

Digital Genres, New Literacies
and Autonomy in Language Learning

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Edited by

María José Luzón, María Noelia Ruiz-Madrid
and María Luisa Villanueva

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P U B L I S H I N G

Digital Genres, New Literacies and Autonomy in Language Learning,
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PREFACE

The future of learning is digital
(Warschauer 2007, 41)

The exponential growth in the amount and the complexity of information transmitted and shared on the Internet and the capabilities afforded by new information technologies (e.g. hypertext, multimedia, interactivity) result in the continuous emergence of new genres and new literacy practices. The interpretation and understanding of these new genres and practices calls for new models of genre analysis and new approaches to teaching literacy and language where autonomy has to take centre stage. The development of autonomous language learning in an online environment goes hand in hand with the development of new literacies (e.g. critical skills allowing management of digital information sources, the ability to understand and make meaning of multimodal texts, the ability to draw connections between pieces of information from different sources), which in turn relies heavily on a firm understanding of the workings of digital texts and of the cognitive processes learners engage in when constructing meaning in hypertext. All these issues should, therefore, be considered in any pedagogical approach that seeks to develop autonomy in online language learning. This belief is one of the assumptions underlying the most recent research conducted by the GIAPEL (Group for Research and Pedagogic Applications to Languages) research group, and the driving force behind the research reported by some members of the group in this volume. Our group has been involved in research on autonomy in language learning and learning strategies since 1992. The experience of introducing ICTs as a tool in student learning plans through several research projects carried out since the year 2000 has led our group, the GIAPEL, to reflect on the relationship between autonomy and ICTs in a multicultural and multilingual setting.

The purpose of this volume is to pull together issues that, although closely intertwined and crucial to understand online language learning, are frequently discussed separately, with little reflection on the need to combine them in order to design effective environments for learning languages and developing electronic literacies. Since new technologies are now being seamlessly woven into the fabric of our society and are

becoming ubiquitous in our daily lives, it is essential to harness their high potential for language learning and to develop an integrative multidimensional pedagogical framework that takes account of all the issues involved in the development of new literacy strategies and autonomous language learning in digital contexts. With this aim in mind, this book is an attempt to incorporate and draw relations between research on digital genres, autonomy, electronic literacies and language learning tasks, combining theoretical reflections with pedagogical research.

Research on digital genres has mainly been carried out within the field of information studies, with little attention to the role of genre in online language learning. Research has focused on issues such as the transformation of genres from one medium to another, the emergence and evolution of genres in digital documents, the identification and classification of digital genres or the role of genre in the development and design of information systems, among others. All these issues are of key importance to understand digital genres and their research will no doubt yield results that should be taken into account in any attempt to develop a comprehensive framework of online autonomous language learning. However, research on digital genres seems to have neglected the role of genres in the online learning process and, more specifically, in the cognitive processes involved in autonomous online language learning. Although some studies of multiliteracies point to the need to raise the student's genre awareness in order to develop digital literacy (Anstey and Bull 2006; Chandler-Olcott and Mahar 2001; Merchant 2007), further research is required on how genre knowledge can be tapped to enhance online learning. In this line, researchers in the GIAPEL group have stressed the need to take into account the features of digital genres when developing webtasks for autonomous language learning (Villanueva, Luzón and Ruiz-Madrid 2008).

Similarly to what happens in the field of digital genres, there is also a scarcity of research that establishes the connection between new literacies, especially digital literacies, and autonomous language learning. It is true, however, that most research on digital literacies suggests that autonomy is a pre-requisite to becoming digitally literate (Anstey and Bull 2006; Leu et al. 2004; Shetzer and Warschauer 2000), but a comprehensive proposal that integrates both concepts, that is, digital literacies and language learning autonomy, is still pending in the field of language learning.

The present volume opens up with an introductory chapter aimed at defining the three key concepts on which the research reported in the book is based (i.e. digital genres, new literacies and language learner autonomy)

and their pedagogical implications for language teaching and learning. After this chapter the volume is structured in two parts. The chapters in part I discuss the concepts of genre and digital genres, electronic literacies, *wreading* competence, and autonomy, thus paving the way for approaches to online language teaching and learning which rely on all these concepts.

In the first chapter in this part, chapter two, Dominique Maingueneau explores the complexity of genre and presents several concepts (i.e. genericity modes, enunciation scene, forms of textuality and hypergenre) that can help us to understand the diversity of discursive practices.

In chapter three, Arif Altun explores the issue of hypertext reading from the perspective of L2 students. Information literacy, which involves being able to read hypertext, is crucial for the development of autonomous online language learning. It is therefore essential to explore how students go about reading hypertext and the problems that they encounter. After discussing the nature of hypertext reading and the different types of readers (in terms of their reading patterns), he reviews research on different aspects related to hypertext reading, i.e., intertextuality and readers' beliefs about multiple texts, linear vs. non-linear reading and disorientation.

