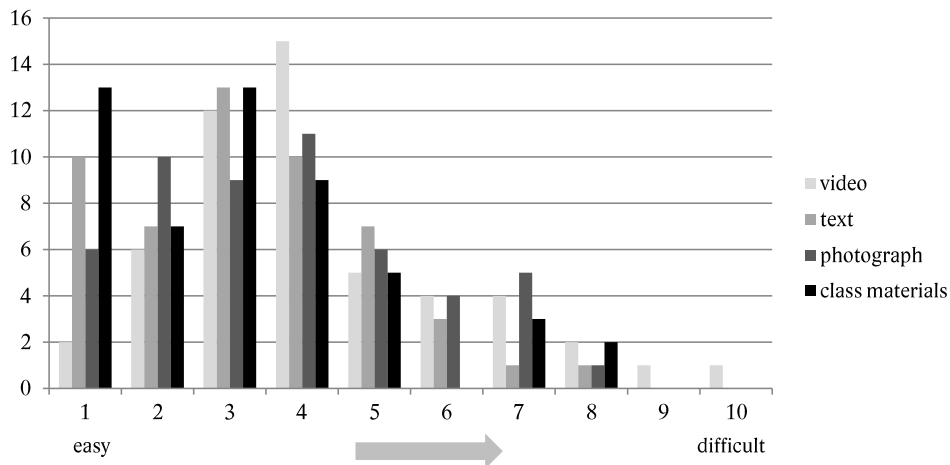


Fig. 2: Student preferences for speaking prompts

Neural psychology and the creative act of thought

To understand the composite nature of attention and therefore stimulus with respect to students' classroom experiences, including spontaneous student connectivity, it is useful to consider the literature on learning and its foundation in brain processes. Over the past 20 years or so a great deal of literature has accumulated across a variety of fields that seem to point to an initial convergent understanding of how knowledge

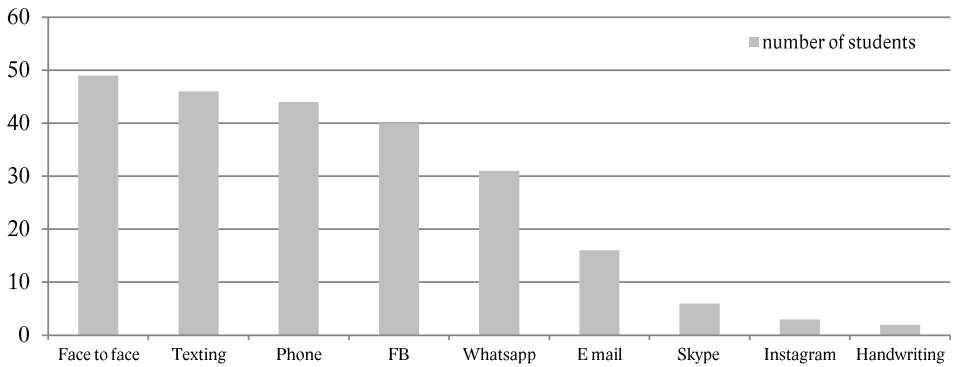


Fig. 3: How do you communicate outside class?

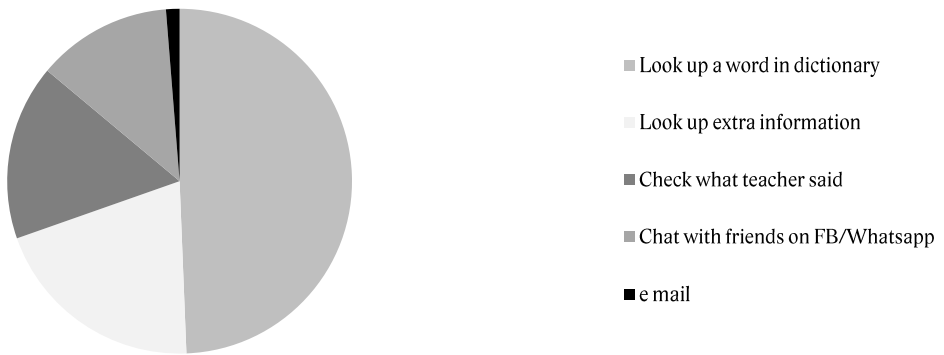


Fig. 4: Using Internet in class

is acquired and maintained in memory. Differently from past models based on innate or inherent capacities and systems, research in neurology, cognitive psychology, cultural psychology and language evolution seem to suggest that knowledge and competence is much more constructed, immediate and plastic than previously thought. It is the process and not the product that counts.

