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Learning and Teaching Languages in Technology-Mediated Environments: Why Modes and Meaning Making Matter

Thesis

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The work derives from my professional journey at the Open University starting with my appointment in 1996 all the way through to 2018, the last 15 years in particular. I have found great inspiration both at the OU and through my work as a member of research consortia and at higher education institutions in Europe and North America. Therefore I also owe a great debt of thanks to my colleagues from outside the OU with whom I have co-authored some of the publications which form part of this thesis. My individual research, as much as our joint projects, have undoubtedly formed a great part of my professional identity. All of my co-authors have become close friends and I enjoy being part of such a vibrant community of committed and visionary scholars.

Dedication

To Tarkan

Perseverance is not a long race;
it is many short races one after the other.

Walter Elliot

This is the story of 16 races.

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Glossary

The following terms appear throughout the publications selected for this thesis. In some cases, the explanations offered are taken from the definitional debate around a term highlighting the aspect that is important to my work. As a result, the glossary applies primarily within the context of my work. A representative example to this effect is the definition of “autonomy”.

Affordances An affordance is a particular property of an environment that allows for action. In language learning, the environments that learners access and *in* which and *with* which they engage is “full of demands and requirements, opportunities and limitations, rejections and invitations, enablements and constraints – in short, affordances (Shotter & Newson, 1982, p.34)” (van Lier, 2000).

The term was originally coined by Gibson (1979), who defined an “affordance” as the quality of an object or an environment that allows an individual to perform an action. Affordances, then, are “action possibilities” latent in the environment. While they exist independently of the individual's ability to recognise them, their manifestations are highly dependent on the individual's capabilities. It is this dependency that underpins my work.

Agency The individual's socioculturally mediated capacity to act (Ahearn, 2001, p. 112), often seen as dynamic, emerging and shaped in and by interaction with others (e.g. van Lier, 2008). A number of scholars (Ahearn, 2001; Lantolf & Thorne,

2006; van Lier 2008; Wertsch, Tulviste & Hagstrom, 1993) describe agency as being mediated by social, interactional, cultural, institutional and other contextual factors.

Autonomy The informed use of a range of interacting resources in context (Palfreyman, 2006).

Contextual knowledge Awareness and knowledge of the learning context as reflected in awareness of the modes available in a bespoke VLE for meaning-making and communication and their affordances (Hauck, 2005).

Digital literacies The various ways of making meaning and the skills required in digital communication (Lankshear & Nobel, 2008).

Intercultural communicative competence Attitudes (for example, curiosity and openness), knowledge (of social groups and their products and practices in one's own and in one's interlocutor's country) and skills (for example, interpreting and relating), in addition to linguistic, sociolinguistic and discourse competence (Byram, 1997).

Learner self-management The definitive metacognitive strategy comprising both knowledge of cognition and control of cognition (White, 1995).

Metacognitive knowledge The part of long-term memory that contains what learners know about learning (Wenden, 2001).

Metacognitive strategies The general skills through which learners manage, direct, regulate, guide their learning (Wenden, 1998).

Modality In the context of CALL, the conjunction of the following semiotic resources makes up modality: (a) material tools (b) modes, such as written language, spoken language, or visual language and (c) language learning objectives materialized through educational designs (Lamy, 2012).

Modes Culturally intelligible systems which are basic to meaning-making including language (written, spoken), the visual (figurative and non-figurative or coded, such as icons), sound (figurative and non-figurative such as music, or coded such as signals), and body-language (Lamy, 2012).

Multiliteracies A concept first coined by the New London Group (1996) which refers to a broadened understanding of literacy including electronic forms of multimedia, images and texts.

Multimodality The simultaneous use of several semiotic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined (Kress & van Leeuwen, 2001).

Multimodal competence The ability to express ideas across a wide range of representational systems or modes including: words, spoken or written; images, still and moving; musical and 3D models (Kress, 2003).

Multimodal communicative competence In language learning, the ability to understand the combined potential of various modes for making meaning (Royce, 2002), that is the ability to process intersemiotic relationships and also the ability to produce these kinds of relationships (Royce, 2007).

Participatory cultures Encompass membership in formal and informal online communities, such as those found in social networking spaces like Facebook and among the communities that grow up around message boards, production of creative forms such as mash-ups, formal and informal teamwork of the sort that occurs in wiki spaces, and online distributions such as podcasting and blogging (Jenkins, Clinton, Purushotma, Robison & Weigel, 2006).

Participatory literacy The ability to create and share knowledge and content collectively through the use of online tools and the completion of collaborative tasks in online environments (Giger, 2006).

Social presence The means by which online participants inhabit virtual spaces and indicate not only their presence in the online environment but also their availability and willingness to engage in the communicative exchanges which constitute learning activity in these environments (Kehrwald, 2008).

Social semiotics A form of enquiry that focuses on how people regulate the use of semiotic resources in the context of specific social practices and institutions, and in different ways and to different degrees (van Leeuwen, 2005). Social semiotics seeks to understand how people communicate by a variety of means in particular social settings and to identify and inventorise the semiotic options that are available to them, and that they choose to make (Mavers, 2018).

Telecollaboration The use of online communication tools to bring together language learners in different countries for the development of collaborative project work and intercultural exchange (O'Dowd & Ritter, 2006).

Telecollaboration 2.0 A concept that integrates the traditional theories and practices of telecollaboration with the new tools and opportunities offered by Web 2.0 (Guth & Helm, 2010).

Acronyms

ALs	Associate Lecturers (at The Open University UK)
CALL	Computer-assisted language learning
CMC	Computer-mediated communication
CMU	Carnegie Mellon University
DLL	Distance language learning
KMI	Knowledge Media Institute (at The Open University, UK)
LSM	Learner self-management
NMC	New Media Consortium
MCK	Metacognitive knowledge
MCS	Metacognitive strategy
OIE	Online intercultural exchange
TBLT	Task-based language teaching
VE	Virtual exchange
VLE	Virtual learning environment

Abstract

The developing argument presented in this thesis is based on seven articles, eight book chapters and one set of conference proceedings, some single-authored and some co-authored, on language learning and teaching in technology-mediated environments, published between 2004 and 2018. The publications chart my evolution as a researcher and practitioner at the Open University UK. There are several threads which weave themselves through my scholarly journey and which are reflected in the selected work:

- Thread 1: **multimodal competence** and language learning and teaching with technology
- Thread 2: **task-based approaches** to language learning and teaching with technology
- Thread 3: **teacher (and learner) preparation** for language learning and teaching with technology
- Thread 4: **learner (and teacher) autonomy** in language learning and teaching with technology.

The narrative cloth in the presentation of the publications draws these threads together and illustrates how they interconnect across my work. They are linked by my concern for online language learners' awareness of the opportunities and demands of the learning environment and the impact that such awareness, or lack thereof, has on the learning process.

The empirical studies presented and discussed in my work use mostly qualitative research instruments. They take forward the knowledge in the field by offering original insights into the interrelationship between language learner awareness *and* control over the learning context understood as awareness of online modes and their potential for meaning-making, communication, interaction and collaboration. This interrelationship is not only relevant for language learning in virtual environments *per se*, it also has repercussions on online learners' development of intercultural communicative competence, their digital participatory competence and social presence online, and on their autonomy.

Underpinning my work is a view shared by a growing number of researchers and practitioners in online learning and teaching of languages and cultures that a radical pedagogical shift is required: it is not sufficient to see the new technology-infused learning spaces as replicates of conventional face-to-face settings. Such a shift has to be informed by new learning theories which capture the dynamic nature of the enterprise in the wake of unabating technological advancements (e.g. Guichon, 2009; Hampel & Stickler, 2005; Hubbard & Levy, 2006; Hubbard, 2009; Kern, 2015; Sun, 2011). Moreover, I argue, it will need to include the systematic raising of learner awareness of learning context.

The presentation of the selected articles, book chapters and conference proceedings in Chapter 4 is divided into five parts in line with the thematic foci of the publications: (1) contextual knowledge, (2) multimodal competence (3) multiliteracies (4) digital literacies (5) participatory literacy and social presence.

The publications in Chapter 4, section 4.1 – Hauck (2004), Hampel and Hauck (2004), Hauck (2005), and Hauck and Hurd (2005) – focus on the concept of contextual knowledge and are informed by two studies: one carried out with students when the former Department of Languages (DoL) at the Open University offered learners a choice between face-to-face and online tutorials via an audiographic conferencing application (Lyceum); the other one carried out with OU tutors, most of whom were at the time unfamiliar with using Internet-based conferencing for language learning and teaching purposes.

The work presented in section 4.2 – Hampel and Hauck (2006), Hauck (2007), Hauck and Youngs (2008) and Hauck and Hampel (2008) – concentrates on multimodal competence as well as the interface between multimodal communicative competence and intercultural communicative competence online. While Hampel and Hauck (2006) is a theoretical contribution, the other three publications are based on a telecollaborative exchange linking participants from three different parts of the world (the Tridem project). The former helped frame the empirical study at the center of the two articles and the chapter that followed.

The publications in section 4.3 – Hauck (2010a) and Hauck (2010b), and Fuchs, Hauck and Müller-Hartmann (2012) – explore multiliteracies with multimodal competence understood as a core element of multiliteracies. They draw on data from a four-way telecollaborative exchange between teacher trainees and language learners in order to illustrate why telecollaboration provides the ideal set-up for fostering such competence development and therefore also online learner and teacher autonomy.

This leads to an examination of digital literacies in Kurek and Hauck (2014) and Hauck and Kurek (2017) in section 4.4. Both chapters are, again, theoretical contributions to the field of technology-mediated language learning and teaching. We conceptualise digital proficiency as mastery of modes and meaning-making – in other words multimodal competence – and as a precondition for autonomy. In Kurek and Hauck (2014) we present a task framework for instructed learner reflection to this effect, ideally in telecollaborative settings.

Finally, in section 4.5 – Hauck and Warnecke (2012), Hauck, Galley and Warnecke (2016), also a theoretical contribution, and Hauck and Satar (2018) – my co-authors and I explore a subset of digital literacies, namely participatory literacy as reflected in multimodal competence, and its relevance for social presence in online language learning and teaching contexts.

An example of how these themes interlink with the aforementioned threads is the task-based approach to multimodal competence development (Threads 1 and 2) in telecollaborative settings which is advocated in all three publications in section 4.3.

Together, the publications make a substantial contribution to the field of language learning and teaching in technology-mediated environments, through the centrality they grant to the learning context, and increasingly also to multimodality (Kress & van Leeuwen, 2001; Kress, 2009) as an overarching approach to conceptualising context-related challenges for both students and teachers.

Chapter 1 Introduction

This thesis draws on publications spanning 15 years of my journey as a practitioner and researcher of distance language learning (DLL) and teaching in online environments. My scholarly work began with the trials and then the introduction of audio-graphic conferencing for the delivery of language tutorials in the former Centre for Modern Languages at The Open University (OU). In 2001/2002, the team of academics I led at the time received an OU Teaching Award for “integrating Internet-based real-time audiographic conferencing tools into distance language-learning”, thus recognising the innovative character of our work.

I was from early on intrigued by issues related to what White (1999) had termed the “learner-context interface” in online DLL. White sees “the contribution of the learning context and the contribution of the learner as integral and reciprocal constructs” in DLL theory (White, 2005, p. 63). She conceptualises the interface as “the place at which and the means whereby learner and context meet and affect each other” (p. 66).

However, I was less concerned, at least initially, with the instructional context White refers to, i.e. course materials, tutor feedback and guidance. I was more interested in the materiality of the learning context, more specifically the online space where the learning and teaching of languages and cultures was supposed to take place: the tools and applications used, the various communication channels (written, aural, visual) at the learners’ disposal and their impact on the learning and teaching process, learner agency in particular, and the available modes and their affordances,

with their potential and constraints for making meaning and communicating (for a comprehensive definition of affordances see section 2.2.3).

Lyceum, the audio-graphic conferencing application developed in house by the Open University's Knowledge Media Institute (KMI), offered a synchronous audio channel, an on-screen whiteboard for writing and drawing and displaying visual input such as photos, charts and graphs, and a text chat window – all of which could be used either one at a time, or simultaneously, in any combination. I realised that the difficulties faced by some learners (and tutors) while using this virtual learning environment (VLE), and their reactions to it, were of a more complex nature than was captured by the term “technophobia”, that is, the fear or dislike of advanced technology or complex devices such as (at the time) desktop computers.

It also became clear to me that “multimodal” VLEs such as Lyceum made new demands on learners and tutors. While learning and practising a language online does undoubtedly require a certain degree of technical expertise, there are also challenges associated with the meaning-making and communication process itself. Kress's work has significantly influenced my research in this regard. “Modes,” as he has reminded us yet again recently, “have a large effect in shaping what the sign-maker (as *learner* or otherwise) can do and does. Modes set limits to the sign-maker's agency” (Bezemer & Kress, 2016).

For some students, learning a language in online contexts might constitute a challenge for reasons other than those they seem to be aware of, or believe they are aware of. They might, however, be unaware of the fact that virtual spaces are not replicates of face-to-face settings and require very different approaches to language

learning and teaching. Therefore, learner anxieties around the foreign language might actually be related to the way in which communication has to be carried out in VLEs, or, as Kress and van Leeuwen (2001) put it, the communicative potential provided by each available tool.

Thus, apart from their knowledge about language learning in cognitive terms, learners usually approach their studies with their own beliefs, assumptions and expectations regarding themselves as learners, the learning process, and importantly, the learning context in the sense I have described above.

As my work progressed, the themes listed earlier began to emerge: contextual knowledge, multimodal competence and their link with learner autonomy; the relationship between multimodal communicative competence and intercultural communicative competence; between multimodal competence and multiliteracies, digital literacies in particular; and finally, between multimodal competence, participatory literacy and social presence – all with regard to language learning and teaching in VLEs.

As I will show, most of these constructs are interrelated in a number of ways and the links between them are neither linear nor unidirectional. They are dynamic and ever-evolving, just like the online learning contexts in which they have been explored.

The 16 co- and single-authored publications I have selected trace the evolution of my ideas as a researcher and practitioner in technology-mediated learning and teaching of languages and cultures. The outputs, which embrace a range of double-blind peer-reviewed international journal articles and invited chapters in refereed edited

volumes, are shaped by both hands-on experience and reflective observations which in some cases have led to contributions of a more conceptual nature (Hauck 2005, Hampel & Hauck, 2006; Kurek & Hauck, 2014, Hauck, Galley & Warnecke, 2016, Hauck & Kurek, 2017). I also refer to other work I have published, both on my own and with colleagues, which does not form part of the thesis.

My arguments and hypotheses have developed in tune with my professional path as an OU academic, research partner and co-investigator in EU-funded and other international projects. Together they constitute a set of threads weaving itself through my publications, which I have used to guide the reader through the presentation of my work in Chapter 4. In Chapters 2 and 3, I introduce the theoretical backcloth and the methodological approaches of the studies at the centre of the chosen publications. Chapter 5 offers a brief look at my most recent work foregrounding the need for *critical* digital literacy education in online language learning and teaching contexts. The final chapter, Chapter 6, is concerned with the reception of the publications presented in Chapter 4: their impact in numerical terms as well as in terms of beneficiaries, projects, contributions to professional organisations and policy making.

Chapter 2 Theoretical backcloth

The studies which underpin my work are informed by learning theories grounded in second language acquisition (SLA) – metacognitive knowledge (MCK), metacognitive strategies (MCSs) and task-based language learning and teaching (TBLT) – learner autonomy and, most importantly, social semiotics. What follows is a brief introduction to each of these theories. The order in which they are presented does not reflect their relevance for my developing academic argument. Instead, the narrative tries to create a logical connection among the constructs which are at the centre of each theory.

2.1 Metacognitive knowledge (MCK) and metacognitive strategies (MCSs)

My considerations of MCK and MCSs, especially Learners Self-Management (LSM), draw on the work of Wenden (1991, 1998, 2001), White (1995, 1999, 2003) and Rubin (2001). Wenden (2001) defines MCK as “the part of long term memory that contains what learners know about learning” (p. 45). She distinguishes between

- person knowledge (the influence of cognitive and affective factors, such as age, language aptitude, personality, and motivation, on learning in general and one's own learning experience in particular),
- task knowledge (the purpose and the demands of a task), and
- strategic knowledge (the nature, adeptness, and effectiveness of strategies),

depending on whether the learner, the learning task, or the process of learning is at the centre of attention. Wenden (1998) describes MCSs as the "general skills through which learners manage, direct, regulate, guide their learning" (p. 519). These include planning, monitoring, and evaluating, both language use and language learning – key elements in developing autonomy (Harris, 2003; Holec, 1981; Little, 2001).

I focus on the role of *learning context*, which according to Rubin's (2001) conceptualisation of MCK is part of a learner's background (or prior) knowledge. Besides "contextual knowledge", that is "knowledge about the physical setting and situations" (Rubin, 2001, p. 32), background knowledge also comprises of world knowledge, textual knowledge, cultural knowledge and linguistic knowledge.

In Hauck (2005) I propose to consider the role of contextual knowledge in language learning and teaching in VLEs. Several years of experience with audio and audio-graphic conferencing in self-directed language learning at the OU had shown that "a high level of person and contextual knowledge and the degree to which learners have control over it at various stages of the learning process are pivotal to effective learning in such environments" (p. 70) (see also Hampel & Hauck, 2004; Hampel & Hauck, 2005; Shield, Hauck & Hewer, 2001; Shield, Hauck & Kötter, 2000). Thus I see knowledge of the learning context and control over it as defining elements of online language learners' MCK and MCS.

Learning context has increasingly been acknowledged as a key factor influencing other factors in language learning. Gardner's socio-educational model of SLA "explicitly proposes reciprocal causation" between individual differences, contexts

and outcomes, with particular emphasis given to the “very dominant role played by the social context” (Gardner & MacIntyre, 1993, p. 2–8). Other studies stress the importance of learning context in influencing learner beliefs and attitudes (e.g. Hurd, 2008). Yet, as I was able to show through the studies and theoretical contributions presented in Chapter 4, in VLEs such reciprocal causation and contextual influence is not limited to the dichotomy between formal and informal settings (Gardner & MacIntyre, 1993). In fact, it stretches across both, and has a far wider reach than learner attitudes and beliefs. It extends to learners’ awareness of modes and meaning-making and thus their multimodal competence (Kress, 2003).

With regard to DLL, White (1999, p. 449) sees “the relationship between the learner and the context as the critical aspect of self-instruction” with “each exerting an influence on the other”. While I agree with her assertion, I set out to show in my work that this applies not only to the instructional context as such (course materials, tutor feedback and guidance), but also to the context in a concrete sense, i.e. its materiality. In online environments, the context is made up of the modes available and their affordances, that is, their specific potentials and limitations for representation and making meaning (Hampel & Hauck, 2006; see also section 2.2.3). This points to the importance of social semiotics for my investigations.