Chapters four and five deal with autonomous language learning on the Internet. In chapter four Phil Benson and Alice Chik clearly establish the links between new literacies and autonomy in foreign language learning and pose insightful questions which should necessarily lead to a restructuring of the educational system as far as foreign languages are concerned. The authors review some recent studies that have explored FL learning and use on the Internet from the perspective of new literacies and discuss their own research involving two case studies focused on Hong Kong students' use of English as an FL in globalised online spaces.

In chapter five, Sophie Bailly examines some aspects that should be considered when designing computer-based environments aimed at developing autonomous language learning. After outlining how the Internet can support the transition from a pedagogical model based on heteronomy to a model based on autonomy, she discusses some limitations to autonomous online language learning. This discussion leads to some insightful conclusions regarding the functionality of online pedagogical environments aimed at developing autonomy and the training of teachers who will be involved in such environments.

In chapter six, Marta Navarro and Antonio José Silvestre present the theoretical background and the main purposes of the CIBERTAAAL project. One of the basic assumptions of this project is that in order to help foreign language learners develop an autonomising *wreading* competence,

research should be carried out on digital textuality, students' strategies and representations and methodological aspects. The authors also give a detailed account of the methodology and instruments used to achieve the aims of the project and present the results of empirical research, carried out as part of the CIBERTAAAL project, which sought to establish possible correlations among variables such as students' linguistic competence, their cognitive and learning styles, their navigating styles, their ability to handle ICTs and their attitude towards the use of ICTs.

The chapters in part II present new directions in the field of task design for online language teaching and learning. All the chapters propose language learning tasks that integrate the development of autonomous learning and of new literacies.

Ton Koenraad's contribution (i.e. chapter seven) focuses on the LanguageQuest concept, which resulted from a project intended to support teachers to innovate in their teaching practices and to integrate the WWW where functional. He presents the rationale for the LanguageQuest Assessment Tool (LQAT), a 'yardstick' to assess the learning potential of a specific WebQuest for the language classroom and provides a review of empirical research related to instructional design, education practice and implementation issues. This review gives useful tips to help teachers design effective empirically-supported LanguageQuests.

In chapter eight, María José Luzón and Noelia Ruiz-Madrid present a proposal for Webtasks for language learning which is grounded in the research carried out by the GIAPEL group. The authors discuss three criteria that should be taken into account when designing Webtasks which foster learner autonomy and develop new literacy competences: i) contextualised and authentic tasks, ii) high quality input and rich resources, and iii) appropriate support.

In chapter nine, Françoise Blin draws on Cultural Historical Activity Theory and Engeström's (1987) theory of expansive learning to propose a design model of cybertasks that promote learner autonomy and exploit the affordances offered by Web 2.0 applications. She redefines learner autonomy as the capacity to resolve contradictions, emphasises the key role of agency and intentionality in the development of autonomy and argues for the need to shift from student-centred to object-centred pedagogies. Finally, she presents a clear and detailed description of her five-step model for task design, which will no doubt be of great help to anyone engaged in activity-theoretical pedagogies.

In chapter ten, Marina Orsini-Jones masterfully illustrates how various software and netware tools can be used to enhance students' digital literacies and genre awareness. She presents some tailor-made e-learning

tasks that have proved successful in fostering learners' autonomy and multiliteracy awareness. She shows how activities within institutional proprietary systems can be carefully structured and designed to allow students to be creative and personalise the e-learning environment and make use of different tools available from the World-Wide-Web.

Finally, the conclusion (i.e. chapter eleven) aims to pull all the aforementioned topics together, while highlighting connections with different fields and disciplines and shedding light on new research perspectives that make language researchers and teachers reformulate teaching practices.

—The volume coordinators

María José Luzón, M^a Noelia Ruiz-Madrid and María Luisa Villanueva

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CHAPTER ONE

LEARNER AUTONOMY IN DIGITAL ENVIRONMENTS: CONCEPTUAL FRAMEWORK

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1. Introduction

ICTs have become an integral part of our lives and are having an immense impact on how we access information and interact with others. New digital genres and new forms of discourse are constantly emerging, spawning new discourse practices and norms and new communicative processes, as well as new ways of participating in information flow and in knowledge construction, new forms of identity construction, and new ways of learning. The present volume pivots on the need to integrate research on digital genres, digital literacies and autonomous language learning in order to come up with a sound framework for the design of online language learning tasks that promote autonomy. For this reason, this first chapter is intended to show the relation among these three concepts and to provide a brief overview of the editors' understanding of learner autonomy.