In the 1980s, Eric Kandel had already suggested that memory itself is based on the chemo-electric ability to maintain stimulated chemical synaptic transmitters in short-term memory or convert them into gene-expressions that result in the replication of synaptic connections, in effect resulting in the creation of a long-term memory – at least in the snail *Aplysia* (Kandel, 2006). The results of Kandel’s work, and of other researchers in that field, demonstrate that the basic foundation of any knowledge – a memory, is in fact a plastic physiological system rather than a static object. What is more, neuroscience has demonstrated quite clearly that each component of a concept or perception actually represents a seemingly immediate reconstruction of

a number of different types of synaptic memories. What Lakoff and Johnson (Lakoff and Johnson, 1999), or Fauconnier and Turner (Fauconnier and Turner, 2002) would call frames or conceptual binding, actually reflects the ability of the brain to compose a perception, thought or reflex from disparate channels of memory stored in different areas of the brain. For example, in order to take a single step, the brain must put together a series of learned visual memories regarding vertical and horizontal spatial relationships with somatosensory memories regarding the concepts of weight and impact, friction and traction etc. Walking is most definitely learned and is not innate, although the body is equipped to perform that action. The physiology of the brain, but also of the body in general has serious implications for how academics today should view learning, and in particular language learning.

Specifically in terms of language, however, a few issues emerge. First, language may be considered one of our first human institutions. This is an important consideration when arguing that multi-modal learning is fundamental to effective classroom teaching. As Lakoff would argue, a classroom is itself a set of institutionalized frames that shape perceptions, concepts and expectations – indeed, these create the very heuristics of classroom behaviour. It is useful to consider that language itself is likely a by-product of multimodal and constructional processes of memory and communication. Martin Sereno argues that language originated due to the combination (mapped in the brain) of vocal control systems with semantic visual systems *that evolved in relation to other functions long before language* (Sereno, 2005). The very memories that allow us to construct a single syllable are a combination of somatosensory vocal control and audio perception. They acquired meaning, according to Sereno, when these memories (synaptic connections) connected with visual cortex memories – exponentially increasing the brain’s capacity to form connections around new, and often internally constructed concepts. Sereno’s secondary point was that languages did not develop because they were useful or needed, but rather because initially we liked them. As a later-to-become symbolic set of sounds, they became pleasing for us to use and functioned in terms of sexual selection. John Searle has done a great deal to show that our institutional behaviour in fact is constituted by our linguistic ability to compose concepts creatively and then communicate them as declarative or intentional (Searle, 2006) A teacher is only a teacher because we declare the role to exist, otherwise a teacher’s communications amount to just advice.

The institutional aspect of language is important. As in the example of a classroom, institutions are things that we perceive but that only exist as convergent forms of interaction between multiple people and objects, in certain places at certain times. Terence Deacon, we think usefully, challenges us to reconsider our object-centred approach to understanding of what something *is* specifically by considering that it might *only exist* in terms of relations (Deacon, 1997; Deacon, 2012). Gravity is an example of this, so is marriage, so is an ECFL B2 language level. Deacon suggests that language is another example of something, including the learning of the thing, that ex-

ists only as a system of relationships. This makes sense in terms of the neural patterns of memory, and therefore, of language development – whether at the evolutionary or the individual learning level.

If language exists solely as a series of relationships that access various functional areas of the brain to create compositional realities *at the time they are stimulated or needed* it becomes at least dysfunctional if not impossible to objectify them. If languages were really products of a static system in the brain, they would take genetic evolutionary scales of time to evolve. They don't. There are some implications for teaching.

Multi-media and multi-modal tools are approaches to help students' brains function better in relation to the information upon which they are required to work. It is important to remember that all aspects of a classroom present perceived visual, audio and somatosensory stimuli to the student *at the same time* their own memories and physical states create internal distractions – hunger, uncomfortable chairs, cute peers, homesickness, etc. A classroom, a teacher, and a set of instruments and peers are all part of the sensory field. To help students attend to new information, it is useful to create a variety of stimuli channels to which they can attend, often accessing different channels at different times over the course of a lesson or assignment. Each channel allows the student to connect any given concept to a different aspect of sensory memory.

Conclusion

To conclude, we can confirm recurring issues which are certainly the complexity and interdisciplinary nature of the field, the influence of changing communicational landscapes, and how these in turn impact on language and education. 'Changes in the contemporary communications environment simply add urgency to the call to consciously deploy multimodality in learning' (Cope and Kalantzis, 2009, p. 181). Our study showed Italian students' preferences for a multimodal approach in the classroom. Students perceived enhanced learning experience through the association of images and external audio to spoken interaction. This produced a creative learning experience and increased the efficiency of language acquisition. Further research should corroborate these findings with actual formal evaluation results. Adopting a multimodal approach with conscious and critical awareness of how and what is being presented as input material, together with a flexibility and willingness to interact in the classroom microcosm can indeed lead to fruitful and creative learning.