2.2 Social semiotics

Social semiotics is, as van Leeuwen (2005) stresses, neither “pure” theory, nor a self-contained field (p. 2). It is a form of enquiry that focuses on how people regulate the use of semiotic resources in the context of specific social practices and institutions, and in different ways and to different degrees (van Leeuwen, 2005, p. xi).

One such practice, I propose, includes learning and teaching languages and cultures in VLEs.

Social semiotics originate in Halliday's Systemic Functional Linguistics and the notion that language and its functions (ideational, interpersonal, and textual) are a resource for meaning-making, which can be used for understanding linguistic texts (Halliday & Matthiessen, 2004). However, it marks a shift from the emphasis on language to other semiotic systems. Central to social semiotics is the principle that modes of communication offer historically specific and socially and culturally shared options, that is, semiotic resources, for meaning-making and communication. In other words, social semiotics develops the idea of meaning-making in social contexts through a variety of systems of representation of which language is one (Scollon & Scollon, 2003; Kress & van Leeuwen, 2001), or as Kress and van Leeuwen (2001) put it, meaning is made "in multiple articulations", i.e. "in any and every sign, at every level, and in any mode" (p. 4).

I draw on social semiotics to explain the relevance of semiotic resources and modes and the many ways in which meaning can be made and communicated in virtual language learning and teaching environments conceptualised as multimodal environments. For me, as for Scollon & Scollon (2003), meaning systems are located in the material world and from this perspective each online environment has its bespoke materiality and comes with its own rules of engagement and sociocultural practices. The communicative potential of the various interacting modes, which is a defining element of the materiality of the medium, is likely to have an impact on the language learning and teaching process. Therefore, I concur with Hampel in Hampel and Hauck (2006) and with reference to Kress (2003), that it is "vital to understand

the meaning making-potentials of the resources as precisely and as explicitly as we can” (p. 24) and so “attend to the materiality of the resources, the material stuff that we use for meaning making” (p. 32). In computer-mediated communication (CMC)-based teaching and learning, as Hampel and Hauck (2006) point out, the “material stuff” is the computer, or – as would be more appropriate today – electronic and mostly mobile devices with their new possibilities for representation and communication, including the ways in which modes can be combined and the way they function.

With reference to Lamy (2012), Chanier and Lamy (2017) explain it as follows: “In computer-mediated interactive language learning [...] learning is affected by the resources that are available to learners and their use,” and conclude that “the design of learning activities [...] needs to take into account the materiality of the modes available to learners and how they are used to create meaning multimodally” (p. 29). Hence, the relevance of multimodality to my work (see section 2.2.1).

Informed by social semiotics, we argue in Hampel & Hauck (2006) that the materiality of resources and the affordances of the modes will have significant impact on interaction and communication. They also have implications for task design. The latter needs to take into consideration the affordances of the medium used: the potential and limitations of the semiotic resources available for meaning-making and communication (see also section 2.2.3). While tasks can encourage communicative interaction, awareness and knowledge of the specific meaning-making and interactive potential of the semiotic resources available should become an integral part of task design. We call for bespoke tasks to this effect, that is, tasks which draw

the learner's attention to the modes available in a given VLE and to their affordances (for concrete examples, see presentation of publications 9, 10 and 11 in Chapter 4) .

In fact, such awareness and knowledge seem useful in any learning environment but are particularly pertinent in relation to communicative language learning and teaching in virtual spaces owing to their social and technological aspects (Murphy, 2009).

2.2.1 Multimodality

Researchers in computer-assisted language learning (CALL) and CMC-based language learning and teaching see multimodality as a defining characteristic of our field (e.g. Chapelle, 2009). Multimodality has emerged from social semiotics and has been defined by Kress & van Leeuwen (2001) as "the simultaneous use of several semiotic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined - they may for instance reinforce each other [...], fulfil complementary roles [...] or be hierarchically ordered" (p. 20).

Bezemer and Kress (2016) understand any kind of teaching as an instance of multimodal communication based on the use of a range of different communicative resources to design a multimodal learning environment. They also perceive semiotic resources as providing "inroads into learning" and explain how through "transformative engagement" with the available resources, the learners gradually expand their resources for making meaning and "acting" in a bespoke environment. Applied to the learning of languages and cultures in virtual spaces, this amounts to learners improving their linguistic and intercultural communication skills by drawing

on and interacting *with* and *via* the communication modes available to them, thus gradually building their semiotic budget.

“The engagement of multiple modalities (sight, sound, tactile, aural),” has been found to be “a highly positive contributing factor for the language learning process” (Meskill, 1999, p. 145), and in Hampel and Hauck (2006) we were able to show that the use of Web 2.0 technologies in DLL, Internet-based audio-graphic conferencing in particular, promotes such engagement. More recently, Guichon and Cohen (2016) have put it like this: “*Multimodality* makes sensory information accessible in diverse semiotic modes and offers the opportunity to produce, comprehend and exchange information simultaneously through different channels” (p. 510).

Moreover, these technologies allow us to combine semiotic modes more easily in an “orchestration of meaning” (Kress, Jewitt, Osborne & Tsatsarelis, 2001). In virtual language learning spaces shared on screen whiteboards, for example, text chat, emoticons and other clickable symbols such as the microphone and the video camera represent semiotic modes with meaning-making potential. Communication in these environments, therefore, is multimodal, with language in a traditional sense being one mode among others.

This prompted Lamy (2004) to expand so-called interactionist models of SLA to encompass multimodal contexts. She contends that learners need to develop new combined competences in receptive and productive skills, an assertion echoed in Kurek and Hauck’s (2014) understanding of language learners in VLEs as creative semiotic initiators and informed semiotic responders. Lamy’s (2004) study focuses on the ways in which learners interact with what she terms the “setting”, which,

based on investigations into the role of MCK in VLEs, I refer to as their “contextual knowledge and strategies” (Hauck, 2004; Hampel & Hauck, 2004; Hauck, 2005; Hauck & Hurd, 2005), in order to make learning adjustments. The traces of these adjustments can then be observed in “discourses and other artefacts” (p. 525) produced within the environment. Yet, as I put forward, it is not only “traces” and “adjustments” that are at stake. My hypothesis from early on was that the degree to which language learners (and teachers) are aware of and have control over the modes available to them online will impact on their ability to make meaning and communicate and in turn their autonomy as defined by Palfreyman (2006): the informed use of a range of interacting resources in context.

A core aspect of such informed use is awareness of the interrelationship between meaning-making in VLEs and language learning in VLEs and support in navigating this interrelationship with multimodal competence.

2.2.2 Multimodal competence

Multimodal competence has been defined by Kress (2003) as the ability to express ideas across a wide range of representational systems or modes including “words, spoken or written; image, still and moving; musical . . . 3D models” (p. 21). Equipped with such competence, I deduce in Hauck (2010a) that language learners “could become ‘fluent’ in new communication modes such as online speech and writing and images *and* their simultaneous realization” (p. 205). I also suggest from Hauck (2010a) onward that telecollaboration provides the ideal conditions for task-based multimodal competence development.

Telecollaboration (or telecollaborative learning and teaching of languages and cultures), has been defined as the use of online communication tools to bring together language learners in different countries for the development of collaborative project work and intercultural exchange (O'Dowd & Ritter, 2006). Telecollaboration draws increasingly on Web 2.0 technologies which afford the transformation of existing visual, auditory and textual content into new multimodal content. These technologies also provide opportunities to represent ideas and the self to new and wide audiences and give access to openly interactive, collaborative and supportive environments in which to build these representations (Asselin & Moayeri, 2011).

However, as we know today, learners' technology use, especially that of young learners, does not necessarily translate into mastering technology in a multimodally competent way. What is required is a sound grasp of the semiotic modes available in a given environment and the ability to match their affordances to task demands in order to achieve the learning outcome in an autonomous way (see definition of autonomy in 2.2.1 and the Glossary). "Therefore," we conclude in Hampel and Hauck (2006), it "becomes increasingly important to use virtual learning spaces in a way that gives students control of meaning-making and enables them to cope successfully with the challenge of their communication and interaction being doubly mediated both by the foreign language and the learning context" (p. 16).

This leads me to the close interrelationship between technology mediation, modes, and meaning-making in online language learning and teaching.

2.2.3 Technology mediation, modes and meaning-making

Picking up the thread from Hampel and Hauck (2006), I argue that in online language learning and teaching the practice of meaning-making happens via at least two layers of mediation: a *linguistic* layer and a *technological* layer. Taking the social interactional layer into account, that is, interaction with the tutor and with peers, which is particularly relevant in telecollaborative language learning, one could even claim that there are three layers of mediation to be considered. This means that language learners in VLEs have to negotiate the technological, as well as the linguistic, and social and often intercultural aspects of meaning-making and interaction. In line with Kern (2014, 2015) and others, I therefore challenge the notion that technology is a neutral or transparent medium for communication and identity work, and see mediation as radically transforming these and other social processes.

Kern (2015) also reminds us that all interaction, not just technology-mediated interaction, is in fact multimodal. What technologies have added are new modalities and media for communication. Different media – as Hauck and Hampel (2006) and others (e.g. Bezemer & Jewitt, 2010) point out – can facilitate or favour different kinds of meaning-making. They can also constrain them through the design of the tools themselves and differential access to reception and production of meanings. The latter also depends on how aware and knowledgeable learners are in terms of modes and their affordances. Hence my continued arguing for the significance of “contextual knowledge” in technology-mediated language learning and its relevance for learner agency and autonomy.

Within the “mediation principle” (Helm, 2016), affordances are a key concept, framed originally by Gibson (1979) as what a particular environment offers to an agent, either to accomplish or to constrain their action. An affordance is therefore a mixed entity, combining the perception of the agent – and therefore their action – and the characteristics of the environment.

In accordance with van Lier (2000) who in turn draws on Shotter and Newson (1982), Helm (2016) offers a slightly narrower understanding, namely “the relationship between the properties of the environment and the active learner.” An affordance,” she proposes, “is a particular property of the environment that allows for further action” (2016, n.p.). In online language learning and teaching, then, the environments which learners access and engage with, and within which they interact, make meaning and communicate, are “full of demands and requirements, opportunities and limitations, rejections and invitations, enablements and constraints – in short, affordances (Shotter & Newson, 1982, p.34)” (van Lier, 2000, p. 253). In my work I refer to this conceptualisation of affordances as it foregrounds the learning context and relates directly to the understanding of learner autonomy which underpins my studies, i.e. the informed use of a range of interacting resources (modes and their affordances) in context (Palfreyman, 2006).

Finally, technologies, networked technologies in particular, not only mediate but also remediate modes, meaning-making, communication and interaction. Remediation refers to “taking up the materials at hand,” – here the semiotic resources available in a VLE – and “putting them to present use, and thereby producing altered conditions for future action” Prior and Hengst (2010: 1). Therefore, we contend in Hampel and

Hauck (2006), that if online language learners are to become agentive in the meaning-making process, they need to become aware of the communication modes at their disposal and of their respective affordances – a view echoed by Kramsch (2006, p. 251), who stresses that it is no longer “sufficient for learners to know how to communicate meanings; they have to understand the practice of meaning-making itself.” To this effect, I have been promoting a task-based approach in my work (see section 2.4 on TBLT).

2.3 Learner autonomy

Autonomy has been relevant to my research in so far as I see a direct link between autonomous learning in VLEs and awareness and control over modes and meaning-making in VLEs. I have worked with a particular understanding of this concept, as presented in the Glossary, for reasons that I now explain.

Over the last 50 years, there have been two “schools” of thought about autonomy in language learning. The first one is mainly associated with Holec (1981) and his view of autonomy as “the ability to take charge of one’s learning,” and as a skill “to be acquired by “natural” means or in a systematic, deliberate way” (p. 3). In technology-mediated language learning and teaching contexts – I maintain in my work – this ability is dependent to a significant degree on learner awareness and control of the learning context, more specifically, modes and their affordances, and should therefore be fostered through a task-based approach, or as Holec puts it, acquired in a systematic, deliberate way. Holec also believes in the absolute freedom

of the learner to take all decisions concerning their learning – the ‘what’, ‘when’, ‘how’, ‘in what order’ and ‘by what means’ – and to work with “a reality which he himself constructs and dominates” (Holec, 1981, p. 21). In online spaces, the ‘by what means’ is pre-determined by the representational resources available for making meaning and communicating which in turn have a direct impact on the degree to which learners can construct and dominate their learning reality. Their agency in terms of their learning reality is closely interrelated with their familiarity with the learning-environment-specific affordances and points to the demands on 21st-century language education professionals. They must make sure they themselves have the skills needed to construct a “reality” in “virtual” spaces which is conducive to language learning and that they are able to exercise what Kurek and Turula (2014) refer to as “digital teacher autonomy”.

The second school emphasises social interaction and has somewhat overtaken the first (see Benson, 2011; Murray, 2014). Little (1996), drawing on Vygotsky (1978), considers collaborative learning through social interaction as essential for the reflective and analytical capacity which are central to autonomy. Benson (2001) sees Little’s understanding as complementary to Holec’s as it adds “a vital psychological dimension, that is often absent in definitions of autonomy” (p. 49). Benson himself prefers the concept of exercising “control” over learning rather than taking “charge”, a notion that chimes with my understanding of autonomy, i.e. control over modes and meaning-making in VLEs through informed use of available resources which also requires analytical capacity. Such VLEs are increasingly becoming commonplace in education, not only in DLL.

Yet, Benson warned DLL providers that expecting autonomy to be one of the outcomes of self-access work and supplying students with DLL materials was an unhelpful assumption. In a similar vein, Hurd (1998) posits that “no amount of surrounding them [learners] with resources will foster in them the capacity for active involvement and conscious choice” (p. 72–3), if, Hurd adds, they are not trained for autonomy. While Benson and Hurd refer to concrete materials when referring to resources, I propose that the same applies to representational resources in online learning spaces. This is in line with Little’s (2001) remark that “the pursuit of autonomy in formal language learning environments must entail explicit conscious processes, otherwise we leave its development to chance” (p. 34). Similarly, we make the case in Hampel and Hauck (2006) for learner (and tutor) preparation informed by multimodal pedagogy (Stein, 2004) for language learning and teaching in technology-mediated environments. It is not sufficient, we say, to equip learners with creative representational resources and to assume that their agency and control over the meaning-making and learning process, and therefore their autonomy, will increase by default.

Holec (1985) considers the imposition of an autonomous approach on learners “a contradiction in educational terms” (p. 189) but agrees with Little that teachers are responsible for raising in learners the metacognitive awareness and skills associated with autonomy. My understanding of autonomy is closely related to metacognitive awareness. Yet it relates not only to awareness of self, task and strategy, as in Wenden’s (2001) definition of MCK, but also awareness of the learning context as included in Rubin’s (2001) framework of MCK. As Benson (2001) says, “Autonomy may be recognised in a variety of forms, but it is important that we are able to identify

the form in which we choose to recognise it in the context of our own research and practice” (p. 47–8).

Web 2.0 technology has undoubtedly given language learners access to new ways of exercising their autonomy. While some contend that this has given rise to “actual new forms of autonomy,” others maintain that what we are witnessing is simply “a case of ‘old wine in new bottles’” (Cappellini, Lewis & Mompean, 2017). In an effort to reconcile old and new ways of thinking about the nature of autonomy, Little and Thorne (2017) offer the following approach: “The concept of [...] learner autonomy [...] provides us with a framework within which we can think about language learning and teaching and then of course apply that thinking and adapt it to the needs of specific contexts” (p. 15). Like Benson, they acknowledge the context-dependent aspect of investigations into (language) learner autonomy, i.e. the fact that autonomy manifests itself in different ways in different environments. Hence, as Cappellini et al. (2017) conclude, “[l]earner autonomy, like learning itself, is contextual” (p. 3). In my work I draw on Palfreyman’s (2006) definition and understand autonomy as the informed use of interacting (representational) resources in context, more specifically, technology-mediated (language) learning and teaching environments.

2.4 Task-based language learning and teaching

(TBLT)

My contribution to the field of technology-mediated learning and teaching of languages and cultures draws on TBLT in so far as I have been promoting a task-based approach to, first:

pp.

- raising learners' (and teachers') awareness of modes and affordances in online environments (see Chapter 4, sections 4.1, 4.2 and 4.3), and then to:
- multiliteracy skills training for both learners and teachers (sections 4.3 and 4.4).

While I subscribe to van den Branden's (2006, p. 4) understanding of tasks as an "activity in which a person engages in order to attain an objective and which necessitates the use of language," I conceptualise spoken and written language in line with a social semiotics stance as one of several systems of representation we use to make meaning alongside the visual, audio, gestural and spatial modes of meaning. Hence, in VLEs, a wider definition of 'task' might be called for, namely 'task' understood as an activity in which a person engages in order to attain an objective and which necessitates the use of several representational systems including language.

This understanding of task is in line with Lai and Li (2011), who question the appropriateness of "a predominant focus on the linguistic aspects of language learning [...] when applying TBLT in technology-enhanced language-learning contexts" (p. 501). In doing so, they refer to more traditional definitions of task such as the one propounded by Samuda and Bygate (2008), namely "a holistic activity which engages language use in order to achieve some non-linguistic outcome while meeting a linguistic challenge, with the overall aim of promoting language learning, through process or product or both" (p. 69). Similarly, Ortega (2009) reminds us that the focus on the linguistic dimension of language acquisition on the one hand, and a

strong inclination for controlled and structured activities on the other, represent the prevailing view in the field.

However, as Lai and Li (2011) highlight, adding technology to the equation increases the number of resources for task execution considerably. Yet they only consider 'resources' in the sense of authentic materials available online, including access to native speakers of the target language. Consequently, they operationalise tasks as "holistic activities in which learners make use of their language and (cross-) cultural and communicative resources to achieve some non-linguistic outcome through stretching their linguistic, (cross-)cultural, internet-based communication, and digital literacy skills" (p.501). Still, this definition gets much closer to the kind of task I have been promoting in my work to foster language learners' multimodal competence gain and multiliteracies skills development in technology-mediated contexts.

2.4.1 TBLT, multimodal communicative competence and multiliteracies

In Hampel and Hauck (2006), we argue that tutors require task-based training- in activity development informed by, and at the same time designed to raise, multimodal awareness: "Tutors will also need to be trained in the design of activities that make efficient use of multiple modalities to ensure that learners stretch, change, adapt and modify all elements available. In doing so they will gradually turn into skilled 'semantic traders' – experienced in the realisation of the affordances of a variety of modes – and thus systematically develop their electronic literacy skills" (p.14) and, as I would add today, their semiotic budget.

From Hauck (2010a) onward, I make the case for telecollaboration as the ideal setting for online language learning and teaching, the development of multimodal communicative competence (see Glossary) and multiliteracy skills. Royce (2002), who has coined the term 'multimodal communicative competence', sees it as an "extension of [Hyme's] communicative competence beyond its traditional (and narrow) linguistic view," as it "incorporates a recognition of the need to focus on multimodal literacy" (Royce, 2007, p. 362). In fact, Royce's term is the adaptation of multimodal competence to language learning and a synonym of multiliteracies (New London Group, 1996) but applied to second language learning and teaching contexts. It is therefore more helpful to me in my discipline area.