The concepts of autonomous language learning and digital genres have been at the centre of the research carried out by the GIAPEL¹ (Group for Research and Pedagogic Applications to Languages) research group over the last few years, and their relation has been explored by this research group in the CIBERTAAAL project (Cyberggenres and Technologies Applied to Autonomy in Language Learning)². The GIAPEL research group, which came into being in 1991 as a multilingual group interested in language learning from a perspective of training in plurilingualism³ and autonomy, has been working continuously on research related with learning styles and the cognitive and pragmatic strategies involved in the process of acquiring, learning and using second languages⁴. The field in which our thinking and research develops is the product of the intersection of linguistic, cognitive and pedagogical aspects, and therefore the epistemological foundations that guide our research activities have their roots in this three-faceted domain.

Our *approach to linguistic phenomena* is guided by discursive and textual criteria, since we assume that text types and genre variations constitute the pragmatic and cognitive frameworks that are taken as a reference for constantly negotiating linguistic interactions (Villanueva 1993), which are contextually bounded social practices. *From a psychological point of view*, our interest in the cognitive frameworks and cognitive strategies employed by language learners (Villanueva and Navarro 1997) is related to the socio-constructivist theories of Vygotsky (1984) and Bruner (1990), and to Ausubel's (1976) meaningful learning. The construction of meaningful knowledge takes place thanks to social mediation and constitutes a process of interiorizing experience that allows new conceptual networks and new frameworks of knowledge to be built. As pointed out by Vygotsky (1994), in this process of social mediation language plays a key role both in teaching-learning interaction (among peers and with the teacher) and in the process of interiorizing knowledge

¹ The three editors of this volume are members of this research group, led by Maria Luisa Villanueva. <<http://www.giapel.uji.es>>

² Cibertaaal Project: R&D project funded by the Spanish Ministry of Education and Science (ref. HUM2005-05548/FILO)

³ In this regard, the Common European Framework of Reference for Teaching Languages in Europe makes an interesting distinction. Multilingualism is an observable social fact, whereas plurilingualism refers to individuals. The latter constitutes a specific competence that results from an integrated representation of languages. One key dimension of plurilingual competence is intercultural mediation competence.

⁴ See <http://www.giapel.uji.es> for further information about these projects.

through metalanguage (Villanueva and Ruiz-Madrid 2005). *From a pedagogical point of view*, we advocate an integrating approach (Villanueva 2005) towards the teaching-learning of different languages that is oriented towards lifelong learning. In other words, since language learning is a lifelong process which students will have to later pursue on their own, methodology must promote the development of the learner's autonomy. Languages that have already been learnt do not work as watertight compartments but instead the bilingual or plurilingual individual is, in fact, a meeting place of all the languages he or she is learning and has acquired.

The different lines of research followed by the GIAPEL group since its beginnings have converged in the CIBERTAAAL project, the results of which will be presented in more detail in chapter six of this volume. In tune with the socio-constructivist approach, we set out from the hypothesis that the textual and discursive competence that pupils have in at least one language constitutes prior knowledge that can be made operative when learning a second language, thus making it shift from a state of spontaneous-intuitive knowledge to reflective instrumental knowledge supporting the learning process (Bialystok 1991; Cummins 1991). Applying this methodological orientation to language learning in online environments requires an investigation of the generic features of digital texts (e.g. generic echoes of genres existing in other media, emergence of new genres, genre variations and genre combinations) and their social context of use (i.e. how readers actually use, interact with and respond to digital genres). Since genres are the meeting point for pragmatic and cognitive representations, and reflect a balance point between divergence and the renegotiation of change, beyond which understanding would become impossible, we could say that the recognition of the generic features in online texts is essential to be able to understand them and interact with them. The purpose of the CIBERTAAAL project is to explore these issues in order to find a model for the design of online tasks that promote autonomous language learning and digital literacies.

Since the driving force behind the compilation of the chapters in this volume is the development of autonomy, this aspect will be dealt with in section 2 of this chapter. Digital genres and electronic literacies will be discussed in subsequent sections.

2. Learner autonomy

In recent years the use of terms related to *autonomy* and *self-instruction* has become widespread, in the fields of institutional/academic teaching and business. Unfortunately, the interest expressed in these