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Appendix A: ELT text books

Cambridge University Press				
Year	Title	Interactive/online resources	Publisher's comment	Level
2010	English Unlimited	Online workbook, IWB software, CD, DVD	"The online workbooks allow students to collaborate and communicate, and... They offer a classroom without walls for schools that wish to take their teaching into the digital age."	A1-C1
2013	Face2Face	Online workbook, IWB software, CD, DVD	"The Classware software brings the whole package of book, audio and video together on one disc, providing the perfect bridge between teacher-led instruction and student-focused learning."	Beginner to Advanced
2012	Business Advantage	Extra online activities, Videos, CD, DVD	"The dynamic web support offers new and updated activities which give students a fresh, dynamic approach to the learning process."	Intermediate to Advanced
Oxford University Press				
2012	New Headway Digital	Online resources bank, students' and teachers' web sites	"This course offers a consolidated methodology enhanced with state of the art digital components and carefully selected literature and culture lessons to better motivate and engage today's learners."	Elementary to Intermediate
2009	English File Digital	Online resources bank, students' and teachers' web sites and apps for mobile devices	"Improved throughout with brand new digital components to use inside and outside the classroom. English File Third edition – the best way to get your students talking."	Elementary to Intermediate
Macmillan				
2012	Global digital	Global resources and blog	" <i>Global</i> is a true multimedia course, with a range of digital components fully integrated into its structure."	Beginner to Advanced
2009	New Inside Out	Online practice, IWB, CD, DVD	"Digital version of the Student's Book is visible on screen, allowing you to combine traditional book-based learning with the multimedia features of the digital version."	Beginner to Advanced
2014	Improve your IELTS	Online practice	"This book prepares students through pronunciation focus, test questions and two audio CDs, along with MPO for further practice online."	IELTS 4.5-6
2013	The Business 2.0	eWorkbook with audio, video and downloads, Internet research tasks	"...contains material to support and enhance the activities in the Student's book"	B1 to C1

Appendix B: Links to videos

minute	link	title
1.05	https://www.youtube.com/watch?v=sbvFoX5lG9o	I love NY type in motion
1.01	https://www.youtube.com/watch?v=LHhJSz6yk6U	Let's end poverty now
0.50	https://www.youtube.com/watch?v=YC-IVNdf538	My dear, dear man – The King's Speech
2.07	https://www.youtube.com/watch?v=L37Pobne4tU	The Macmillan dictionary is going places
6.34	https://www.youtube.com/watch?v=J7E-aoXLZGY	Stephen Fry – Kinetic typography
1.24	https://www.youtube.com/watch?v=mToZnIVCwAs	Shakespeare Sonnet 116

Appendix C

Ideas for developing a lesson at level B1

1 – PRE VIEWING

- With a partner make a list of countries in the world. Or brainstorm on blackboard/ whiteboard.
- Which countries are rich/poor?

2 – FIRST VIEWING

- Gist question – what is the topic of the video? What does the video show?

3 – SECOND/(MULTIPLE) VIEWING

1. What happened in 1992?
2. What did they discuss?
3. What happened in 1997?
4. What did they sign?
5. Why did they sign it?
6. Why did some countries refuse to cut?

4 – FOLLOW-UP

- In pairs or small groups talk about the political events regarding the problems presented in the video.

(Teacher – highlight past tense verbs – met, discussed, signed, refused, cut, agreed /disagreed, got richer/became wealthier, caused, paid)

Writing – write a short history of climate change negotiation

Ideas for developing a lesson at level C1

1- PRE VIEWING

- What are your ideas on geo-political relations regarding climate change? Which countries are involved?

2 – FIRST VIEWING

- Watch and note the main events. Discuss the importance of these with your partner.

3 – SECOND VIEWING

- a) Watch and make notes.
- b) In groups compose 3–5 questions to ask the other groups.

4 – FOLLOW-UP

- Role play – divide the class into rich and poor countries and simulate climate change negotiation.
- Discussion – debate the current situation and discuss environmental sustainability.

Bionote

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Lorena Marchetti, 20 years ELT experience in UK, Spain and Italy, where I currently teach at Urbino University. MA in Applied Linguistics and TESOL, led to research in multimodal approaches to teaching and learning.

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