In arguing for telecollaboration as the overall training context, I draw on Skehan (2003), who summarises the advantages of developments in technology for task-based instruction as follows: "What is really exciting about the use of technology is its potential as a source of language learning materials and input. [...] In addition to these opportunities to receive input, there are many opportunities to engage in interaction. A few years ago, this was restricted to typed communication, whether synchronous or asynchronous. Now it is likely that groups of learners can engage in real-time communication, so that the feasibility of exchange arrangements will grow exponentially, and "twinning" of learners and native speakers will become common place." Today, such "twinning" or "telecollaboration" is considered one of the main pillars of online language learning (Thorne, 2005). "Telecollaborative tasks," O'Dowd and Ware (2009) explain, "generally involve different linguistic and cultural communities and producing negotiation of meaning and providing opportunities for the exploration of different cultural perspectives. This makes them particularly suited

to recent approaches to task-based learning which include a focus on issues related to intercultural communication [...] and [...] a focus on the skills of electronic literacy” (p. 174–5).

In their white paper entitled “Confronting the Challenges of Participatory Culture: Media Education for the 21st Century”, Jenkins, Clinton, Purushotma, Robison, and Weigel (2006) assert that more attention needs to be devoted to fostering new media literacies, which they define as “a set of cultural competencies and social skills that young people need in the new media landscape”, and which are developed through collaboration and networking. Online collaboration, I conclude in Hauck (2010a), seems to emerge as both the means and the end of the educational challenge described by Jenkins et al. (2006): it is through working together online to complete tasks and develop and share new knowledge that the ability to participate and engage with collaborative problem-solving is developed (see Figure 1). Hence the relevance of telecollaboration not only for the learning and teaching of languages and cultures but also for teacher (and learner) training in multimodal communicative competence and multiliteracy skills referred to by Jenkins et al. (2006) as new media literacies.

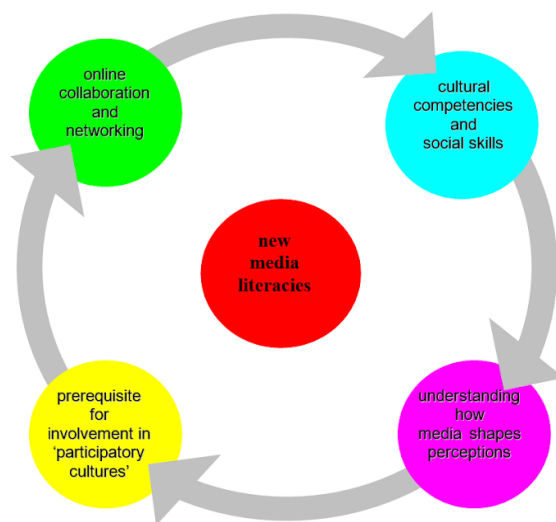


Figure 1: New Media Literacies (Hauck, 2010a)

As explained in Fuchs et al. (2012), I see multimodal competence as a core element of multiliteracies (Cope & Kalantzis, 2000, 2008), a concept first introduced by the New London Group (1996), which refers to a broadened understanding of literacy including electronic forms of multimedia, images and texts. The New London Group called for a new "pedagogy of multiliteracies" to account for the emergence of new genres and new ways of experiencing texts and media.

Therefore, online language teachers need to be trained – through a task-based approach – in the design of activities that make appropriate use of multiple modalities so that they can fulfil their “technical” responsibility beyond “introducing tools to the less knowledgeable learners, [and] familiarising participants with both systems and software” (Legutke, Müller-Hartmann & Schocker-v. Difturth, 2006 cited in Müller-Hartmann, 2007, p. 169). In Fuchs et al. (2012), we hypothesise that such

training would also contribute to what Fuchs (2006) calls the tutor's professional literacy, a core dimension of Kurek and Turula's (2014) "digital teacher autonomy".

2.4.2 TBLT and semio-pedagogical competence

More recently, Guichon and Cohen (2016), drawing on Peraya (2000), have used the term "semio-pedagogical competence" to refer to "teachers' awareness of the semiotic affordances of media and modes and their subsequent ability to design appropriate technology-mediated tasks for language learning" (p. 517; see also Guichon, 2009). As I contend in my work, in Chapter 4 sections 4.2 and 4.3 in particular, teachers with enhanced levels of semio-pedagogical competence are more likely to be in a position to turn areas of conflict and misunderstanding in telecollaborative encounters into key moments of (intercultural) learning. The telecollaboration reported in Hauck (2010a, 2010b) and Fuchs et al. (2012) in particular, would confirm that "teacher development ... [is the] lynchpin for progress of the TBLT enterprise" (Bygate, Norris & Van den Branden, 2009, p. 498). It further confirmed O'Dowd and Ware's (2009) claim that beyond decisions on the nature and sequencing of tasks, the teaching partners of the telecollaborative project team must consider how they will negotiate the enactment of tasks throughout the online exchange.

I will now introduce the methodological approaches used in the studies reported in the work that constitutes this thesis.

Chapter 3 Methodological approaches

My choice of methodologies has been informed by the aims of my research, which I summarise briefly here.

I have sought to shed light on the impact that online language learners' awareness of and control over the learning context – the available modes and their affordances – has on their ability to make meaning, communicate and collaborate with peers and exercise autonomy over their learning. Two foci have emerged from this overall aim. One is that telecollaborative exchanges which bring together language learners from different parts of the world for intercultural-communicative-competence gain, provide an ideal set-up for developing such awareness and mastery of the learning environment and consequently an autonomous approach. The other is that there is a close interrelationship between these constructs and the development of learners' digital literacy skills, notably their participatory literacy, and their social presence online.

3.1 Action research

In order to achieve these aims, I have adopted methodologies that draw mostly on interpretive rather than positivist paradigms. Those contributions which are *not* of a purely theoretical nature (publications 1, 2, 4, 6, 7–11, 14 and 16) report insights gained from case studies sharing characteristics of action research (e.g. Nunan & Bailey, 2009) and exploratory practice (Allwright & Hanks, 2009). My role was that of a participant-observer, which has the advantage of “reducing the conventional

distance between researcher and subjects” (Cohen, Manion & Morrison, 2011, p. 37) and is an important element of action research.

3.2 Case studies

A case study is primarily “theory-building” or “data in search of a hypothesis.” This means that “generalizations and hypotheses emerge during the course of the data collection and interpretation, rather than being predetermined by the researcher” (Nunan, 1992, p. 56).

Hauck (2010a and 2010b) and Fuchs, Hauck and Müller-Hartmann (2012) (publications 9–11), which draw on data from the same studies, are representative examples to illustrate my methodological choice and the instruments used. In line with Nunan and Bailey (2009), we approached action research as a systematic, iterative process which in this case comprised of (1) defining the aim (i.e. investigating the interrelationship between task design, learner autonomy, teaching and digital competence); (2) planning a four-way project cycle; (3) carrying out the telecollaborative exchange; (4) observing the apparent outcomes of the project cycle; (5) reflecting on the outcomes and on alternative approaches to carrying out the investigation; and (6) repeating these steps again in the second cycle upon having refined the task design, by putting a stronger focus on multimodal competence development.

While being low-scale in terms of size and interference in classroom processes, action research nevertheless “involves systematic collection [...] and analysis of qualitative data and description of events and processes” (Benson, 2001, p. 282).

This is reflected in the summaries of Hauck (2010a and 2010b) and Fuchs et al. (2012) in Chapter 4, section 4.3, and builds on numerous studies on telecollaboration in pre-service teacher education which were informed by the same research paradigm (e.g. Belz & Müller-Hartmann, 2003; Fuchs, 2006; O'Dowd, 2007).

3.3 Exploratory practice

Allwright and Hanks (2009), however, have criticised the action research approach for being too limiting and have suggested a move to exploratory practice or inclusive practitioner research instead. "Third-party research in general cannot meet our purposes," they posit, "and practitioner research, the form of AR [action research], has not yet taken us far enough away from the third-party model to overcome these limitations. [...] The first two parties for research on education are the teachers and the learners" (p. 145). Exploratory practice attempts to bridge the teacher-researcher gap by focusing primarily on teachers (although with a recent shift to learners to acknowledge their centrality), by trying to make teaching more interesting for teachers, and by emphasising principles over practice (Allwright & Hanks, 2009). The authors further insist that language learning and teaching and research are social processes and so call for learners as "key practitioners" without excluding teachers. Instead, both should be considered "practitioner colleagues with the teacher playing a collegial role in helping learners develop as researchers of their own practices and as practitioners of learning" (p. 146). This collegial role was taken on both by Fuchs, Hauck and Müller-Hartmann and the in- and pre-service teachers (the learners) who

took part in both project cycles with all three groups reflecting on their practice (see section 4.3).

The case study approach was chosen, since it grasps the complexity of telecollaborative projects. A case study investigates a single instance or phenomenon in context and focuses primarily on gaining understanding of a context (i.e. on the 'what it is' and 'what it does'), and not on generalising results (Nunan, 1992). Thus, the approach seemed well-suited, as 'context' both in the wider sense of telecollaboration, as well as in a narrow sense of the VLE with its modes and affordances, where the telecollaborative exchange was hosted, was the focal point of the investigation. Yin (2003) comments that a case-study approach is especially suitable where contextual conditions are highly relevant, and Burgess, Sieminski and Arthur (2006) confirm that "contexts matter", with case study research being well-suited to develop contextual understanding. Furthermore, Yin (2003) recommends using a case-study method when boundaries between phenomenon and context are not clearly evident. This certainly applies to my work. In my investigations of social presence (Chapter 4, section 4.5), for example, the online context is intricately linked with the phenomenon under scrutiny. Social presence is understood as the means by which online participants inhabit virtual spaces and indicate not only their presence in the online environment but also their availability and willingness to engage in the communicative exchanges which constitute learning activity in these environments (Kehrwald, 2008). The means are the modes available to the participants to project their presence into a given environment and their

multimodal competence is the degree to which they are aware of the affordances of those modes and can exercise control over them accordingly.

Case studies are “methodologically speaking [...] a ‘hybrid’ in that almost any data collection and analytical methods can be used” (Nunan & Bailey, 2009, p. 157). They are characterised by the fact that “a case is a ‘bounded instance’ [...], whether those boundaries are physical (a certain school site) or temporal” (p. 161), such as a bespoke VLE used for a semester-long telecollaboration. The phenomenon in the case study “is studied in context, focusing on observation, description, inference and interpretation, all important facts of ethnographic and practitioner research” (p. 162).

3.4 Ethnographic aspects

As my research addresses phenomena such as contextual knowledge, multimodal competence (multimodal communicative competence), participatory literacy, social presence and learner autonomy, the data gathering and analysis in most of my studies are informed by a qualitative rather than a quantitative framework. According to Snape and Spencer (2003), “there is fairly wide consensus that qualitative research is a naturalistic, interpretative approach concerned with understanding the meanings which people attach to phenomena (actions, decisions, beliefs, values etc.) within their social worlds” (p. 3). To that effect I have applied evaluative, exploratory, interpretative and ethnographic methods such as open-ended survey questions, semi-structured interviews, participant observations, reflective journals and portfolios, as well as content analysis of forum contributions and wikis. I am aware that qualitative research tends to be criticised for not being as rigorous or

reliable as quantitative approaches (Silverman, 2010). However, such criticisms seem anachronistic considering the evolution of qualitative research since the end of the twentieth century, and the greater transparency which has been achieved in the use of qualitative methods (Snape & Spencer, 2003; Braun & Clarke, 2006).

3.5 Data triangulation

Another case study characteristic is the triangulation of data, which has been a helpful part of my methodology in publications 2, 4, 6–11, 14 and 16. Ritchie (2003) defines triangulation as “the use of different methods and sources to check the integrity of, or extend, inferences drawn from the data,” which explains why triangulation is often referred to as “one of the central ways of 'validating' qualitative research evidence” (p. 43). Thus, we aimed in Fuchs et al. (2012; publication 11), for example, to increase the validity of the findings across the data sets derived from the chosen methods: qualitative and some descriptive quantitative data from pre- and post-exchange questionnaires, transcripts of forum postings and wikis, learner portfolios, and journal entries. In this way, we attempted to collect multiple viewpoints and gain a more in-depth understanding of the phenomenon under investigation. This is in line with the call for “more description of the learners, settings, and events in [CALL] contexts” (Huh & Hu, 2005, p. 17) and for “a better understanding of how exactly all of these factors interact and operate in real pedagogical contexts” (Chambers & Bax, 2006, p. 466–67; see also Müller-Hartmann & Schocker-v. Dittfurth, 2008; Hampel & Hauck, 2006). It needs to be acknowledged though that the

process of triangulation was influenced by our subjectivity as researchers in directing and designing our research approach.

Nonetheless, this kind of research can offer a broad and balanced analysis of the various factors at play and their interaction. It could have a local impact, in that it might lead to better use of technology-mediated language learning in the research settings themselves, that is, the bespoke VLE used in a telecollaborative exchange. It potentially might also have a wider impact, in that it might illuminate the ways in which these factors can be managed in other contexts (Chambers & Bax, 2006, p. 467). Considering the pace of technological advancements and the ensuing proliferation of contexts, this is highly relevant for technology-mediated learning and teaching of languages and cultures online, in telecollaborative settings in particular.

3.6 Inductive and deductive approaches

Finally, my research reflects both inductive and deductive approaches. While the former is concerned with the generation of new theory emerging from the data, the latter sets out to test theory. An inductive approach, as Braun and Clarke (2006) put it, aims to generate theory through research, and is therefore a “bottom up” process. Hampel and Hauck (2006), Kurek and Hauck (2014), and Hauck, Galley and Warnecke (2016), for example, are representative of an inductive approach, while Hauck (2005, 2010a and 2010b) and Fuchs et al. (2012), for example, reflect a deductive approach.

The next chapter presents the publications selected for this thesis, beginning with an illustration that shows the threads (see Abstract) that weave themselves through my publications.

Chapter 4 The publications

The presentation of my published work is subdivided into five sections. These correspond to the foci of the studies on which the individual articles and chapters in each part are based. They are presented in chronological order although the developing lines of argument are less linear and at times even multidirectional. The following is a visual representation of the principle threads (see Abstract), the horizontal lines, and of how they apply to the publications (see Figure 2), the vertical lines.

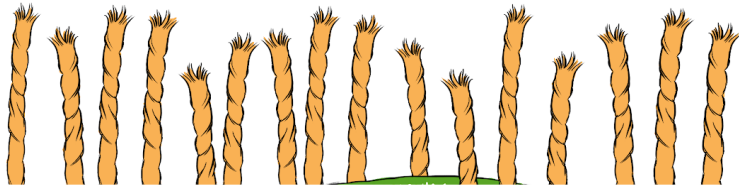


Figure 2: Overview of publications and threads

The publications in section 4.1 show my early interest in using action research and case studies, which are methodological approaches I developed and refined throughout my career as a researcher. The same applies to the methods I have adopted: I have opted mostly for qualitative data collection and evaluation instruments which seemed appropriate as the issues I have addressed, such as contextual knowledge and multimodal competence, multiliteracies, participatory literacy, and social presence, can hardly be captured with quantitative methods. They are dependent on learner and tutor awareness of the learning context and are as such predominantly meta-cognitive phenomena.

4.1 Contextual knowledge

Hauck (2004 and 2005), Hampel and Hauck (2004) and Hauck and Hurd (2005) are linked by my growing interest in awareness and knowledge of the learning context, its interrelationship with learner self-management and autonomy, and the need to make such awareness and knowledge part of the language learning and teaching process in technology-mediated environments.

1. Hauck, M. (2004). Exploring the link between metacognitive knowledge, efficient strategy use and learner autonomy in distance language learning. In U. Bernath & A. Szücs (Eds.), *Supporting the learner in distance education and e-learning: Proceedings of the Third EDEN research workshop* (pp.183–190). Oldenburg: Universität Oldenburg.

Hauck (2004) reports on a project I set up and ran when the former Department of Languages at the OU offered learners a choice between face-to-face and online tutorials via an audiographic conferencing application (Lyceum), which had been developed in-house. The purpose of the project was to help distance language learners to manage themselves and their learning, based on their understanding of how they can learn in VLEs such as Lyceum.

Hauck (2004) was primarily informed by White's (1995) insights into the interrelationship between learner autonomy, the instructional context (course materials, tutor feedback and guidance) and strategy choice in DLL. Later publications, however, move away from White's conceptualisation of autonomy as something that is learner-inherent and therefore context-independent. While I concur with White that learner self-direction is intrinsically linked to a higher degree of learner self-knowledge, I have suggested from early on, starting with Hauck (2005), that in VLEs, there is also a link between learner autonomy and learner's contextual knowledge or awareness. White (1999) acknowledges the context's influence on the learners who need to "expand and develop their learning skills and knowledge about themselves as learners" (p. 449). In addition, as I argue from Hauck (2005) onward,

such skills and knowledge development must include increasing awareness of the learning environment and should therefore become an integral part of task design for language learning and teaching in online contexts.

The task-based approach chosen for the project reported in Hauck (2004) is one of the threads linking the articles and chapters selected for this thesis (see Figure 2). In Hauck (2004), the task-based approach was inspired by Cohen's (1998) understanding of instruction in language learning strategies as "potentially the most supportive means of getting the message to learners that how they mobilize their own strategy repertoire will have significant consequences for their language learning and use" (p. 226). I also draw on Wenden's (1998) understanding of MCSs and the link she makes between metacognitive knowledge and strategies and learner autonomy. For Wenden (1998), successful learners are those who "have acquired the learning strategies, knowledge about learning, and the attitude that enable them to use these skills and knowledge confidently, flexibly, appropriately and independently of a teacher. Therefore, they are autonomous" (p. 15). Investigations of learner (and teacher) autonomy, then, its nature and relevance for language learning in virtual contexts, is yet another thread that connects my scholarly work (see Figure 2).

Today I would advocate adding the following to Wenden's description/understanding of learner autonomy: "and can readily adapt their learning strategies and knowledge about learning to new environments", since in the wake of technological advancements an increasing amount of learning and teaching, including language education, happens in online-only or blended environments. This aspect of learner

autonomy is encapsulated in Palfreyman's (2006) definition of autonomy as the informed use of a range of interacting resources in context which underpins my later work, in particular Hampel and Hauck (2006; see section 4.2) and Fuchs et al. (2012; see section 4.3) .

The Project

Participants and set-up

A group of volunteer students (n=37) took part in a pre-course face-to-face day school and engaged in activities designed to foster reflection on the online language-learning process and their role in it. They were adult language learners enrolled in OU German and Spanish Beginners' courses which offered students the aforementioned choice of tutorial modi.

Tasks

All tasks were based on the procedures suggested by Wenden (1998) for designing awareness-raising activities for MCK acquisition:

- (1) Elicitation of learners' metacognitive knowledge and beliefs.
- (2) Articulation of what has come to awareness.
- (3) Confrontation with alternative views.
- (4) Reflection of the appropriateness of making adjustments.