concepts is often based on criteria of profitability. Self-guided learning systems are assumed to enable a maximum use of material resources with minimum staff requirements. This approach to autonomy comes from what might be called “superficial thinking” or “speed and product ideology”, which emphasizes features like maximum resource profitability, individualisation understood as solitary or collective use of teaching products in any place at any time, and speed of access and multiplication of the number of users of the teaching object. Although these features are not negative in themselves, they are not components of what we understand as autonomous learning. In our view, autonomy in the field of foreign language learning and teaching should be considered as an “attitude” or even a philosophy, and it should be related to the socio-constructivist language learning approach (Bruner 1984) and neo-Vygotskian psychology (Vygotsky 1978), which emphasize the interdependence of the cognitive and social-interactive dimensions of the learning process, according to which action, thought and language interact and become a single unit. Although from the outset the concept of autonomy has been associated to very different epistemological, psychopedagogical and ethical paradigms, it may be interesting to remember at this point that this notion has been historically linked to: i) the reflections on the awareness of thought itself, ii) the relationships with power, and iii) the potential for the rational grounding of individual behaviour by subjects who freely form part of a community with which they establish relationships of reciprocity (Little 1991; 1999). Developing autonomy involves developing “a capacity for detachment, critical reflection, decision making, and independent action” (Little 1991, 4) through social interaction and with the help of the teacher as a mediator. Three general pedagogical principles govern the teacher’s role in the development of language learning autonomy: i) learner involvement, ii) learner reflection, and iii) target language use (Little 2007). Teachers must involve learners in planning, monitoring and evaluating their own learning, help learners to reflect on and self-access the process and content of their learning, and make sure that the target language is the medium and goal of all learning.

Being able to self-manage communicative resources is part of a metacognitive and metalinguistic ability that is found at the very heart of autonomy, as a progressive capacity to be responsible for one’s own learning. Self-managing learning involves taking a step back, adopting a specific point of view to evaluate both process and results, and being willing to take risks freely along the lifelong learning path. However, this decision cannot be made if the conditions are not in place to make this

choice. At least two factors must be taken into account in this respect: i) the context within which the learning process takes place, including educational, social and technological affordances (Kirschner 2002), and ii) autonomy training as a step from a teaching culture towards a learning culture. With regard to autonomy training as deconditioning from a teaching culture, the new realities should promote the inclusion of new skills in the process, or of more complex old skills that require a new approach within the ICT and exolingual communication framework, such as: multilingual and multicultural mediation skills within exolingual communication; the skills typical of an integrated plurilingual competence that promote different strategies in alloglossic situations (i.e. situations where speakers use a non-native language as their language of communication); critical skills to manage information sources; strategic information organisation and *appropriation* skills; and skills in the selection of the guidance, counselling or *accompanying* forms in accordance with learning contexts and objectives. As pointed out above, contrary to an ideology based upon the concepts of speed and efficiency, we consider that the use of the term *autonomy* in the area of the ICTs should be explored in relation to socio-constructivism and critical thought, which are found in the origins of learning autonomy.

Introducing an autonomous language learning approach in formal instructional settings involves redefining teaching-learning relations and the concept of evaluation. This may be the reason why, as Dam points out (1995; 2003), learner autonomy remains a minority pursuit, perhaps because all forms of *autonomisation* threaten the power structures of educational culture. In fact, the development of learner autonomy depends on complementary teacher autonomy (Benson 2001). Whereas on a self-study—or self-access—course, the teacher is usually responsible for materials and evaluation, within a learning-to-learn perspective the teacher might be assumed to be responsible for fostering autonomy by helping students to become more independent and to gradually take charge of one's own learning (Holec 1981; Dickinson 1987). Although in institutional contexts both the terms *autonomy* and *self-learning* are often used to refer to situations in which students may have access to a resource centre, where they can study and work on their own, self-instruction cannot be confused with learner autonomy. Self-instruction refers to a variety of self-regulation strategies that students can use to manage themselves as learners in order to direct their own behaviour, but this awareness is not spontaneous and needs a process of autonomisation learning in which the teacher is seen as a counsellor and a resource.

A retrospective look at the evolution of teaching-learning methodologies can help to understand the context where the concept of autonomy starts to be used. By the end of the 70s, when teaching-learning methodologies began to suggest that the focal point should be the learner, a pedagogical perspective involving a constructivist and socio-constructivist tradition was being called for. At this time the works of Vygotsky and Piaget started to become known and researchers were beginning to show an interest in learners' internal processing of the input, in learners' cognitive styles and in the attention to diversity. Adopting this perspective involves considering the teacher as a researcher of learning processes and a mediator who designs learning plans that take these processes into account. The concept of pedagogical mediation opens up a new area for reflection: how the student's construction of significant knowledge might be favoured by teaching methods and by counselling (Dickinson 1987; Holec 1981). The evolution of communicative approaches from the 80s onwards can be described as a growing integration of cognitive and metacognitive factors, with a progressive emphasis on the development of a learning consciousness. Communicative competence, understood in its triple dimension (*strategic, discursive* and *cultural*), and metacognitive ability appear as inseparable. Indeed, the most recent models for learning through tasks and projects incorporate methodological and metacognitive aspects that concern i) the development of work plans, ii) selection of tools to carry out the task, iii) ways of doing the work, and iv) the assessment and reorientation of the process.

After this retrospective look, it is clear that the concept of autonomy is closely related to a set of intertwined notions that cannot be ignored when designing language teaching and learning plans from an autonomizing perspective. Developing the longlife autonomous learning capacity beyond the strict context of instruction entails a change in the teachers' thinking, a reconceptualisation of their practice and a change regarding the learning objectives. In particular, it is clear that learner autonomy is related to the learner's personal, cognitive and socio-communicative development. All this involves the development of new social interaction and information processing skills that become even more important in today's world, where knowledge and communication are highly complex, due to the technological advances and to the multilingual and multicultural contacts that are made every day.