Methods

After the event, all participants received a questionnaire to:

- gather information on how the awareness-raising activities and instructed self-management strategies had been received and
- establish whether there was an increase in the learners' reflection on individual approaches to (online) language learning.

The questionnaires included both Likert-type and open-ended items.

Main findings

The data collected and evaluated indicated that activities designed to support MCK acquisition and instructed self-management strategies can be used in VLEs to enhance the capacities underlying effective self-management such as detachment and critical reflection. According to Little (1991), these are characteristic of an autonomous approach. The results of the study also seemed to confirm that distance language learners do not only need “regular opportunities through their learning to develop metacognitive awareness” (Hurd, 2000, p. 49), but – like all learners – also need “guidance in improving their knowledge about learning so that they may [...] become more autonomous in their approach to the learning of their new language” (Wenden, 1998, p. 531).

However, the insights gained are based on data from volunteer participants, that is, learners who from the outset might have had comparatively high levels of awareness of the language-learning process and their role in it. They had attended the day school to find out whether and how their trialed and tested learning strategies could be transferred to new contexts such as Lyceum.

From a theoretical standpoint, Hauck (2005), the third publication presented in section 4.1, picks up the baton in terms of the relevance of contextual knowledge. It also introduces Rubin's (2001) four-way division of MCK, including the learner's background knowledge with explicit reference to contextual knowledge, and so acknowledges the importance of learner awareness of the learning environment. Yet, as I have proposed in my later work, in VLEs, contextual knowledge – understood as awareness of modes and their potential for meaning-making and communicating (Hampel & Hauck, 2006) – is much more than background knowledge. This holds particularly true for online language learning and teaching, where communication and interaction are by default mediated at least twice, by the foreign language and the learning context and its constituent modes, and where – as I have been maintaining – awareness of and control over the latter become a precondition for learning success and autonomy.

Therefore, another salient thread in my scholarly investigations is the relevance of multimodality in VLEs, a learning theory which considers the many different modes people use to communicate with each other and to express themselves: the more traditional modes of speaking and writing, but also modes such as gesture, gaze and visual forms. As highlighted in Hampel and Hauck (2004), which is the next publication presented here, multimodal technology makes new demands on learners because they have to operate several modes in one medium and make choices between modes to suit both the task at hand and their own learning styles (Kress & van Leeuwen, 2001).

2. Hampel, R., & Hauck, M. (2004). Towards an effective use of audio conferencing in distance language courses. *Language Learning & Technology*, 8(1), 66–82.

Drawing on Kress (2000a, 2000b) and Kress and van Leeuwen (2001), this article takes the multimodal nature of new learning environments as its point of departure and balances opportunities for and demands on users. VLEs like Lyceum offer learners a combination of different modes such as the visual, the verbal and the written, thus realising the “meaning potential of language” (Halliday, 1986, p. 2). As Chun and Plass (2000) point out, they “not only present learners with information in various modes (visual, audio and verbal/textual), but also require learners to engage in productive tasks and activities in a variety of modes [...] and they employ video, images, sound, and text for both the presentation and the negotiation of meaning” (p. 152).

VLEs create a rich context for learning and teaching languages, and – as argued in Hampel and Hauck (2006), Hauck (2007, 2010a, 2010b), Hauck and Youngs (2008), Fuchs et al. (2012), Kurek and Hauck (2014) and Hauck and Satar (2018) – for raising awareness of modes and their meaning-making potential. The latter is not explicitly referred to in Hampel and Hauck (2004) but we draw attention to another observation by Chun and Plass (2000) which is the danger of overloading students when working online and using authentic Web materials – a challenge which points

to the relevance of contextual knowledge in VLEs and which is addressed in Hauck (2005) and subsequent work.

Hauck and Hampel (2004) emphasise the technological expertise required for learning in a VLE and the need to prepare learners for the experience. The need for multimodal competence development, which becomes a focal point of my work from Hampel and Hauck (2006) onward, is only indirectly addressed. Instead, we concentrate on task design, tutor training and student support as the three main influencing factors for a positive learning experience in VLEs.

With regard to task design, we do stress, though, that “the activities used the different modes available in Lyceum in a complementary way,” in other words, input in one mode was used to elicit output in another one, in order to meet Holliday’s (1999) demands for rich contexts in CALL. We also mention several linguistically undemanding warm-up activities specifically designed not only to help students become acquainted with each other but also to enhance their familiarity of the various features of the VLE. We might, therefore, have unwittingly created the impression that the challenges associated with modes and meaning-making in VLEs, which we set out to meet in Hampel and Hauck (2006), could be dealt with at the level of pre-task or warm-up activity.

Nevertheless, the need for student and tutor preparation for language learning and teaching in VLEs was established and would become another thread in the cloth that weaves my studies together. It culminated a decade later in a framework for instruction presented by Kurek and Hauck (2014; see section 4.3), which is informed by the theory of multimodal meaning-making (Kress, 2000a) and is designed to equip

language learners as semiotic responders and semiotic initiators (Coffin & Donohue, 2014) for successful participation in technology-mediated engagement and collaboration.

The Project

The research is based on the first Open University course ever to deliver tutorials face-to-face as well as online (a level 2 German course). It was felt necessary to developmentally test the VLE (Lyceum) in conjunction with newly designed activities and the course website. On an administrative level, the testing was deemed necessary to establish what kind of information online students need and the ways in which they best access that information. From a technological point of view, we wanted to make sure that the installation process of the software worked and that students would not be overwhelmed by technical demands. Academically, the testing allowed us to see whether the activities were suitable for the environment.

We also worked with OU associate lecturers (ALs), most of whom had never used Internet-based conferencing before, by running two sessions introducing them to the various tools in Lyceum and providing some basic netiquette training.

Participants and set-up

15 volunteer students took part in four 75- minute sessions: an induction into the software, a set of two tutorials, and a debriefing session. We acted as tutor and as observers. Some students also agreed to come to campus for the testing of the website. They were observed face-to-face.

Academic members of the German team were responsible for the pedagogical training sessions, which ran in December 2001 and January 2002:

Session 1: consolidation of use of Lyceum tools and online warm-up activities.

Sessions 2 and 3: simulation of tutorial tasks.

Session 4: debriefing and evaluation.

Thus, the pedagogical training sessions were used to familiarise tutors with the online tool and to demonstrate the pedagogical rationale for online tuition, as well as to help OU ALs develop strategies for implementing online tuition. After the hands-on experience, tutors spent an entire session (session 4) evaluating their experience and discussing the pedagogical implications of online learning and teaching. They asked for an additional session after the start of the course to share their experience of the reality of teaching online.

Methods

The questionnaire for Lyceum, sent to all 15 participants, sought feedback on technical issues such as installing and using the software and helpdesk support. Students were also asked to describe their experience both with the main tasks and the warm-up activities. Thirteen participants completed the questionnaire, and the data obtained was analysed qualitatively and, to a limited extent, quantitatively. The data was complemented by the online observers' notes (logbooks) and the tutors' experience of the sessions.

The tutor training – attended by 19 OU Associate Lecturers – was evaluated with a questionnaire, to which 15 tutors responded. We asked for feedback on the technical aspects of setting up and using Lyceum, and on the content and format of the training sessions. We also analysed the tutors' contributions to the debriefing and the follow-up sessions, during which we had taken notes, and we looked at their e-mail inquiries during the training. 14 tutors took part in the debriefing session and nine attended the follow-up session.

Main findings

The data showed that training was paramount. The tutor training followed an approach which Hoven termed a couple of years later “experiential modeling” (Hoven, 2006). This has become the default approach in teacher training for online learning context in language education and across the curriculum, in telecollaborative settings in particular (EVALUATE¹, 2017-2019; EVOLVE², 2018-2020), in which the online tools and processes that tutors are expected to use in their teaching are experienced from a learner's point of view. It constitutes the thread linking together those publications of mine which draw on data from teacher education studies (Hampel & Hauck, 2004; Hauck, 2007; Hauck & Youngs, 2008; Hauck, 2010a, 2010b; Hauck & Warnecke, 2012; Hauck, Galley & Warnecke 2016; Fuchs et al., 2012; Hauck & Satar, 2018; see Figure 2).

¹ Evaluating and Upscaling Telecollaborative Teacher Education (EVALUATE) is a European Policy Experiment project funded by Erasmus+ Key Action 3. Its aim is to show that participation in telecollaborative exchange contribute to the development of competences which future teachers need to teach, collaborate and innovate effectively in a digitalised and cosmopolitan world (<http://www.evaluateproject.eu>).

² Evidence-Validated Online Learning through Virtual Exchange (EVOLVE) aims to mainstream Virtual Exchange as an innovative form of collaborative international learning across disciplines in Higher Education institutions in Europe and beyond (<https://evolve-erasmus.eu/about-evolve>).

Feedback from students and tutors on the warm-up activities (familiarisation with the VLE and its features) was particularly revealing in this respect. It was also an early indication of the need to foreground the modes available and their affordances, that is, their specific potentials and limitations for representation and making meaning (Hampel & Hauck, 2006), and to approach technology-mediated language learning and teaching from a social semiotics perspective (van Leeuwen, 2005).

Joint reflection on the activities also showed how learners should be given the opportunity to discuss the rationale for a given task with the tutor. Similarly, I have argued in my work informed by teacher education studies (see above) that participants should be given the opportunity to discuss the rationale for choice of tools and applications, even the entire online environment chosen to carry out a task or sequence of tasks. This is likely to focus everybody's attention on modes, affordances and meaning-making and to foster "multimodal competence" (Kress, 2003), as well as what Guichon termed "critical semiotic awareness" (Guichon, 2009) a few years later.

In terms of challenges of a purely technological nature, Hampel and Hauck (2004) found that tutors as "troubleshooters" (Hauck & Haezewindt, 1999, drawing on Dias, 1998) require bespoke training to work with VLEs like Lyceum so that they can provide a basic level of technical support to the students during online sessions. Today we know that the skills required by tutors go far beyond the ability to handle the technology per se. Hampel and Stickler's (2005) "pyramid of skills", for example, includes the ability of "dealing with constraints and possibilities of the medium". Similarly, Guichon (2009) identifies "semio-pedagogical competence" as a key

competence required by language teachers to work effectively in digitally enhanced language classrooms. Guichon's insight is based on his analysis of the challenges that are at stake for teachers confronted with a dense multimodal situation (Norris, 2004). In order to grasp some of the issues that pre- and in-service teachers deal with when integrating technology into their pedagogical practice, Guichon proposes the adoption of a semiotic approach. He develops the aforementioned concept of "critical semiotic awareness", which in fact broadens Rubin's (2001) "contextual knowledge" – at the center of the next publication, Hauck (2005) – and allows for it to be adapted to Web 2.0 environments.

3. Hauck, M. (2005). Metacognitive knowledge, metacognitive strategies, and CALL. In J. L. Egbert & G. Petrie (Eds.), *CALL Research Perspectives* (pp. 65–86). New Jersey, USA: Lawrence Erlbaum.

Hauck (2005), an invited book chapter, draws on the same studies as Hauck (2004) and Hampel and Hauck (2004). In terms of my developing argument, it is more closely linked to Hauck (2004), though, as I revisit the concepts of MCK, "the part of long term memory that contains what learners know about learning" (Wenden 2001, p. 45), and MCSs as defined by Wenden (1998). The focus, however, shifts to learner self-management. The interrelationship between strategic competence, especially self-management skills and successful learning in virtual learning spaces,

is picked up again in Hauck and Hurd (2005) and Hauck and Hampel (2008; see section 4.2).

According to White (1995), self-management is the definitive MCS, as it comprises both knowledge of cognition and control of cognition. Today I would argue that learner self-management and learning environment management are reverse sides of the same coin and that – in line with White’s (1995) reasoning – learner management of the learning environment is made up of awareness and thus knowledge, as well as control of a bespoke learning context, the available modes and their respective affordances.

In O’Malley and Chamot’s (1990) taxonomy of language learning strategies, self-management is defined as “understanding the conditions that help one successfully accomplish language tasks and arranging for the presence of those conditions” (p. 137). Self-management, as I contend in Hauck (2005), is an essential MCS for language learners in VLEs as it relates their ability to set up optimal learning conditions for themselves in what at the time was for many unknown learning territory. I further maintain that a slightly more comprehensive definition of self-management might be called for: self-management involves both understanding the conditions that help one successfully accomplish language learning tasks in virtual learning contexts and arranging for the presence of those conditions in such contexts. Such a wider notion of self-management can be found in Rubin’s (2001) interaction model of LSM, which illustrates the complex dynamic processes between the learning task, the procedures for LSM, and LSM knowledge and beliefs. The latter include, as mentioned earlier (see Hauck, 2004), contextual knowledge as a

subcategory of background (or prior) knowledge. According to Rubin (2001), skilled self-managed learners are those who "possess sufficient knowledge and appropriate well-developed beliefs about self, the learning process, possible strategies, the nature of tasks, and prior knowledge" and who are able "to access their knowledge and beliefs in order to orchestrate their use of procedures" (p. 26).

Rubin's interaction model is an extended version of that proposed by Butler (1997) and incorporates the knowledge and beliefs framework proposed by Wenden (1999). All three authors see the task as the starting point of any self-managed learning. In an alternative approach, the self and, more importantly, the learning environment were taken as the starting points in the two case studies reported in Hauck (2005). Findings suggest that the level of online language learners' MCK and the degree to which they demonstrate control and flexibility in the use of MCSs and thus autonomy are interdependent. Acknowledging the importance of MCK, I propose that contextual knowledge, in VLEs in particular, can contribute to a clearer understanding of how learner autonomy can be fostered in such environments.

At the time, only a small body of research was exploring the link between MCK, MCSs and learner autonomy in self-directed language learning settings such as DLL, where the use of virtual learning spaces was becoming increasingly popular (e.g. White, 2003). Moreover, to my knowledge there were no published studies investigating the link between learner awareness of the learning environment, strategic competence and learner autonomy.

Benson (2001) sees the ability to draw on this type of knowledge (MCK) as one characteristic of autonomous learners; an ability that manifests itself in a reflective

approach. However, "[t]hose unaccustomed to reflection in any aspect of their lives," as Hurd, Beaven and Ortega (2001) remind us, "may find it difficult to accept this link between self-awareness, strategic competence and effective learning" and they "may well resist it if they are not convinced of the so-called benefits and relevance to themselves as individual learners" (p. 343). In Hauck (2005) I put forward that this holds true especially for DLL in multimodal online contexts given their additional demands on learners. Accepting the relevance of contextual knowledge in VLEs, then, has implications for task design, in so far as reflection on the learning environment needs to be built into the language learning tasks that we ask learners to engage with – a recommendation put into practice from Hauck (2007) onward (see sections 4.2 and 4.3 – Fuchs et al. 2012 in particular – and section 4.5). It may even require a fundamental pedagogical shift altogether, a challenge described and theorised in Hampel and Hauck (2006).

4. Hauck, M., & Hurd, S. (2005). Exploring the link between language anxiety and learner self-management in open language learning contexts. *European Journal of Open, Distance and e-Learning*, 2005(2), n.p.

In the meantime, Hauck and Hurd (2005) was an exploration of the interrelationship between affective learner variables, language anxiety in particular, and learner self-knowledge and management in face-to-face, as well as online, environments. We report on two studies with DLL at the Open University. The second study is the

one that also formed the backdrop for Hauck (2004, 2005) and Hampel and Hauck (2004). Here we looked at the data collected in terms of affective and contextual factors, with a focus on LSM skills.

The Project

In 2003 and 2003/2004, two studies were carried out with OU language learners based on a phenomenographic research approach, which is described as “the finding and systematising of thought in terms of which people interpret significant aspects of reality” and “aims at description, analysis and understanding of experiences” (Marton, 1981, quoted in White, 1999). The first study investigated language anxiety among distance learners supported by face-to-face tutorials and the strategies they use to deal with it that is their self-management. The second study sought to contribute to a more comprehensive picture of the relationship between learner self-knowledge and self-management in DLL, both in more traditional contexts and in VLEs such as Lyceum.

Participants

The study into language anxiety was part of a wider longitudinal project investigating a range of affective variables including anxiety, motivation and beliefs among a group of DLL students registered on an OU French course for students at lower intermediate level. For details about the participants in the second study, see Hauck (2004).

Methods

In Study 1, two questionnaires were administered during the course, which ran from February to October: Questionnaire 1 at the start of the course in February, and Questionnaire 2 at the midway point in June. The questionnaires included Likert-type questions and questions requiring yes/no answers, selecting and ranking activities, as well as some open-ended questions for qualitative analysis. In addition, one-to-one recorded telephone interviews were held in November at the end of the course.

The first questionnaire was sent out to a random sample of 500 subjects selected by the Open University's Institute of Technology (IET) from the 2003 cohort of learners. 277 students responded, 55% of the overall sample. The second questionnaire (n = 277) achieved a response rate of 52%, 145 responses.

Study 1 reports the findings of the two questionnaires in relation to the following research questions on language anxiety:

- Are there any elements of the language-learning process which distance learners associate with anxiety?
- What are the strategies that distance language learners deploy to cope with anxiety?

As for the methods used in Study 2, see (Hauck (2004).

Main findings

Through the answers to the questionnaires we were able to confirm that self-management is an essential strategy for DLL, both in face-to-face and VLE learning. Most importantly, though, learner data testified to the effect that LSM not

only includes self-knowledge and awareness and a reflective capacity, but also relates to the ability to set up optimal learning conditions in different learning contexts (face-to-face and online), including managing affective considerations such as anxiety and motivation.

The main point in terms of my developing argument was that further research was needed into the role of LSM in enabling learners to deal successfully with so called “metacognitive experiences”, i.e. moments when they are “confused, or uncertain, or when there is a breakdown in learning” (White, 2003, p. 140). In multimodal environments, such confusion and uncertainty can at times be caused by the context itself – the range of modes simultaneously available for meaning-making and communication, and the additional challenges they raise (Chun & Plass, 2000; Hampel & Hauck, 2004).

Hauck and Hurd (2005) draw on White (2003), whose studies indicate that such experiences are a “significant point of growth” for DLL and that they are “not confined to specific learning difficulties but [...] strongly directed towards a concern about how best to manage their learning within a new context” (White, 2003, p. 142). In this way, the relevance of the learning context with regard to LSM in VLEs had once again been foregrounded.

In sum: At this point in my career, my work had allowed me to show the interrelationship between learners' knowledge about learning, awareness of self and the learning environment, related strategy use and their autonomy in online contexts. I had also made the case for student and teacher preparation to this effect, beyond the level of warm-up activities and informed by a social semiotic approach, thus bringing to the fore the modes available in a given VLE and their affordances. Lastly, I had begun to advocate that reflection on the learning environment should be embedded into task design for online language learning and teaching.

Methodologically, it had become clear that data triangulation drawing on an increasing number of complementary data sources – from pre- and post-intervention questionnaires only, to questionnaires and observation, to questionnaires, observation and interviews – was an appropriate way to throw light on the complexity of the phenomena I was interested in (e.g. contextual knowledge). It allowed me to gain a comprehensive view from multiple perspectives: those of learners, teachers and researcher(s).

4.2 Multimodal competence

In 2005/2006 I spent a year as a research scholar in the Modern Languages Department at Carnegie Mellon University (CMU) in the USA. During my invited secondment, I designed, set up and ran my first telecollaboration, defined by O'Dowd and Ritter (2006) as "the use of online communication tools to bring together language learners in different countries for the development of collaborative project work and intercultural exchange" (p. 623). Apart from the linguistic benefit, the potential increase in the participants' intercultural communicative competence (ICC) – the ability to interact with people from another country and culture in a foreign language Byram (1997) – was seen as the main attraction of such exchanges at the time. In the wake of the "intercultural turn" in foreign language education (Thorne, 2003, 2010), there had been a marked shift towards sociocultural paradigms of learning, and the development of ICC had become a key component of foreign language curricula. Through advancements in technology, increasingly multimodal environments allowed educators and participants to draw on both asynchronous and synchronous online communication tools in telecollaboration, ranging from email, discussion forums and chat to instant messaging, audio-conferencing and video-conferencing. Applications facilitating co-publishing of project work such as blogs and wikis had also started to gain popularity (Godwin Jones, 2003). As established in my earlier work (see section 4.1), these tools, particularly when combined in one single VLE, make new demands on learners who have to orchestrate many semiotic modes in order to make meaning and communicate. Thus

– I would argue – in telecollaborative exchanges in particular, enhanced contextual knowledge as reflected in multimodal competence is a prerequisite for successful interaction with other learners. In my later work (see section 4.3), I would move on to commending telecollaboration as the ideal set-up for such competence development.

The two articles (Hauck, 2007; Hauck & Youngs, 2008) and the book chapter (Hauck & Hampel, 2008) that follow are based on insights gained from the telecollaborative project mentioned above with a focus on multimodality. Methodologically they draw on action research. Hampel and Hauck (2006) precedes and informs this work and is a theoretical contribution to technology-mediated learning and teaching of languages in multimodal environments.

5. Hampel, R., & Hauck, M. (2006). Computer-mediated language learning: Making meaning in multimodal virtual learning spaces. *JALT CALL Journal*, 2(2), 3–18.

In Hampel and Hauck (2006), our starting point is the fact that VLEs are not replicas of face-to-face settings, as communication and interaction are mediated by technology. Therefore, we must consider how meaning is made using the new media and modes available online. New communication channels offer new ways of combining different modes (text, audio, graphic, etc.) within one medium: laptop, smartphone, etc. and, as put forward in Hauck (2004), require a different kind of contextual knowledge.

We draw attention to the need for a new framework to investigate the limitations and possibilities offered by information and communication media and the modes they afford. Such a framework, we propose, cannot only enhance our understanding of the phenomenon of new literacies (Lankshear & Knobel, 2003; Hauck 2010b; Hauck & Youngs, 2008; Fuchs et al. 2012; Kurek & Hauck, 2014; Hauck & Satar, 2018), but also inform technology-mediated language learning and teaching. In fact – as I have argued from Hauck (2007) onward – technology-mediated learning and teaching of languages and cultures in the shape of telecollaboration offers an optimal “context” for participants to engage with and practice the new literacies.

In Hampel and Hauck (2006), our observations are primarily motivated by Kress and others (e.g. Kress & van Leeuwen, 2001; Kress, 2003), who have further developed Halliday’s ideas about making meaning. They conceive of language as a complex system made up of written, spoken, visual and bodily resources (or ‘modalities’), each with their own materialities and affordances. In this sense, language is made up of different, “independent meaning-making systems, which are however co-ordinated so as to produce a single, if complex, integrated and differentiated text-message” (Kress, 2000b: 186). Today, the media offer us the possibility to combine a variety of different modes in an “orchestration of meaning” (Kress, Jewitt, Osborne, & Tsatsarelis, 2001). Users have access to tools and applications which allow them to design, author and publish their own multimodal texts, understood as any artefact created with the help of representational resources. Apart from making the need for multimodal competence prominent, we note, new media have also changed notions of “authorship”, making for greater democracy and levelling of authority – at least as

we saw it at the time in the educational domain. While this is in line with Warschauer's (1999) assertion regarding the "decentered, multimedia character of new electronic media," which "facilitates reading and writing processes that are more democratic, learner-centered, holistic, and natural" (p. 11), it certainly encourages learners to be knowledgeable about modes and meaning-making, i.e. to be multimodally competent and therefore aware of the learning context.

Insights highlighted in Hampel and Hauck (2004) as to the demands made on teachers and learners by new multimodal VLEs in terms of task completion and learning styles were now complemented by a series of concrete suggestions as to how the arising pedagogical challenges could be met. In Hampel and Hauck (2006), we strongly suggest a fundamental review of online language acquisition. It is not sufficient, we stress, to equip learners with creative representational resources and assume that learner control over the learning process, and thus learner autonomy, will increase by default. We point to Stein's (2004) call for a multimodal pedagogy to promote the kind of literacy required to use the new learning spaces to their best effect. According to Stein (2004), "the theory of multimodal communication marks a paradigm shift in language pedagogy from language to mode, to exploring what modes are and how they can be used to maximize learning" (p. 105). We explain how the way modes are embedded in new media makes new demands on communication and learning, especially language learning in technology-mediated environments. "Language learners," we conclude, will have to become competent in both switching linguistic codes and switching semiotic modes and to do so consciously" (Hampel & Hauck, 2006, p. 12). Our central argument is that online

learning and teaching in general and language learning in VLEs in particular, when based on multimodal pedagogy, will enable students to:

- communicate in the language of the 21st century (Lessig, 2004)
- and construct their own knowledge, become authors, and disseminate their productions.

The former, we hold, starts with awareness of communication modes and their meaning-making potential, i.e. enhanced contextual knowledge (as researched in my early work and continued in Hauck, 2010b; Fuchs et al. 2012; Kurek & Hauck, 2014; Hauck & Satar, 2018). The latter relates to Kress's (2000c) concept of "learner agency", or "learners as agents", and thus learner autonomy (see also Hauck, 2010b; Fuchs et al., 2012).

Multimodal VLEs, then, can be conceptualised as "packaged resource kits" (Kress, 1998, p. 65) and learning as a process of design in which the degree of multimodal competence and the degree of learner control, and thus autonomy, are likely to be interdependent. Operating in multimodal VLEs, we follow on, can therefore potentially contribute to an increase in learner autonomy as defined by Palfreyman (2006), i.e. "the informed use of a range of interacting resources in context". It was the term 'resources' which led us to make the conceptual link between Palfreyman's understanding of learner autonomy and semiotic "resources" (modes and meaning-making).

To exercise autonomy in the sense above, we argue, tutors will need to support learners in developing "multimodal communicative competence", which is the way

Royce (2002) conceptualised multimodal competence for language education: the ability to understand the combined potential of various modes for making meaning, as well as the ability to process intersemiotic relationships and to produce these kinds of relationships (Royce, 2007) – thus including both the receptive as well as the productive dimension of the competence in question.

We summarised the challenges both learners and teachers face as follows:

- Critical use of modes; that is, understanding modal complexity as a result of varying degree of embeddedness of modes in the new media which yet again highlights the need for contextual knowledge as reflected in awareness of and control over modes and meaning-making.
- Dealing with affective challenges as a result of cognitive overload caused by the range of modes simultaneously available for meaning-making and communication (Chun & Plass, 2000; Hampel & Hauck, 2004; Hauck & Hurd, 2005).
- Intercultural differences resulting from the fact that modes, meaning-making and communication are strongly influenced by cultural conventions, as encapsulated in Thorne's (2003) "cultures of use".

The latter is a concept that relates to the cultural dimension of tools, culturally-specific communicative norms and modes and informs a parallel argument taking shape in my scholarly work, that telecollaboration, or more specifically Telecollaboration 2.0 which encompasses the development of language proficiency, intercultural communicative competence and new media literacies (Guth & Helm, 2010), provides an ideal context to raise awareness of learning environment-specific

affordances (see section 4.3). Therefore, it lends itself well to task-based contextual knowledge growth (Hauck, 2007; Hauck & Youngs, 2008; Hauck, 2010a, 2010b; Fuchs et al., 2012, etc.).

In sum: Through Hampel and Hauck (2006), we had hypothesised that an approach to learning and teaching languages in VLEs which draws on multimodal pedagogy has significant implications. These were to be pursued in other researchers' work. For example, task design implications were studied by Hampel (2006, 2010), while assessment practices and training for preparing online language tutors in the design of activities that make use of multiple modalities were explored in Hampel and Stickler (2006) and later in Guichon (2009).

Returning to my own work, the impact on task design and tutor training was to be further explored in Hauck and Youngs (2008), Hauck (2010a, 2010b) and Fuchs et al. (2012). Considerations in relation to task design have eventually led to the framework presented in Kurek and Hauck (2014). Meanwhile, in the second publication in this section, I was concerned with the interrelationship between multimodal communicative competence and ICC.

6. Hauck, M. (2007). Critical success factors in a TRIDEM exchange. *ReCALL*, 19(2), 202–223.

The Tridem project, which I set up and ran while at CMU, was among the first telecollaborative exchanges reported in the literature linking participants from three different parts of the world. It marked a clear departure from the more traditional Tandem exchanges and was inspired by a three-way pilot study funded by the Australian Research Council and reported in Hampel, Felix, Hauck and Coleman (2005). The pilot had yielded important insights into the factors which influence success in synchronous online language learning.

At the time, there was growing realisation that CMC-based telecollaboration between language learners “often fails to achieve the intended pedagogical goals” (O’Dowd & Ritter, 2006, p. 624) and that “exposure and awareness of difference seem to reinforce, rather than bridge, feelings of difference” (Kern, 2000, p. 256). O’Dowd and Ritter (2006) had come up with an “inventory of pitfalls”, which included factors influencing success and failure such as discrepancies in target-language competence among participants. In view of my earlier work (Hampel & Hauck, 2004, 2006), I was wondering whether difficulties arising from varying levels of multimodal communicative competence among participants might also be a contributing factor. My participation in the research carried out by Hampel et al. (2005) had refined my understanding of such difficulties. The insights gained from that research are briefly summarised here before I move on to the Tridem project itself.

Hampel et al. (2005) draw on multimodality to understand the meaning-potentials of the representational resources in the CMC environment used in their project, Lyceum. It provided a framework for examining the semiotic resources of this environment and for exploring the different modes these resources offer, along with their affordances as presented in Table 1:

Audio	Whiteboard	Concept map	Document	Text chat
<ul style="list-style-type: none"> ▪ ‘Talk’ button ▪ Several people speaking at once via modem can create a time lag ▪ Can be recorded (by re-searchers) ▪ Audio functions supported by ‘para-linguistic’ icons (see description below) 	<ul style="list-style-type: none"> ▪ Writing of limited amount of text ▪ Drawing tool ▪ Importing screen dumps (containing text, images etc.) ▪ Can be created and manipulated jointly ▪ Can be saved 	<ul style="list-style-type: none"> ▪ Writing ▪ Organizing shorter pieces of text (notes, instructions etc.) ▪ Text is located in nodes, which are created by users ▪ Nodes can be linked by arrows ▪ Only one person can work on a node at any one time ▪ Can be saved 	<ul style="list-style-type: none"> ▪ More extended writing ▪ Text can be copied from and pasted into other documents ▪ Texts can be created and manipulated jointly ▪ Compatible with other word processing programs such as Word ▪ Can be saved 	<ul style="list-style-type: none"> ▪ Writing ▪ Can be turned on and off for use alongside audio, white-board, concept map or document

Table 1: Tools in Lyceum and their affordances

Table 1: Tools in Lyceum and their affordances (Hampel et al., 2005)

“The affordances,” we claim, “influence the way we use Lyceum for language teaching, employing certain modes for certain purposes in order to foster interaction

between students and improve their communicative competence” (p.6). We propose the use of activities which gradually introduce learners to using the available resources – audio, text and graphics – so that they become increasingly aware of how the various modes can be applied and competent in choosing modes to serve their own purposes. With reference to Klein (2003), we recognise that this approach to task design entails a different notion of learning and teaching: “By actively creating and modifying representations while thinking and learning, students no longer simply learn from representations; instead, they learn by interacting with representations” (p. 11).

Participant feedback in Hampel et al. (2005) related, among other issues, to the degree of control learners felt they could exercise. Another issue highlighted was the juxtaposition of modes within a single environment, learners’ ability to multitask and their readiness to cope with the simultaneity of various meaning-making processes (e.g. in audiographic conferencing, handling the audio channel, several shared graphic interfaces, and text chat).

We also found that personality-inherent issues such as “tolerance of ambiguity” and “locus of control” (White, 1999) influence the learners’ ability to take control over the learning process in VLEs and thus display autonomy. *Tolerance of ambiguity* relates to learners’ and tutors’ reaction to uncertainty and confusion experienced in new learning processes (e.g. learning of languages and cultures through telecollaboration) and environments (e.g. audio-graphic conferencing). In VLEs the learning context itself can give rise to such confusion and uncertainty. *Locus of*

control refers to whether learners and tutors see internal factors (e.g. ability to manage one's expectations) or external factors (e.g. affordances of a specific CMC application) as responsible for their success or failure. Those with an external locus of control, experiencing either language or technological challenges, or both, tend to blame the CMC application when confronted with communication difficulties. Hence my continued contention that raising learner and tutor awareness of the communicative potential of the available tools and resources, and thus their contextual knowledge, will give them more control over modes and meaning-making and will work in favour of their autonomy.

Finally, Hampel et al. (2005) draw attention to the following interdependence: "the higher the learners' and tutors' level of awareness – regarding their modal preferences and how these relate to the possibilities and limitations of the available tools – the more creative they can be when interacting with representations and the less self-conscious they can be when interacting with the meaning-making resources" (p. 25).

In sum: Through their 2005 study, Hampel et al. had illustrated the connection between multimodal communicative competence and interculturally rich interaction and the need for what Dooley (2014) termed almost a decade later "critical semiotic intercultural awareness". In terms of the methods used, it was the first occasion where our data triangulation included reflective participant comments on the environment specific affordances and their impact on meaning-making, which were solicited several weeks after the end of the project. These fed into our findings with regard to "locus of control" (see above).

The Project

In the Tridem project then, I wanted to explore whether the ability to interact with representations and meaning-making resources and thus multimodal competence might be one of the critical success factors in telecollaboration. Participants completed a series of collaborative tasks using Lyceum and blogs. In both environments, they had access to tools which enabled them to design, author, edit and in the case of blogs, publish their own multimodal texts, that is, texts where “several semiotic modes” are used “in the design of a semiotic product or event, together with the particular way in which these modes are combined – they may for instance reinforce each other [...], fulfil complementary roles [...] or be hierarchically ordered.” (Kress & van Leeuwen, 2001: 20). It could therefore be reasonably contended that, once competent in a multimodal sense, they would be well positioned to exercise agency as conceptualised by Kress (1998) and autonomy as understood by Palfreyman (2006).

Participants

The project brought together adult learners of French from the OU, students of French from CMU, and French native speakers enrolled on a Masters programme in Open and Distance Learning (Master FOAD) at the Université de Franche Comté, France.

All participants were ICT-literate. The French and American students had to be trained in the use of Lyceum. For the majority, however, it was the first time they contributed to a blog. The mix of project participants was extremely varied in many

other respects, though – in age, life experience, linguistic ability, reasons for taking part in the project and expectations.

Methods

The research design combined mostly qualitative and some quantitative methods of analysis. Our prime aim was to assemble a comprehensive body of recorded data through:

- pre- and post-treatment questionnaires
- post-treatment semi-structured interviews
- screen data capture (using CAMTASIA)
- audio recordings (Lyceum)
- log files (Lyceum)
- student production (in blogs and Lyceum)
- learner diaries (interaction logs).

Main findings

The main challenges faced by Tridem participants were: learner differences in terms of target language competence, impact of affective variables, awareness of affordances, and assessment of intercultural learning experience. We suggest that it is possible, yet not unproblematic, to bring together learners with different aims and motivations in a successful shared experience. However, a lack of grounding in autonomy or self-management is more difficult to accommodate (Hauck & Lewis, 2007). While some of these factors have been reported by other telecollaboration researchers (see, for example, Belz 2001 for lack of proficiency in target language

competence), other factors, such as the impact of varying levels of multimodal communicative competence among participants, had until then received little attention.

Learning context

Interestingly, the majority of respondents (16) to the pre-treatment questionnaire (n=25) had agreed that 'awareness of the learning environment (i.e. finding out what you can do with tools such as websites, blogs, chat rooms, audio-conferencing, etc.)' was very important, if not essential, when learning a language online and had attributed similar importance to 'support in achieving such awareness (i.e. initial training in the use of the available tools)' and 'choice of tools in online language learning'. They had thus acknowledged, at least indirectly, the significance of both contextual knowledge – a vital part of learner self-management knowledge (Rubin, 2001) – and multimodal communicative competence as defined by Royce (2002) as "the ability to understand the combined potential of various modes for making meaning" (p. 92).

I mapped the insights gained from the project against the aforementioned inventory of pitfalls (O'Dowd & Ritter, 2006). The resulting framework allows educators to gauge both the degree and nature of some of the risks they are likely to encounter in a telecollaborative exchange. The differences in awareness of learning-environment-specific affordances among participants and their impact on their multimodal communicative competence, and thus ultimately also on their intercultural communicative competence gain, suggested that O'Dowd and Ritter's

(2006) inventory needed to be expanded by another factor of potential dysfunction: familiarity with and control over the learning environment, in particular modes and meaning-making . Telecollaborative partners who lacked multimodal communicative competence seemed challenged when attempting to engage in intercultural exchange, in some cases independently of their foreign language competence (Hauck & Lewis, 2007).

In Hauck (2007), I established that challenges arising from the affordances of the online learning context need to be more systematically considered by research and practice in technology-mediated learning of languages and cultures such as telecollaboration. Only then can all involved benefit fully from the opportunity of operating at the interface between intercultural and multimodal communicate competence. In subsequent work (Hauck & Youngs, 2008; Hauck 2010a, 2010b; Fuchs et al. 2012; Kurek & Hauck 2014; Hauck & Kurek 2017; Hauck & Satar, 2018) we show how these constructs, as well as digital literacy development in telecollaboration, are interconnected.

In sum: Methodologically, Hauck (2007) – and by the same token also Hauck and Youngs (2008) and Hauck and Hampel (2008) – drew on the richest pool of data sources so far in my work. This allowed me to turn the scholarly spotlight on the interrelationship between multimodal communicative competence and ICC development in telecollaboration. I conclude that those who are able “to choose, not merely with full competence within one mode [...] but with full awareness of the affordances of many modes and of the media and their sites of appearance” (Kress, 2003: 49) are also likely to “experience comparatively higher levels of intercultural knowledge gain in telecollaboration” (p. 221). To raise participant awareness to this effect, “successful instances of informed use of multimodal environments,” I propose, should “feature both in pre-exchange briefings and as an integral part of the content of an exchange” p. 221). This approach was followed in the study reported in Fuchs et al. (2012). “Learners,” Hampel (2006) reminds us, cannot be expected “to be competent users of the new media who are aware of the affordances and how to use them constructively” (p.112) – a thread continued in Hauck (2010b), Kurek and Hauck (2014) and Hauck and Satar (2018). It also focuses the attention back on the role of tutors and task design first highlighted in Hampel and Hauck (2006).