Developing the capacity to argue and to understand the arguments of the other or others by working together to seek out links is part of the development of an ethical consciousness of communication that is tied up with the development of multilingual and mediation competence.

Developing a mediation culture involves adopting critical thought on communication, on interaction and on learning. The notion that the development of autonomy is inseparable from a capacity to participate critically in social interaction has been held for some time in this area of study (Little 1995; Littlewood 2002; Villanueva 2006). This critical point of view is characterized by its complexity, since it must combine a capacity for both reflection and self-knowledge with communicative action. Particularly in exolingual communicative situations, collaboration in building a communicative episode always involves the renegotiation of communication roles and, to do that, a capacity to carry out seemingly opposed movements is vital: becoming aware of what one does and distancing/detaching oneself from one's own behaviour, decentering and reorganizing one's own reasons, acting and reflecting.

The use of ICT opens up a space for complexity and multiplicity that might help the development of autonomy. In this sense, we are talking about multiplicity of access to authentic documents, multiplicity of access to interaction, the chance to reinforce metacognitive ability through experience with others, via dialogue and knowledge of other forms and ways of tackling problems and learning styles, other perceptions of texts and discursive genres, other criteria and uses of formality and courtesy. From the paradigm of learning autonomy, ICT may open up an attractive way forward for the intercultural dimension of reflection, since contact among *others* encourages relationships between individuals and the enrichment of their own representations. Discussing autonomy in our technology-mediated society involves taking into account the multiplicity and variety of resources, supports and genres, the multiplication of forms of interaction between peers in pedagogical (e.g. virtual classrooms) and non-pedagogical (e.g. forums, chats, blogs) contexts (see Benson and Chik, this volume), and new forms of evaluation, heteroevaluation and pedagogical mediation and advice (see Bailly, this volume). However, these affordances of the new medium in themselves do not guarantee their use from a critical and autonomizing perspective. We therefore believe in the necessity of specific training for language learning autonomy, both for students and teachers. This training can help the actors in the teaching-learning process face the new challenges posed by the amplifying effects of ICT on the pedagogical framework (Villanueva 2006) (see part II this volume).

There are many issues open to research in the field of ICT and language learning. Yet, when taking the development of language learning autonomy as the initial premise, we think that some of the most important issues to be addressed should be the following: What are the implications

of digital genres for autonomous language learning? What should be understood by new literacy and by autonomous learning in a digital context? Which strategies are needed to construct meaning in an online environment? What is the relation between autonomous language learning and the ability to engage in the new discourse practices afforded by new technologies?

3. Digital genres and web-mediated discourse practices

Although genre has been defined in different ways, depending on the analyst's perspective (see Maingueneau this volume), there is general agreement that genres provide a shared framework for interpreting and producing texts and for participating in mutually understood communicative acts (Bazerman, Little and Chavin 2003), to the point that Fowler (1989, 216) suggests that "communication is impossible without the agreed codes of genre". Focusing on digital environments, researchers like Warschauer (1999; 2000) have stressed the need for students to apprentice into new discourse communities by learning "the types of genres and rhetorical structures that are used in particular media" and learning "enough about cultural and dialectical differences to choose the right communication strategies for the particular audiences that they are likely to encounter in a new medium" (Warschauer 1999, 162).

Developing an awareness of online genres requires a previous analysis and understanding of such genres and of the processes users engage in when interacting with them. However, this is not an easy task, because the features of the new medium have come to complexify the concept of genre even further, as discussed in Maingueneau (this volume), and because such an understanding also requires a consideration of the new social and discourse practices engendered and afforded by online environments. Digital genres are highly dynamic forms usually characterized by hybridism, which involves articulating "established practices and conventions within and between different modes of meaning" (New London Group 2000, 30) in new ways. However, as Santini (2008) points out, in the digital environment, genre hybridism (which is articulated in the combination of multiple genres within a single Web document) combines with individualization, which is in turn reflected in the existence of a large number of *emerging genres*, i.e. genres still in formation, not fully standardized, which do not instantiate any recognized genre. The fluidity and dynamism of hypermedia lead to the malleability of genres in the digital environment, which results in a range of phenomena that need to be researched when studying digital genres, namely: multigenericity

(Santini 2008; Villanueva et al. 2008), intertextuality (Luzón 2005; Osterlund 2007; Villanueva et al. 2008), genre colonisation (Beghtol 2001) genre combination (Osterlund 2007), and transgenericity (Villanueva et al. 2008).