The role of task design is addressed in Hauck and Youngs (2008), together with the impact of learning-environment-specific affordances on learner interaction.

7. Hauck, M., & Youngs, B. L. (2008). Telecollaboration in multimodal environments: the impact on task design and learner interaction. *Computer Assisted Language Learning*, 21(2), 87–124.

Apart from being relevant for task design for the learning and teaching of languages and cultures in VLEs, multimodality also comes into play when considering issues related to connectivity and interactivity online (see also Hauck & Warnecke, 2012; Hauck, Galley & Warnecke, 2016 in section 4.5). Here we explore how learning-environment-specific affordances guided the development of tasks and their execution during the Tridem project, as well as their influence on participant interaction. Our insights are based on the evaluation of the questionnaires, the interviews and student productions in the blogs (see Hauck 2007 for methods used in the Tridem project).

Initially in CMC, activities that had been trialled and tested in face-to-face classrooms were often simply transferred to online contexts. Chapelle (2003, p. 135) therefore called for an expansion of the scope of this basic approach to task theory “beyond the types of tasks that have been examined in the past to the types of CALL tasks of interest to teachers and learners today.” At the same time, the need for material designers “to assess critically the effects of the technological capabilities of [...] CMC, as well as the features that characterize a potentially new type of literacy” (Salaberry, 2000, p. 28), started to be mentioned in the literature. This new type of literacy, closely linked to the mediating effect of technology, and its relevance for

language learning and teaching in online environments, would become one of the guiding threads of my later research (see sections 4.3 and 4.4).

The critical assessment of the impact of the technological capability of CMC suggested by Salaberry (2000) should be “based on the analysis of how specific pedagogical objectives are achieved through the design and implementation of instructional activities in CMC environments” (p. 28). This was, in fact, an early acknowledgment of the dynamic nature of the online learning context and the consequences for material design and teaching. Still, at the time of the Tridem project, material design for language learning in multimodal CMC environments was under-researched and under-theorised. As a result, the question of how tutors and materials developers can make optimal use of these learning contexts to foster language acquisition and in the case of telecollaboration ICC as well, remained largely unaddressed (Hampel et al., 2005).

Unsurprisingly, published work on task design for language learning and teaching in VLEs using audio-graphic technology – still a relatively recent phenomenon at the time – was also sparse (Hampel, 2003; Hampel & Baber 2003; Hampel & Hauck, 2004; Hampel et al. 2005; Hampel & Hauck, 2005; Rosell-Aguilar, 2005). Only a small number of researchers in the field of CMC and language learning had explicitly considered the tutorial-environment-specific modes and their affordances in their investigations: Felix’s (2005) contribution on “multiplying modalities” for online learners, Hampel’s (2006) research on task design for intermediate and advanced distance learners of German, Hampel et al. (2005), Hampel and Hauck (2006), and Rosell-Aguilar’s (2005) considerations on task design for oral interaction in DLL

focusing on beginners. Yet some principles reflected in task design for the Tridem project, had been established: namely, the need for

- tasks to be appropriate to the medium, and therefore the inaptness of an “an easy (and cheap) transposition of face-to-face tasks to virtual environments” (Hampel, 2006 drawing on Fürstenberg, 1997)
- contextual awareness and knowledge for learner control and autonomy (Hauck, 2004; Hauck, 2005)
- learner (and tutor) preparation for informed use of affordances (Hampel, 2006; Hampel & Hauck, 2006; Hauck, 2007).

Of particular interest to Hauck and Youngs (2008) were the criteria from Hampel's (2006) task framework for synchronous CMC environments which had been informed by Chapelle (2000). These were: meaning focus, language-learning potential through beneficial focus on form, learner fit, authenticity, positive impact on participants and practicality (i.e. adequacy of resources). Thus, the approach to task design in the Tridem project represents a step forward in comparison to the one taken in Hampel and Hauck (2004), and a first systematic implementation of the recommendations formulated in Hampel and Hauck (2006).

The icebreaker was guided by the principle that all participants need the opportunity to ‘play’ with the various tools available in the online environment and to get a ‘feel’ for their affordances (Hampel et al., 2005). The execution of the main task allowed for further step-by-step familiarisation with the modes in both environments (Lyceum

and blog) to foster a systematic increase in the participants' multimodal communicative competence.

In this way, we hypothesised, the project participants would not only develop an awareness of the communicative potential of different modes and of their individual or shared modal preferences (Hampel & Hauck, 2006), but would also be enabled to make a gradually more informed choice of modes for specific intercultural communication purposes. The approach should have allowed project partners to become increasingly versed in multimodality and to experience comparatively higher levels of intercultural knowledge gain through telecollaboration than by partners unaware of communication modes and their potential for meaning making.

Main findings

Learning context

As reported in Hauck (2007), only some participants provided feedback that testifies to that effect. Some of the more insightful remarks linked the challenges identified to group size in synchronous plenary sessions, time constraints and communication modes used. Other participant reflections confirmed earlier observations by Hampel (2006) and Hampel and Hauck (2006) regarding the disembodiment experienced in VLEs – the generation of conferencing applications that Lyceum belonged to did not offer live video streaming – and its impact on immediacy and turn-taking among learners, and on feeling “connected”. ‘Yes/no’ buttons (signalling agreement/disagreement), the ‘raised hand’ button (signalling readiness to speak), the ‘away’ button (signalling that one has left the computer) and ‘text chat’ for interjections provided at least partial compensation for the lack of body language.

However, only a few participants were able to use these functions confidently to the intended end. Some students praised the advantage of synchronous online sessions where a smaller number of participants gathered, and which allowed for learner interaction and collaboration in line with the aforementioned guiding principles and criteria for task design and execution.

Learner interaction

In Hauck and Youngs (2008), we start from Vygotsky's (1978) premise that learning arises not *through* interaction but *in* interaction, which has significant repercussions on the way we conceptualise language learning and teaching, considering that the linguistic medium is at the same time the learning goal. In addition, in online contexts, the language learning and teaching process is at least mediated twice, by the foreign language and by the learning environment (Hampel & Hauck, 2006). Hence, learners do not only learn in interaction with their *peers*, but also in interaction with *affordances*, that is, the learning context, a perspective first offered by Hampel et al. (2005).

The data analysis revealed that challenges associated with the learning context were among the critical success factors. Participants mentioned lack of familiarity with the online environment as one of the main difficulties experienced. The findings corroborated insights with regard to the need for contextual awareness and knowledge previously reported (Hauck, 2004; Hauck, 2005). Finally, they bore out claims from Hampel et al. (2005, p. 11) in relation to "the shortcomings of those studies of CMC in language learning which focus exclusively on interactional analysis and cognitive factors."

In sum: While building on the insights from Hampel et al. (2005), the issue of task design to support awareness of modes and meaning making remained somewhat unresolved in Hauck and Youngs (2008). It was clear, though, that online language tutors would need to be trained in the creation of tasks that make efficient use of multiple modalities so that beyond mere familiarisation with modes and affordances, there is a need for learners to stretch, change, adapt and modify the means of representation, communication and interaction available to them (Hampel & Hauck, 2006; Hauck & Stickler, 2006). It seemed also obvious that this approach to task design would need to be part of a comprehensive pedagogic framework for technology-mediated intercultural foreign language education which at the time was still a desideratum. Hence, if significant impact was to be expected on teaching practices, radical transformations of teacher training and development programmes were needed, a requirement highlighted by a growing body of research (Hampel & Hauck, 2006; Hampel & Stickler, 2005; Hauck & Stickler, 2006; Hubbard & Levy, 2006; Hubbard, 2009).

Kessler and Plakans (2008) provide a point of comparison with my thinking at the time. They had found that the most effective technology users were not those most comfortable with technology in general, but rather teachers whom they termed "contextually confident," that is, competent in using a few tools for highly

circumscribed purposes. In contrast, I conceptualised contextual confidence in VLEs as the ability to realise the “orchestration of meaning”, as understood by Kress et al. (2001). To help teachers overcome technological concerns, then, Kessler and Plakans (2008) recommend to “contextualise” CALL teacher preparation in tasks that simulate real world teaching challenges. While I subscribe to the suggested modeling approach (Fuchs et al., 2012; Hauck & Warnecke, 2012), I see the ability to identify modes and affordances and to support learners to this end as a vital part of the contextualisation process and one of the main challenges that online teachers face. This holds especially true for language teachers who have to constantly deal with the dual mediation effect of the foreign language and the technology involved.

8. Hauck, M., & Hampel, R. (2008). Strategies for online environments. In S. Hurd & T. Lewis (Eds.), *Language Learning Strategies in Independent Settings* (pp. 283–302). Clevedon, UK: Multilingual Matters.

Knowing that the Tridem project had not yielded all its potential, we decided to revisit the data collected to take another look at learner interactions, more specifically on the strategies used by those participants who had worked together successfully.

Apart from my own interest in MCSs (Hauck, 2005; Hauck & Hurd, 2005), research into strategy use in online settings had – up to then – been scant. Yet SLA researchers such as Chapelle (1990, 1995) had long suggested that CALL investigations should incorporate areas central to SLA such as learning strategies.

Yet we still knew very little about how online language learners deploy strategies and how they develop strategic competence.

However, informed strategy use seemed particularly relevant in environments that – at least at the time – students were either less familiar with, or, that they used primarily for social rather than educational purposes. Hampel and Lamy (2007) had highlighted the following challenges:

- profusion of material
- cognitive overload
- need for technoliteracy
- different time structures (asynchronous versus synchronous) and impact on interaction
- unequal participation patterns (e.g. “lurking”)
- anonymity of environment
- need for netiquette
- need for teacher involvement and support.

Picking up from Hauck and Hurd (2005), Hauck and Hampel (2008) make affective and also social strategies the focal point of the study. In doing so, we followed the recommendation of developmental psychologists such as Jones and Issroff (2005), who highlight the importance of considering affective and social factors when using technologies for learning. The impact of learning theories rooted in the psychology of language learning is best reflected in what Block (2003) calls the “social turn” in SLA. He argues for “a broader, socially informed and more sociolinguistically orientated

SLA that does not exclude the more mainstream psycholinguistic one, but instead takes on board the complexity of context, the multi-layered nature of language and an expanded view of what acquisition entails” (p. 4).

In language learning and technology, the changing view of learning as a socially based activity is accompanied by the move from CALL, with its predominant behaviourist and instructivist approach, to CMC with a strong focus on language learning *in* interaction (Warschauer & Kern, 2000). This, as Hampel et al. (2005) point out, includes interacting with representations. Hence the centrality the “social turn” grants to the “context” chimed well with the developing argument in my scholarly work.

In Hauck and Hampel (2008), we take Oxford’s (1990) framework of language learning strategies, together with Ellis’s (1994) examples, as the point of departure to establish whether they apply to CMC-based language learning contexts. We are able to show that those affective and social strategies that learners use in more traditional learning settings are also relevant online. Drawing on data from learner diaries (interaction logs; see Hauck, 2007 for methods used) kept by the French Tridem participants, we identified a set of strategies which we termed “socio-environmental strategies”. While these relate directly to the French students’ social strategy use, they also relate to how they made use of functionalities of the online environments – the available modes and their affordances – to improve communication and interaction, e.g. posting summarising notes on synchronous meetings that had taken place in Lyceum to the blog, typing into text chat (Lyceum) to compensate for the lack of spontaneity in the voice exchanges (Lyceum), etc. The findings indicated that

social and affective strategies from face-to-face settings need to be tailored to virtual contexts. They also confirmed – yet again – Hampel's (2006) and Hampel and Hauck's (2006) assertion about the need for language learner and teacher preparation for multimodally informed technology use, including the development of socio-environmental strategies. To this effect, we argue for training based on the direct interventionist contextualised approach first mentioned in Hauck (2005) so that teachers as learners, and subsequently their students, can draw maximum benefit from the representational resources available in a given VLE.

In sum: The question as to how multimodal communicative competence and consequent learner agency and autonomy in technology-mediated learning of languages and cultures can be enhanced through a task-based approach warranted further investigations at this point. Yet we were able to show some strategic use of learning environment specific affordances and reinforce the message regarding the need for systematic learner and tutor preparation to this effect.

The next part, section 4.3, marks the transition in the literature from Telecollaboration to Telecollaboration 2.0 (Guth & Helm, 2010) and the shift in my research of modes and meaning-making from telecollaborative exchanges between students and teachers to between teacher trainees and teacher educators. It is also the point where I begin to frame multimodal competence and multimodal communicative competence as multimodal literacy, and the latter in turn as a defining element of multiliteracies.

4.3 Multiliteracies

The studies discussed in the publications in section 4.3 are based on exchanges which fall into the remit of Telecollaboration 2.0, a concept introduced by Guth and Helm (2010) into language learning research to reflect the fact that the scope of telecollaborative encounters had broadened by then. “The open, collaborative and relational mindset of Web 2.0 and the multimodal, social, Internet-based 2.0 environments and tools,” Helm (2014) points out, “offer great opportunities for collaboration and participation” (p. 4). They also increase the variety of modes at learners’ disposition to communicate, exchange, and compare information. Referring to the Soliya Connect Program, Helm (2014, p. 4) states the following:

Through this project participants learn to use the multiple modes of communication available to support understanding and become effective intercultural communicators in online contexts. Participants acquire digital literacies such as expressing themselves effectively through video, text chat and the audio channel in what for many of them is a foreign language.

Telecollaboration 2.0 also enjoyed increasing popularity in teacher education (e.g. Arnold & Ducate 2006; Müller-Hartmann, 2006). Collaborating online with colleagues, and subsequently students, from different cultural backgrounds and educational systems allows teacher trainees to first discover, then experience and finally reflect on the multi-layered aspects of their own techno-pedagogy (Desjardins

& Peters, 2007) and semio-pedagogical competence (Guichon, 2009) in authentic linguistic and intercultural contexts (Hauck & Kurek, 2017).

Through the Tridem project – one group of participants had been teacher trainees – I had gained first-hand experience in Telecollaboration 2.0-based teacher education. The experience was consolidated through four-way telecollaborative exchanges with teacher trainees and language learners in 2008 and 2009. This, together with my substantial expertise in providing continuing professional development opportunities at a distance for associate lecturers at the OU, led to an invitation to chair the Teacher Education Special Interest Group (SIG) of the European Association for Computer Assisted Language Learning (EUROCALL) from 2009 onward. Research seminars I organised as SIG chair provided me with further opportunities to promote Telecollaboration 2.0 as an educational intervention to develop participants' multimodal communicative competence, which I now began to frame as multimodal literacy and as a core element of multiliteracies (Cope & Kalantzis, 2000, 2008). Multimodal literacy had been defined by Pegrum (2009) as the ability to understand and interpret the relationship and interaction between different formats of digital media and was gaining importance alongside an ongoing shift in linguistics from a focus on language towards a wider focus on semiosis (Blommaert & Rampton, 2011).

'Multiliteracies' is a concept first coined by the New London Group (1996). It refers to a broadened understanding of literacy to include electronic forms of multimedia, images and texts which was to replace traditional language-based academic discourses. Since then, educators have repeatedly recognised that the concept of

literacy must be pluralised (Kalantzis & Cope, 2012; Lankshear & Knobel, 2008; Pegrum, 2011) to encompass an ever-expanding range of component literacies. In the same vein, Kern (2014) reminds us that literacies are multiple, not only in relation to their cultural, historical, and linguistic dimensions but also in relation to the demands made by various media and multimodal communication practices.

The two book chapters (Hauck 2010a and 2010b) and the article (Fuchs et al., 2012) in section 4.3 are based on the 2008 and 2009 telecollaborative exchanges mentioned above.

9. Hauck, M. (2010a). Telecollaboration: At the interface between Multimodal and Intercultural Communicative Competence. In S. Guth & F. Helm (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 219–244). Bern: Peter Lang.

The 2008 exchange forms the backdrop for Hauck (2010a and 2010b). I wanted to find out whether the participants' multimodal awareness – their ability to identify modes available online and how they convey cultural information, and thus also their multimodal literacy and ICC – could be raised through tasks informed by Halliday and Hasan's (1985) social semiotic framework. This framework takes into account three major features of context: what is happening (FIELD), who is taking part (TENOR), and the role language is playing and which other semiotic features are present (MODE). Halliday and Hasan look at language study from a social

perspective according to which words, utterances and even entire chunks of discourse can only be understood in context, by taking into consideration the physical setting, the participants and other semiotic forms such as gestures and gaze. With its focus on mode and the channel of communication, this framework –seemed apt for the analysis of online resources and environments, although it was originally not developed with electronic media in mind. The tasks, then, were intended to bring the role of modes and their meaning-making potential and the multimodal nature of media in general to the participants' attention. In this way, I surmised, they would consciously enhance their contextual knowledge through the direct interventionist contextualised approach first promoted in Hauck (2005).

Participants, data collection procedures and analysis of the 2008 exchange and methodological insights are presented in more detail below (see Hauck, 2010b and Fuchs et al., 2012 in particular). Here my concern is to present the main findings, starting with a brief reminder of the task and its aims.

As shown in Figure 3, learners were asked to focus on the various channels of communication (written and spoken language, images and pictures, etc.) to raise their awareness of the fact that beyond its technical features each online technology has particular *affordances*. The teacher trainees had to explain why they had chosen a certain website and how they would use it in their own teaching in the future. They were to gauge the effects of technological mediation on language teaching and learning and to find out how the potential of online settings can be exploited to enhance communication and interaction, thereby fostering language development and intercultural knowledge gain.

TASK 1, PART 3

You will continue comparing the sites your group members have found by answering the following questions:

- 1. Which channels of communication are available on the site you have chosen (written language, spoken language, images/pictures, gestures, etc.)?*
- 2. What role does spoken/written language play on the site you have chosen?*
- 3. How do these features (spoken/written language, images/pictures and their colours, etc.) influence what we learn about the culture/the country?*

Please post your answers to the questions to your group forum.

Figure 3: Project Task 1, Part 3 (Hauck, 2010a)

Main findings

The data revealed that participants needed a stronger steer in the shape of a model they could follow – for which we provided a fully worked example of a website analysis based on Halliday and Hasan (1985). It confirmed findings in the literature regarding the cursory nature of many young people’s engagement with new media: while they may have embraced “participatory cultures” (Jenkins et al., 2006), the quality of their interaction with digital content tends to remain superficial.

Participatory cultures are framed by Jenkins et al. (2006) as any online collaborative activity ranging from informal, spontaneous communities to formal educational settings and as such include CMC-based collaborative learning such as telecollaboration.

Our observations also confirmed that digital skills acquired in informal settings do not readily transfer to formal ones (Selwyn, 2009). As we put it a few years later in Kurek

and Hauck (2014): “What presented itself initially as digital proficiency has in many cases turned out to be a familiarity with basic affordances of the most common tools and communication modes” (p.124). Therefore, simply mentioning “channels of communications” in the task instructions (see Figure 3) turned out to be too vague a concept for the participants. They needed to be asked in a more direct way about the role of language and the role of other semiotic resources at their disposition. Moreover, the concept of ‘mode’ needed to be broken down into spoken, written, image, and gestural mode and operationalised with examples. Finally, learners had to be sensitised to the fact that speaking, writing and gesture are temporal and sequential (logic of time) phenomena, whereas images and even features within written online text such as hyperlinks on a website are conceptual (logic of space) phenomena. According to my developing argument, these are an essential part of contextual knowledge in VLEs. A lack of such knowledge is what Jenkins et al. (2006) discuss in relation to participatory cultures, where they question the assumption that media users are “actively reflecting on their media experiences” – including, in our case, their online intercultural experiences – and “can thus articulate what they learn from their participation” (p. 12). This thread of my argument is continued in Kurek and Hauck (2014; see section 4.4).

Finally, I suggest in Hauck (2010a) that systematic raising of contextual awareness in learners and teachers would allow us to bring culturally specific communication norms and modes to the forefront of Telecollaboration 2.0. Kress highlighted as early as 1998 that modes, meaning-making and communicating are influenced by cultural conventions. In Hampel and Hauck (2006) this led us to the conclusion that “language learners will have to become competent in both switching linguistic codes

and switching semiotic modes and to do so consciously” (p.12; see also section 4.2, Publication 5). Only then can they participate in the coding and decoding that characterises the negotiation of culture online and operate in an informed way and with greater autonomy – a reasoning continued in Fuchs et al. (2012).

10. Hauck, M. (2010b). The enactments of task design in Telecollaboration 2.0. In: M. Thomas & H. Reinders (Eds.), *Task-based language learning and teaching with technology* (pp. 197–217). London: Continuum.

Other research (O’Dowd & Ware, 2009) had considered “how task design is negotiated throughout the [telecollaborative] exchange with different consequences on the learning outcomes” (p. 174). Informed by this, when invited to write a chapter for a book on task-based learning and teaching with technology, I built on Hauck (2010a) and re-explored the same data with a new focus on tasks and multimodal literacy. Here is a more detailed account of that project.

The Project

Among the various foci of telecollaboration – such as development of linguistic accuracy and fluency, learner autonomy, intercultural communication skills and electronic or new media literacy (Guth & Helm, 2010) – the 2008 exchange reported in Hauck (2010a and 2010b) centred on the enhancement of participants’ new media literacy, their multimodal literacy in particular. For the teacher trainees, the project design reflected an approach increasingly advocated in the literature, namely, the combination of pedagogical and technical training (Hampel, 2009; Hubbard &

Levy, 2006), or more specifically, online tutoring skills and multimodal competence development (Hampel & Hauck, 2006).

Participants

The participants were pre- and in-service trainee teachers of English as a Foreign Language (EFL) from the United States and Germany, and language learners from the United Kingdom and Poland. The teacher trainees from the US were motivated by the opportunity to explore the use of online tools and resources for tutoring, while their counterparts in Germany were also interested in the intercultural dimension of the exchange and wanted to practise their English. The language learners were primarily motivated by the opportunity to practise their German. The teacher trainees were a week ahead of the language learners so that they had time to design a task for the learners to carry out.

Tasks

During the exchange, participants engaged in an introductory task followed by two main tasks. Task design for the main tasks was informed by Halliday and Hasan's (1989) social-semiotic framework (see Hauck 2010a) and Kress and van Leeuwen's (2001) understanding of multimodality.

The tasks followed O'Dowd and Ware's (2009) framework for sequencing activities in telecollaboration. Yet, as the authors point out, task choice and sequencing are only part of what influences the interaction and collaboration among participants and the outcome of an exchange. Equally, if not even more important, are the interactions

among the instructors as they negotiate “the ongoing enactment of the tasks” (p. 179).

Task 1 fell into category 2 of O’Dowd and Ware’s (2009) typology: a Comparison and Analysis Task. It had been designed in a more directive way than in previous projects (see section 4.2) to raise participants’ awareness of varying affordances requiring varying multimodal literacy skills for successful communication and interaction online. This was inspired by Lamy and Hampel (2007), who suggest that first the modes involved in making up a multimodal environment should be identified and then the meaning-making and communication possibilities they afford the learner – both as single and as combined modes – should be considered.

Students were to find out about their learning partners’ various cultural backgrounds while at the same time becoming increasingly aware of *how* the information they were evaluating was communicated to them, i.e. what communication modes had been used and what impact their affordances had on the recipient(s). The Collaborative Task that followed required participants to work together to create a joint product which in this case was a task designed by the teacher trainees to develop multimodal awareness in the learners, mapped onto the approach experienced during Task 1.

Methods

Data were collected through pre- and post-treatment questionnaires, learner journal entries, portfolios and student exchanges in the telecollaborative group forums. The

methods are presented in greater detail in Fuchs et al. (2012), the third publication in section 4.3.

Main findings

O'Dowd and Ware (2009) draw attention to the following fact: the interactions among tutors during a telecollaborative exchange are at least as, if not even more, important for learner interactions and the outcome of a telecollaboration as agreeing on the nature and the sequence of the tasks while planning an exchange. In 2008, one of the tutor researchers worked under considerable institutional constraints and had to respond when the students expressed dissatisfaction with the duration of Task 1. This led to tensions in the project team aggravated by the fact that I had seemingly failed to communicate my underpinning pedagogical beliefs to the teaching partners in the preparatory phase of the exchange. Thus part 3 of Task 1, which originally had an explicit focus on online modes and how they facilitate meaning making and communication, was amended midway through the exchange, and one of the intended outcomes, to raise the participants' multimodal awareness, was marginalised during the "ongoing enactment of the tasks" (O'Dowd & Ware, 2009).

Unsurprisingly, the number of forum postings which made explicit references to modes and meaning-making was much smaller than anticipated. The project team revisited the task design for the 2009 iteration of the exchange reported in Fuchs et al. (2012). In our final evaluation of the 2008 exchange we agreed that the task needed to be more clearly structured so that the teacher trainees would focus from the outset on the multimodal aspects of the websites they were first analysing, and

then using, to design multimodal awareness-raising activities for the learners, their telecollaborative exchange partners.

11. Fuchs, C., Hauck, M., & Müller-Hartmann, A. (2012). Promoting learner autonomy through multiliteracy skills development in cross-institutional exchanges. *Language Learning & Technology*, 16(3), 82–102.

The scope of the 2009 iteration of the exchange was slightly wider than in 2008.

Beyond multimodal literacy (Pegrum, 2009), multiliteracy skills development in more general terms based on hands-on analysis of web resources *and* social networking tools was aimed at promoting learner autonomy as defined by Palfreyman (2006).

Thus, Fuchs et al. (2012) pick up the thread linking multimodality and autonomy, foregrounded in Hauck (2007; see section 4.2).

“Ideally,” we hypothesise, “while becoming gradually more versed in multimodality and multiliteracies, learners can also take over more control and self-direct their own learning when working online (Benson, 2001) which are also characteristics of autonomy” (Fuchs et al., 2012, p. 82).

In Fuchs et al. (2012), we see multimodal competence, now framed as multimodal literacy, as a defining element of multiliteracies (New London Group, 1996; see also introduction to section 4.3). We refer to the latter as “the most comprehensive literacy model to date reflecting the constant interplay between individual human

agency and social, economic, historical, and political contexts that determine the various discourses resulting from it" (Fuchs et al. 2012, p. 83). To account for the emergence of new genre and for new ways of experiencing texts and media, the New London Group called for a new "pedagogy of multiliteracies". This is echoed almost two decades later in Kern's (2014) call for a "relational pedagogy", in order to develop among students "a disposition for paying critical attention to relations among forms, contexts, meanings, and ideologies" (p. 353).

The Project

In the 2009 exchange the participants were given:

- a list of multiliteracy skills based on Pegrum (2009); they were asked which of those were required to use various networked technologies (forum, social bookmarking, wiki, chat, Ning and blog) and which technologies could be used to help develop the skills (Task 1).
- an example analysis of a web resource and a detailed set of questions about modes and meaning-making (Task 2).

Figure 4 illustrates the amendments made to part 3 of Task 1 in the 2008 exchange (see Hauck, 2010b).

<p>Task 2 / Part 3</p> <p>Introduction</p> <p><i>This part should be finished by Friday, November 20th</i></p>	<p>MODE</p> <p>Please, take a closer look at the various communication modes/channels available on the website you have chosen:</p> <ul style="list-style-type: none"> • spoken mode (code – including languages and language varieties, vocabulary, syntax, voice and pronunciation, non-verbal signals) • written mode (code – including languages and language varieties vocabulary, syntax, paragraphing, i.e. rhetorical structure, punctuation, etc.) • image mode (photo, drawing, diagram, graph, logo, layout. colour three-dimensional representations. etc.)
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Figure 4: Amended version of Task 1, Part 3 (Hauck, 2010b)

Participants

Figures 5 and 6 provide an overview of the participants in both projects (Fuchs et al., 2012, p. 85):

Country	United States	Germany	Poland	United Kingdom
Institution				

Figure 5: Participants 2008 exchange

Country	United States	Germany	Poland	United Kingdom
Institution				

Figure 6: Participants 2009 exchange

Methods

Fuchs et al. (2012) provide an overview of the methods used in both projects. Table 2 shows the data collection instruments for both case studies. Additionally, CMC data in both studies were derived from participants' posts in the Moodle forums, blogs,

and wikis. For the overarching methodological approach in most of my studies see Chapter 3, where I refer to this work as an example.

Data Collection Instrument	Case Study 1 (2008-2009)	Case Study 2 (2009-2010)
	<i>n</i> =101	<i>n</i> =78
Pre-Project Questionnaire (Pre-Q)	<i>n</i> =26 (PHH: 15; OU: 8; TC: 3)	<i>n</i> =62 (PHH: 15; TC: 22; OU: 12; WSL: 13)
Needs Analysis (NA)	<i>n</i> =25 (TC: 25)	<i>n</i> =53 (TC: 53)
Journal Entries (JE)	<i>n</i> =25 (TC: 25)	
Portfolios (PF)	<i>n</i> =4 (PHH: 4)	<i>n</i> =5 (PHH: 5)
Post-Project Questionnaire (Post-Q)	<i>n</i> =28 (PHH: 18; OU: 8; TC: 2)	<i>n</i> =42 (PHH: 20; OU: 8; WSL: 14)
Post-Project Telephone Interviews		<i>n</i> =5 (OU: 5)

Table 2: Data collection instruments used in the 2008 and 2009 telecollaborative exchanges

The research questions for the case studies carried out with data from both exchanges were as follows.

1. To what extent does the task design help participants develop learner autonomy through understanding and working with the mediating effect of online tools?
2. In what ways do participants display teaching competences when designing multimedia tasks to develop language learner autonomy?

The data collection instruments for the first action research cycle (ARC) (Case Study 1) had been jointly chosen by the tutor-researcher team and refined for the second

ARC (Case Study 2). After the second ARC, the data were coded by each tutor-researcher with reference to the research questions (see above). The following indicators provided the basis for analysing the data in terms of learner autonomy:

For research question 1:

Indicator 1.1 Teachers describe the tool's multimodal potential.

Indicator 1.2 Teachers describe the tool's potential for communication and interactivity, i.e. its meaning-making potential, covering constraints and affordances.

Indicator 1.3 Teachers describe the tool's potential to support EFL/ESL learner autonomy.

For research question 2:

Indicator 2.1 Teachers show an awareness of the importance of developing learner autonomy when working online.

Indicator 2.2 Teachers show an awareness of the importance of multimodality when trying to develop their learners' autonomy.

Indicator 2.3 Teachers design tasks that a) help learners understand and handle the tools involved, and that b) allow learners to develop autonomy.

During the data analysis, colour codes and comments were used and sections of the data – CMC transcripts, journal entries, questionnaires, portfolios – were highlighted.

Next, we cross-checked each other's data sets against our own by coding and

commenting further until categories emerged from the data, which were then discussed in several online meetings.

Main findings

The data analysis evidenced the added value of “experiential modeling” (Hoven, 2006) and “exploratory practice” (Allwright & Hanks, 2009) in teacher education (see Chapter 3). It allowed the teacher trainees as learners to find out about modes, meaning-making, and online communication, and to become familiar with the mediating dimension of Web 2.0 applications and environments. It was obvious that these are “complex contexts in which learners have to learn to operate and require the development of digital literacies both on the part of learners and educators” (Helm, 2014, p. 4). The task-based approach promoted conscious choosing of modes regarding their meaning realisation and communication potential (their affordances), and thus learner autonomy (Benson, 2001; Palfreyman, 2006).

In sum: The results suggest that task design to this end – enhanced learner autonomy through multimodal literacy development – should follow a certain sequence (Figure 7). First, tasks should focus on gaining an understanding of the multimodal literacy skills required when working with social networking tools and applications for language learning and teaching purposes. Ideally, this understanding should allow teachers to provide a rationale for explaining why they want to use a bespoke tool or application. Next, tasks should help raise their awareness of a tool's specific affordances (Hampel & Hauck, 2006). Subsequently, teachers themselves design tasks with the goal of fostering their learners' multimodal literacy and thus their autonomy since – as all projects presented and discussed so far have shown – simply exposing learners to the creative and democratic online resources does not necessarily lead to control over the learning context or the development of autonomy (Hampel & Hauck, 2006).



Figure 7: Learner autonomy through multimodal literacy development

Finally, as we propose, this approach should become a learning goal itself both in pre- and in-service teacher training and formal language instruction. Then, while becoming gradually more versed in multimodality and multiliteracies, teachers as learners can take more control over and self-direct their learning in online environments, so becoming more autonomous in Palfreyman's (2006) sense and gradually gaining the competence to design tasks which foster such autonomy in their learners.

Methodologically, the chosen approach was different from previous studies. We used qualitative indicators which we defined at the outset of the study and against which

we mapped the coded data during the analysis. An indicator is a measurable quantity which 'stands in' or substitutes for something that is less readily measurable such as awareness of an online tool's multimodal potential, its potential for meaning-making or the importance attached to multimodality for online learner autonomy. We opted for indicators as they are quantitative or qualitative factors which provide a simple and reliable means to reflect the changes connected to an intervention. They enabled us to "perceive developments in relation to a desired change [...] in a particular context", namely online learners – teacher trainees – becoming increasingly more autonomous while becoming gradually more multimodally literate. We were fully cognisant of the fact that "indicators are inevitable approximations" (Patton, 1996, p. 159). They are, as the term suggests, "not the same as the desired change," but signals of that change.

4.4 Digital literacies

By 2014 the call for instructed learner reflection on the learning environment and explicit multimodal communicative competence training as a core principle for language learning and teaching in VLE – in telecollaborative settings in particular – had taken centre stage in my work. While still implicit in Hauck (2004, 2005), it gradually became the focal point of the studies reported in sections 4.2 and 4.3. Among the two chapters discussed in section 4.4, Kurek and Hauck (2014) represents the first attempt at a comprehensive task framework for training to this effect and reflects the approach suggested in Fuchs et al. (2012).

Hauck and Kurek (2017) is an invited contribution to volume 3 (*Language, Education and Technology*) of the third edition of the *Encyclopaedia of Language and Education* which Stephen Thorne, the co-editor of this volume, asked us to write. We refer to the overarching skill set in question – of which multimodal communicative competence is a defining element (Fuchs et al., 2012) – as ‘digital literacies’. In accordance with Lankshear and Noble (2008) and their contributors, I refer to this skill set in the plural (i.e. digital literacies rather than digital literacy), because “the most immediately obvious facts about accounts of digital literacy are that there are many of them and that there are significantly different *kinds* of concepts on offer” (p. 2). Among the latter are terms such as digital skills, digital fluency, digital capabilities, digital competencies and digital intelligence. Hence, it is appropriate to talk of *digital literacies* instead of searching for an all-inclusive definition. Similarly, the New Media Consortium’s (NMC) Horizon Project Strategic Brief states that the

literature is “broad and ambiguous, making digital literacy [*sic!*] a nebulous area that requires greater clarification and consensus” (Alexander, Adams & Cummins, 2016, p. 1).

I see digital literacies as one of the range of component literacies of multiliteracies (see section 4.3). Digital literacies encompass the various ways of making meaning in digital communication and the skills required to contribute to a multitude of meaning-making communities. They exist both on- and offline, which is where my understanding converges with the New London Group’s understanding of multiliteracies (see section 4.3 and Glossary). In terms of (language) learning and teaching in VLEs, then, multimodal communicative competence, or multimodal literacy, can be conceived of as a core element of digital literacies which in turn are embedded in multiliteracies.

Both, Kurek and Hauck (2014) and Hauck and Kurek (2017) are theoretical contributions to the field of technology-mediated learning and teaching of language and cultures, with the first one focusing on learners and the second on teachers.

12. Kurek, M., & Hauck, M. (2014). Closing the “digital divide” – a framework for multiliteracy training. In: J. Pettes Guikema & L. Williams (Eds.), *Digital Literacies in Foreign and Second Language Education: Research, perspectives, and best practice* (pp. 119–140). CALICO Monograph Series (12). San Marcos, TX: CALICO.

Today's learners are likely to have gained mastery in the use of online media on their own. However, they are equally likely to need guidance when it comes to the application of their knowledge and skills to more formal educational undertakings such as learning a language online – particularly when they involve multimodal productions (Godwin Jones, 2015) and, as we argue in Kurek and Hauck (2014), informed reception of multimodal content.

We take Jenkins et al.'s (2006) concern as our main point of reference: the assumption that users and thus also online language learners are “actively reflecting on their media [...] experiences and can thus articulate what they learn from their participation” (p. 12; see also Hauck 2010a). Such reflection, we contend, will in turn enhance learners' participatory literacy, i.e. the ability to create and share knowledge and content collectively through the use of online tools and the completion of collaborative tasks in online environments (Giger, 2006).