A general assumption in the literature on digital genres is that, since digital genres have unique features deriving from the multimodal, hypertextual and interactive affordances of the Internet, the analysis of digital genres should take account of the unique properties that the medium adds to the web genre “in terms of production, function and reception” (Askehave and Nielsen 2005, 3). The functionality of a genre, i.e. the capabilities afforded by the new medium, is as important as content and form (Shepherd and Watters, 1999). Askehave and Nielsen (2005, 98a) consider that we need to extend the traditional model of genre analysis “to account for the fact that a web text also functions in the navigating mode where the text, due to its media constraints, becomes an interactive medium, used actively to navigate the website”. Lemke (2005) claims that nowadays not only do we hybridize insulated genres, but “we now also make meaning along our traversals across traditional genres” (Lemke 2005, 45). He considers that genres are becoming units for flexible trans-generic constructions. When dealing with digital genres, a large number of researchers have emphasized their multimodal nature (e.g. Lemke 2005; Kress 2003), which involves meaning being constructed by combining resources from different semiotic systems. That is why several scholars have called for a semiotic theory of genre, which leaves behind the linguistic paradigm and “can account equally well for gesture, speech, image, writing, 3D object, colour, music and others” (Kress 2003, 35-36). Taking all this into account, Villanueva et al. (2008) put forward a framework to analyze and describe websites which includes: i) a heuristic description based upon a semiotic and content analysis, which makes it possible to determine the combination of semiotic cues (including the echoes from existing genres) used by the reader to interact with and through the text and to construct meaning; ii) an analysis of the structure/design of the website, i.e. the architecture of the website, the way the different pages in a website are linked to each other and connected, since the way a website is structured or designed will determine the best strategies to navigate within and from the site; and iii) an analysis of the hypertextuality and multigenicity of the website, which is necessary to determine how users construct meaning by traversing sites and genres.

Other authors stress the need for a multi-faceted framework for the definition of digital genres, which should account both for the attributes of the document itself and its role in human endeavour, i.e., a model that

combines textual patterning and patterns of social interaction (Chandler-Olcott and Mahar 2001; Crowston and Kwasnik 2004; Crowston, Kwasnik and Rubleske 2010; Montesi and Navarrete 2008). Crowston et al. (2010) suggest that web-genre taxonomies could be in part structured by the types of tasks for which a given genre might be useful. In this line, Montesi and Navarrete (2008) utilize a user-based model to describe the web genres employed by an engineer in his daily work. They describe the genres according to the following criteria: i) the purposes they serve for the participant (i.e. no clearly focused purpose, orientation, getting directions or an introduction to something, getting specific answers, including how to do something); ii) the role they play in the various work and search phases; and iii) and the way they are used in combination with each other (i.e. combinations through linking, purposive combinations).

All this research suggests that a framework for the analysis of digital genres should take account of generic features deriving from the medium and of social patterning. We agree with Chandler-Olcott and Mahar (2001) when they argue for an inclusive theory of genre, i.e. “one attending to the demands of digital and print texts, as well as the social contexts that shape and are shaped by those texts”. This theory should address the following interrelated dimensions: i) the purpose intended by the producer; ii) textuality features (i.e. textual regularities or patterns, interdiscursivity, multimodality, interactivity and hypertextuality); and iii) patterns of usage (i.e. How do particular users interact with the document? What is its function in a social context?). This last aspect should include the analysis of how users combine genres to accomplish social actions, focusing on “who combines genres, when, where, and for what purpose” (Osterlund 2007).

All these features should therefore be considered when teaching students to work with digital genres. Accordingly, making language learners aware of the complex nature of the digital genres should be a primary task for language teachers, since this genre-awareness would lead language learners to a better understanding of the text and they could thus make the most of the language learning experience. When using online text to accomplish a (real-life or learning) task, text users might need to work with different types of texts and multiple semiotic systems (e.g. linguistic, visual, auditory) and might need to interact with and through text in multiple modes (e.g. reading, writing, listening). Therefore, as Luke and Freebody (1997) remark, they will need knowledge about texts, their purpose, use and structure, i.e. genre knowledge. Raising the awareness of digital genres necessarily involves the introduction of specific training on digital skills in the language learning experience. As Coiro (2003) rightly

points out, electronic text environments require new thought processes for making meaning and, thus, multiliteracy pedagogy must promote the development of new literacy skills. Benson and Chik in part I as well as all the chapters in part II of this volume make explicit reference to this necessity and present different pedagogical proposals accordingly. The last section in this chapter deals with this topic in more detail.

4. New literacies and autonomous language learning

The evidence that ICTs are increasingly occupying centre stage in our lives has given rise to a large body of research on the skills that are necessary to cope in a digital world. The concept of digital/ electronic literacy, the skills that it encompasses and the implications for online teaching and learning have been widely explored (e.g. Esthet-Alkalai 2004; Leu et al. 2004; Martin 2006). Two precise and illuminating definitions of the concept are those provided by the team carrying out the DigEuLit project (whose aim is to develop a European Framework for Digital Literacy, EFDL) (Martin 2006) and by Leu and his team (Leu et al. 2004).

Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process (Martin 2006).

The new literacies of the Internet and other information and communication technologies include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICTs to identify important questions, locate information, critically evaluate the usefulness of the information, synthesize information to answer those questions, and then communicate the answer to others (Leu et al. 2004, 1572).

These two definitions reveal two important aspects of digital literacy. First, they focus on intentionality by emphasizing that digital literacy involves not only abilities/skills but also attitudes, disposition and awareness. Second, they take into account that the use of ICTs is a constantly changing realm and draw attention to the need to be strategically responsive and adapt to these changes. The connection

between digital literacy and autonomy is, therefore, more than evident in these definitions.

Research on digital literacies has emphasized that online learning requires strategic and autonomous learners who know how to access and use online resources and tools (Anstey and Bull 2006; Shetzer and Warschauer 2000). As Shetzer and Warschauer explain (2000, 176):

Flexible, autonomous lifelong learning is essential to success in the age of information (Reich 1991; Rifkin 1995). Autonomous learners know how to formulate research questions and devise plans to answer them. They answer their own questions through accessing learning tools and resources online and offline. Moreover, autonomous learners are able to take charge of their own learning through working on individual and collaborative projects that result in communication opportunities in the form of presentations, Web sites, and traditional publications accessible to local and global audiences.

There is a reciprocal relationship between learning autonomy and new literacies. The development of new literacies involves autonomous learning, but autonomy in the age of information also demands new literacies. In this respect, Warschauer (2002) argues that it is necessary to extend the concept of autonomy to include the ability to make effective use of new technology and be strategically responsive to technological changes. The need to redefine learning autonomy to fit in the rapidly evolving educational context is also pointed out by Blin (this volume).

Using new technologies to communicate and to learn therefore involves being able to understand the new discourse practices emerging in the digital environment and also being able to use those practices to construct new knowledge. As Luke (2000, 73) puts it:

The Multiliteracies of digital electronic “texts” are based on notions of hybridity and intertextuality. Meaning-making from the multiple linguistic, audio, and symbolic visual graphics of hypertext means that the cyberspace navigator must draw on a range of knowledges about traditional and newly blended genres or representational conventions, cultural and symbolic codes, as well as linguistically coded and software-driven meanings.

Several researchers have explored the concept of electronic literacies in relation to the notions of online reading and language learning (e.g. Coiro 2003; Frechette 2002; Leu 2002; Leu et al. 2004; Warschauer 2002). Kern, Ware and Warschauer (2004) and Ware and Warschauer (2005) call for a new and more complex view of literacy, which takes into account the features of the digital environment, i.e. the high degree of multimodality

and multimedia, which challenges the dominance of the written word in many contexts; the possibility of interactive written communication, which bridges the gap between speech and writing; hypertext, which brings together information in entirely new ways; the emergence of new discourse structures and genres and of new forms of many-to-many communication; the new notions of authorship; and the possibility of participating in multicultural learning communities. Warschauer (2002) argues for the need to help students develop *electronic literacy*, which includes four main components: computer literacy, information literacy (i.e. the ability to find, analyze, and evaluate information available online), multimedia literacy (i.e. the ability to interpret and produce multimedia documents), and computer-mediated communication—CMC—literacy (i.e. mastery of the pragmatics of CMC).

It is clear from all these definitions and views of digital literacy that it goes beyond the textual and includes understanding and making effective use of all the iconic systems present in digital artefacts (Snyder 2002). Reading hypertext cannot easily be compared with reading traditional printed material, mainly because of the huge number of possibilities that the non-linear and rhizomatic structure of the first opens up, which at the same time creates a new type of relationship between author and reader (Finnemann 1999). Indeed, hypertext can be said to implicate the reader in writing since the so-called “navigation mode” that users can activate (see Askehave and Nielsen 2005) puts them in a position where they have not just to read but also to make decisions about how to proceed with the information. As Allen (2003) argues, the reader’s role has dramatically changed when faced with hypertextual modes as compared to the role played in contexts where traditional print-based texts are involved. In fact, the reading of content is no longer the only aspect to be considered because in this dimension the reader becomes a *wreader* (Allen 2003) or, in other words, a writer/creator (Lemke 2005), developing new skills such as browsing or navigating in an “open-ended search for meaning” (Allen 2003).

Research on strategies required for online reading emphasizes the importance of cognitive and metacognitive strategies which enable the reader to navigate through and find information in complex, multisemiotic and continually changing systems (Dalton and Strangman 2006; Leu et al. 2004; Shapiro and Niederhauser 2004), e.g. using appropriate search techniques; understanding how links function; making decisions regarding the usefulness, quality and coherence of texts; deciding on the sequence of reading; and reading both the textual and the visual. The research carried out by the GIAPPEL group (e.g. Sanz and Villanueva 2008; Villanueva

2006, 2008; Villanueva, Luzón and Ruiz-Madrid 2008) relies on the assumption that when working with Web-mediated texts, students need to become *wreaders* (i.e. an active responsive reader who performs acts where the boundaries between reading and writing/creating text blur) (Landow 1997) and develop strategies which involve the integration of the reading and writing competence into a single *wreading competence*, which we define as *the ability to understand the pragmatic, discursive and semiotic features of online texts, harness their affordances and interact with them in various ways, find relevant information in different semiotic modes within and across these texts, and relate and meaningfully use such information in order to achieve a specific purpose, complete a task or produce an output*. From this definition it can be seen that *wreading* involves more than just reading and writing in the traditional sense. It involves interaction with the text in all the ways that are required to construct meaning in a digital environment, i.e. reading, creating text by linking, triggering off actions by clicking, listening, writing, and so forth.

Helping students develop a *wreading* competence requires not only analyzing the affordances of digital genres and studying how potential users can interact with them, but also looking into the strategies developed by actual online readers and the problems they face. Research into online reading strategies by native speakers has revealed the use of comprehension strategies, such as predicting, evaluating and monitoring, which may be similar to those used in reading printed text, but may be used for different purposes (Akyel and Erçetin 2009; Duke et al. 2006). Akyel and Erçetin (2009) also found that certain strategies commonly used in reading printed text are rare when reading hypertext, and that hypertext readers resorted to certain strategies that are not used when reading printed text (e.g. the use of embedded annotations or glossaries). Research on online reading in L2 has shown that L2 learners face several difficulties and lack some skills/strategies to make effective use of digital information (Murray 2005), e.g. they have difficulty determining which online texts have reliable and relevant information (Murray and McPherson 2004; Walz 2001), or evaluating features such as visuals (Sutherland-Smith 2002); furthermore, they lack the skill to modify and synthesize online texts (Sutherland-Smith 2002).

A great part of research on online reading strategies in L2 has explored the factors that affect strategy use and effectiveness. Research has found that readers' L2 proficiency is a factor that accounts for differences in strategy use: students with a higher level of proficiency used more global/top-down strategies than those with a lower level (Huang et al. 2009). Other learner variables affecting reading strategies are field

dependence/independence, navigation styles, learning goals (Niederhauser and Shapiro 2003) or cognitive styles, i.e. verbalizer vs. imager styles (Graff 2005; Plass et al. 1998). The features of the hypertext that students engage in reading also affect strategy use, for example, level of text difficulty (Huang et al. 2006), website usability and text design (Elshair 2002), and the absence or presence of content representations such as menus and concept maps (Nielsen 1999). In his contribution to this volume, Altun discusses some of the issues presented above through a review of the literature on hypertext reading (e.g., hypertext reading patterns, readers' beliefs about hypertext, or problems related with navigation in reading hypertext). The GIAPEL research team is also involved in investigating the variables affecting strategy use when reading online. The contribution by Navarro and Silvestre in this volume reports on empirical research conducted with the purpose of establishing possible correlations among learners' learning style, their linguistic competence, and the type of hyperreading modes activated by learners when navigating on the Web in order to accomplish a specific task. Results from previous research by members of this group (Luzón, Ruiz-Madrid and Villanueva 2008) reveal that students need to be trained in electronic literacy skills, such as the ability to work in a non-linear and multimodal environment and to interact with online texts in various ways, the ability to combine different generic patterns and reading strategies, and the ability to evaluate the usefulness of online information in relation to one's purpose.

This need to train students in electronic literacies has been stressed by other scholars. For example, Reinhardt and Isbell (2002) state that "as educators we are not being fair to our students if we expect them to read, comprehend, and extract information from the Web without first providing explicit instruction in the unique skills needed for these tasks". This viewpoint is also shared by authors like Leu (1997), who suggests that web literacy instruction should concentrate on teaching students to recognize and utilize to their advantage the special features that can be found on webpages. More importantly, it should guide students to critically examine and evaluate online information. For Rouet and Levonen (1996), without such instruction, learners may become lost in a sea of information and experience cognitive overload.

Undoubtedly, Web literacy instruction has to be regarded as a key training activity for learners in order to make the most of hypertext but, at the same time, we should bear in mind the fact that we, as teachers, are responsible for the design of learning tasks in this new medium. This responsibility involves the need to have a deep knowledge of the pedagogical implications of working with hypertext and be willing to

reconceptualize learning needs according to the new competencies that students need to adapt to continually changing modes of communication. This issue is further discussed in part II of the volume, where contributors present pedagogical proposals that integrate the development of electronic literacy from a language learning task-based approach.

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