In Kurek and Hauck (2014), we make an attempt at capturing recent trends in literacy development (see Figure 8) as part of the “move from a paradigm of scarcity to one of abundance” (Pegrum, 2009) and its repercussions on all spheres of our lives including education:

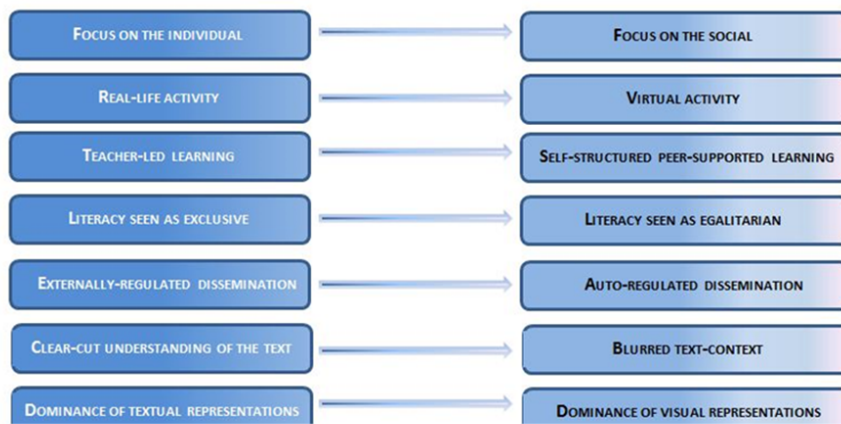


Figure 8: Trends in Literacy Developments (Kurek & Hauck, 2014)

While some of these developments, such as a broader understanding of “text” and “authorship”, have been widely acknowledged (for an early example see Kramsch, 2000), others, such as the nature and quality of user interaction with digital content, remain a pedagogical concern. “Relevant in terms of educational demands,” we underline in Kurek and Hauck (2014), “is the realization that active participation in the changes highlighted above calls for increased personal agency and autonomy” (p.122). We refer to the literature highlighting learners’ – especially young learners’ – deficiencies in this respect, such as an inability to transfer digital skills acquired in informal contexts to formal ones (Selvyn, 2009) and a lack of critical or evaluative skills (Sharpe, 2010). Littlejohn, Beetham and McGill (2013) also report on the difficulties learners have with taking a critical stance towards online content and in

opinion-generating activities unless they have experienced relevant practices. All this speaks to my continued call for an instructed, task-based approach to remedy the situation (Hauck, 2005; Hampel & Hauck, 2006; Fuchs et al., 2012).

We draw attention to the fact that in formal online education, including language learning and teaching, a tendency to reproduce power structures known from more traditional classrooms still prevails (Kurek & Turula, 2014). Yet almost two decades ago Warschauer (1999) pointed to the democratic and learner-centered characteristics of “new electronic media” (also highlighted in Hampel & Hauck, 2006). Thus, the available technologies are, at least in theory, conducive to more participatory approaches. Indeed, the majority of young learners have embraced online “participatory cultures” (Jenkins et al., 2006) as facilitated and promoted by social networking and gaming sites. However, in order to harness the full potential of these digital possibilities, strategic action is required guided by a unique blend of competences on a technical, cognitive, social, communicative, and even personality level; an assertion which echoes the relevance of metacognitive knowledge and strategies established in my earlier work (e.g. Hauck, 2005).

With Hubbard (2013), Kurek and Hauck (2014) see the required learner training as a “process aided at the construction of a knowledge and skill base that enables language learners to use technology more efficiently and effectively in support of language learning objectives” (p.164). Interestingly, the literature on learner training to this effect (Hauck, 2010a, 2010b; Fuchs et al. 2012; Hubbard, 2004, 2013; Lai & Morrison, 2013; McBride, 2009; Thorne & Reinhardt, 2008; Reinhardt & Zander, 2011), reports on enhanced learner performance as the result of awareness-raising

and training in metacognitive strategy use rather than tool-focused instruction. The former being the approach advocated by myself from Hauck (2004) onward.

In Kurek and Hauck (2014) we propose a framework (see Figure 9) for training – ideally as part of a telecollaborative exchange – which allows students to move along a continuum from informed reception of multimodal input, through thoughtful participation in opinion-generating activities, and on to creative contribution of multimodal output.

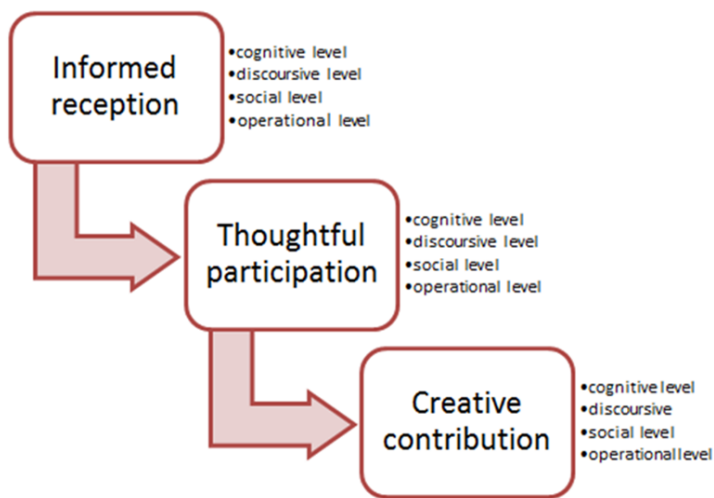


Figure 9: Training components (Hauck & Kurek, 2014)

The three defining components of the developmental continuum are seen as cumulative and complementary, rather than hierarchical, particularly as they often overlap. Both as individual components and jointly they contribute to learners' contextual knowledge gain (Hauck, 2004, 2005) and consequently – as we argue – to their informed and autonomous technology use.

As the input at the starting point of the continuum and the output towards its endpoint are usually of a multimodal nature, drawing on a variety of semiotic resources (Kress & van Leeuwen, 2001), language learners who can comfortably alternate in their roles as “semiotic responders” and “semiotic initiators” (Coffin & Donohue, 2014) will reflect the success of training programs that take account of multimodal literacy as a core element of digital literacies and thus also multiliteracies. At the same time, learners should gradually develop the ability to explain how media shape their perception, reflect on their technology-based activities and develop appropriate standards for their own media practices. This approach addresses Jenkins et al.’s (2006) concern regarding media users’ active reflection on their media experiences, that is, the assumption that users and therefore online language learners too are “actively reflecting on their media [...] experiences and can thus articulate what they learn from their participation” (p. 12).

Further, in Kurek and Hauck (2014) we differentiate four levels at which learners’ capabilities and needs in relation to each of the three components should be addressed, and which, again, are likely to overlap.

- The **cognitive** level: learners develop a critical stance, i.e. a reflective approach, in relation to the learning context and the processes they are engaged in.
- The **social** level: learners manage their online identities, participate in an emerging online community and develop collaborative and intercultural communication skills.

- The **discursive** level: learners work with different types of discourse, and explain and express meaning using various modes – a particular challenge in language learning and teaching in virtual spaces, because of the double mediation at play (technology and the foreign language; see also Hampel & Hauck, 2006).
- The **operational** level: learners move beyond the most obvious affordances of online tools and applications available in a given environment.

We finish with a sample task sequence which incorporates the elements of the proposed framework.

13. Hauck, M., & Kurek, M. (2017). Digital Literacies in Teacher Preparation. In S. Thorne & S. May (Eds.), *Language, Education and Technology. Encyclopedia of Language and Education, Third Revised Edition* (pp. 1–13). Heidelberg: Springer.

In Hauck and Kurek (2017), we start from the premise that digital literacy skills development should be an integral part of pre- and in-service training programs for language teachers, and that telecollaborative exchanges provide an optimal setting for such training (see publications from Hauck 2010a onward; section 4.3). In consonance with Thorne and Reinhardt (2008), we acknowledge the breadth and elusiveness of the digital literacies concept and the resulting challenges to grasp and even more so to teach it. In the NMC's Horizon Project Strategic Brief, digital literacy

(singular!) is framed as the critical and practical understanding of digital technologies in sociocultural settings, where people are creators as well as observers. This resonates with the constructs of semiotic initiator and semiotic responder put forward in Kurek and Hauck (2014) and with Kress's (2000c) concept of learner agency.

The UK-based organisation JISC, which provides digital solutions for UK education and research, offers a slightly simpler definition of digital literacies: "capabilities which fit an individual for living, learning and working in a digital society" (2014, n.p.). They bear the characteristics of a transversal skill which enables learners to acquire other key competences such as languages, economics, or learning to learn and ensures their active participation in society.

Pegrum (2009) lists eight major literacies for successful functioning in an increasingly digital society, with print, search/information, participatory, remix, and intercultural being the most prominent ones and underpinned by other literacies such as multimodal, personal, and code literacy. Dudeney, Hockly and Pegrum (2013) take a slightly broader perspective and differentiate four major areas: language, connections, information and (re)-design. In a forthcoming publication they make adjustments to their approach "in a Revised Framework that takes into account our evolving context": communication, information, collaboration and (re)-design. Finally, Thorne (2013) is interested in the unfolding dimension of digital literacies which "can be seen to dynamically evolve in a wide variety of often interrelated semiotic modes, genres and cultural contexts" (p. 193).

The transversal nature of digital literacies has pedagogical implications. In Hauck and Kurek (2017), we refer to the scaffolded approach originally suggested by the

New London Group (1996) for structuring multiliteracies instruction, because of the importance it attaches to context: learners (1) recognise available designs, (2) learn the specific discourses and required technical competence, (3) interpret and reflect on their practices, and (4) are prompted to transfer their knowledge to new contexts and discourses. We also mention the “bridging activities” proposed by Thorne and Reinhardt (2008) which involve collecting and exploring digital texts selected by students to match their “vernacular interests”, followed by guided student production of contributions to a digital community or context of their choice. The aim is to foster learner awareness of communicative practices and their discursive framing across various media and modalities. In this way they can potentially also gain a better understanding of the multiple dimensions of contemporary language use, and – as we add – contemporary use of modes in ever-changing contexts. This conscious structuring of (language) students’ digital experiences is also the backdrop for the three-tiered framework presented in Kurek and Hauck (2014) which is advocated afresh in Hauck and Kurek (2017). We revisit the argument first put forward in Hampel and Hauck (2006) that due to the many different ways in which modes are embedded in the new media, learners in technology-mediated environments in general, and language learners in particular, need to become competent in switching both linguistic codes and switching semiotic modes, and need to be able to do so consciously.

A hitherto unresolved issue, though, is how language teacher training programs can better prepare prospective teachers to first gain such competence themselves, to assist learners in acquiring it. In Hampel and Hauck (2006) we suggested that meaning making using a variety of modes should become a topic of instruction in its

own right, and that teachers needed to be trained in activity design for virtual spaces that is activity design based on multimodality. In subsequent studies I initiated, attempts to meet the challenge have been made with the most promising results, reported in Fuchs et al. (2012), and some similarly good outcomes in Hauck and Satar (2018). Other language educator-researchers concur that the much needed “paradigm shift in language pedagogy from language to mode, to exploring what modes are and how they can be used to maximize learning” (Stein, 2004), first foregrounded in Hampel and Hauck (2006), requires the integration of multimodal technology and pedagogy in teacher preparation programmes (e.g. Desjardins & Peters, 2007; Hubbard, 2008). As Guikema and Menke (2014) observe: “Teachers who have experienced collaborative digital communities are less likely to use technology as an instructional tool and instead view it as an object of instruction” (p. 67).

Telecollaboration 2.0, now increasingly referred to as Online Intercultural Exchange (OIE) or Virtual Exchange (VE), is by definition based on the use of networked technologies such as forums, blogs, wikis, and video sharing websites. It shifts the focus onto what these allow learners to do: the available meaning-making and communication modes and their affordances. It has therefore emerged as an ideal way of addressing the issues outlined above as it facilitates “on-the-job” training in digital literacy skills (Helm, 2014). Hence, teacher trainees can discover, experience and finally reflect on their techno-pedagogy (Desjardins & Peters, 2007), akin to Guichon’s (2009) semio-pedagogical competence (see also section 4.3). The approach, we propose, is conducive to the development of “digital teacher autonomy” (Kurek & Turula, 2014). OIEs, we conclude in Hauck and Kurek (2017),

provide teacher trainees with a viable pedagogical model in which digital literacies both support their online activity and are shaped through it. They also offer them the opportunity to experience and reflect on different forms of mediation, their pedagogical relevance and their potential.

We point to the following challenges that remain to be addressed:

- The widening gap between learners' vernacular digital practices and the mostly print-based practices valued in traditional education.
- The unlikelihood of digital skills acquired informally by students to transfer to more formal educational contexts (Hubbard, 2004; Littlejohn et al., 2013).
- Institutionalised technology-oriented curricula informed by rigid "competency frameworks" which tend to come with checklists of technical skills to be taught and assessed (Littlejohn et al. 2013).
- The unpredictability of the literacy requirements of today's school children at the time of their university graduation, due to rapid technological changes (Kern, 2014).
- The need to prepare teachers for ever-increasing diversity as students' digital practices are characterised by variety and fragmentation across semiotic genres, modes, and cultural contexts (McKenna & Hughes, 2013; Thorne, 2013).
- The still-prevailing tendency to see technology as pedagogically efficient in itself and the ensuing – mostly inadequate – teaching practices which "fail to embrace the diversity and plurality (...) of resources, opinions, contexts, communication and semiotic modes" (Kurek & Turula, 2014, p. 124).

Yet it is arguable the main educational value of current technology resides within this diversity. Thus, for now, Bezemer and Kress (2016) see a central challenge in the need “to understand both the affordances, the facilities, and the constraints of contemporary media, in all aspects of social action; and the affordances of the modes which appear there” (p. 12).

In my most recent work I am increasingly concerned with the aforementioned competency frameworks and checklists and with the instrumentalist and decontextualised approach to digital literacies they perpetuate. My interest in technology-mediated learning and teaching of language and cultures has moved beyond context in the concrete sense, i.e. bespoke media and their modes and affordances. My research as a co-investigator in several EU Erasmus Plus-funded projects focuses on the aspects of social action mentioned by Bezemer and Kress (2016), in particular the socio-political contexts in which these frameworks are applied and how multimodal and digital literacies come into play. I draw on Brown (2017) and Morris (2018) and the way they conceptualise “critical digital literacy” and “critical digital pedagogy” respectively. “If digital literacies,” Brown (2017) puts forward, “are core to what it means to be an educated person in the 21st century, then our thinking needs to go beyond preparing people to fit the type of inequitable and socially unjust societies we have created over the past century” (n.p.).

Virtual exchanges, I argue, bring a minimum of two different socio-political contexts together, and if informed by critical digital pedagogy, present countless opportunities to discuss – among many others – the problem highlighted by Brown (see Chapter 5 ‘Concluding remarks and further research interests’).

4.5 Participatory literacy and social presence

Apart from developing digital literacies, of which – as I have been arguing – multimodal communicative competence (multimodal literacy) is a constituent element, there is a need to make learners aware of new types of social agency in online community involvement. With software and applications becoming increasingly social, the literacy shift is moving from the acquisition and interpretation of multimodal content (semiotic responder; see also section 2.2.1) to its production (semiotic initiator; see also section 2.2.1). Hence the need for another constituent element of multiliteracies, participatory literacy, also referred to in the literature as ‘digital communicative literacy’, which provides a foundation for online interactions and facilitates collaborative processes (Pegrum, 2009) and is therefore core to successful involvement in participatory cultures (Jenkins et al. 2006; see also sections 4.3 and 4.4). Participatory literacy has been defined by Giger (2006) as the ability to create and share knowledge and content collectively through the use of online tools and the completion of collaborative tasks in online environments.

As successful participation online has been found to be context-dependent (Hanna & de Nooy, 2003; Kern, Ware & Warschauer, 2004), I argue that participation and social agency online presuppose, among other capabilities, social presence (SP) online. With Kehrwald (2008) I understand SP as the means by which online participants inhabit virtual spaces and indicate not only their presence in the online environment but also their availability and willingness to engage in the communicative exchanges which constitute learning activity in these environments.

The three chapters in this final part of the thesis are linked through the close interrelationship between multimodal communicative competence, participatory literacy and SP in VLEs.

According to Pegrum (2010), the best way to develop participatory literacy is by actually participating in Web 2.0 technologies. Accepting Pegrum's reasoning allowed Hauck and Satar (2018) to construct the following circular argument: it is through online participation and collaboration that multimodal communicative competence, participatory literacy skills, and thus the ability to send and receive SP cues, are being developed (see Figure 10). This is a process which language educators can put into practice in telecollaborative exchanges (see also Hauck, 2010a).

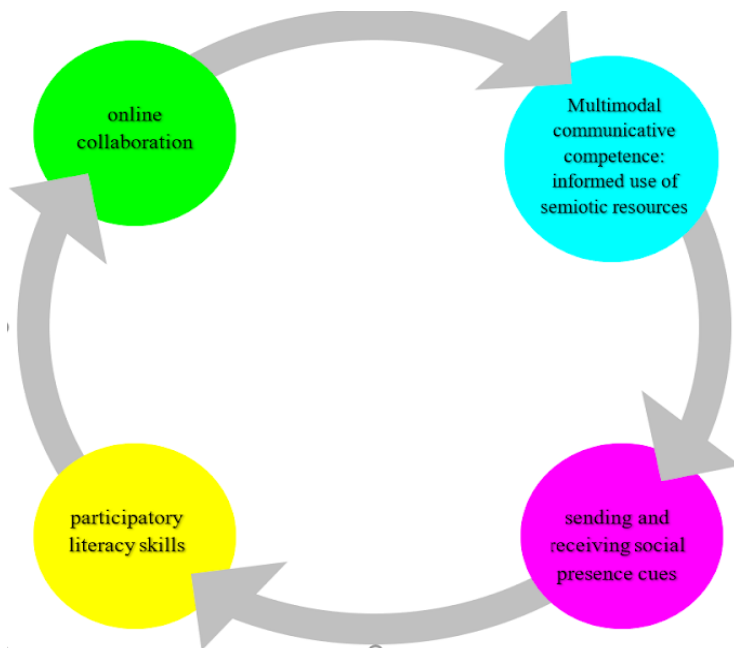


Figure 10: Participatory Literacy Development (Hauck & Satar, 2018)

The chapters presented here are informed by three separate studies:

- Hauck and Warnecke (2012), based on a teacher training programme which I designed and implemented in 2010 jointly with an OU Associate Lecturer (AL) colleague for ALs preparing to tutor on English for Academic Purposes (EAP) Online
- Hauck, Galley and Warnecke (2016), based on the TESOL-Electronic Village Online (EVO) 2012 module “Tutoring with Web 2.0 tools – Designing for Social Presence”, an adapted version of the OU programme

and

- Hauck and Satar (2018), based on a telecollaborative pre-service teacher training module – also informed by the original OU programme – between the former Department of Languages (DoL) at the OU and the Foreign Language Education Department (FLED) at Boğaziçi University in Istanbul, Turkey.

14. Hauck, M., & Warnecke, S. (2012). Materials design in CALL: social presence in online environments. In: M. Thomas, H. Reinders, H. & M. Warschauer (Eds.), *Contemporary Computer-Assisted Language Learning* (pp. 95–115). London: Bloomsbury.

SP has been acknowledged by scholars as a central driving force for a successful learner Community of Inquiry (CoI), a model developed by Garrison, Anderson and

Archer (2000) for text-based online conferencing and informed by the work of educational philosophers C.S. Pearce and John Dewey.

In Hauck and Warnecke (2012), we set out to establish whether SP as understood by Kehrwald (2008), namely the ability of the individual to demonstrate their availability for and willingness to participate in interaction, can be learned through a task-based approach – one of the threads linking my studies. We also wanted to explore the potential benefits of “experiential modeling” (Hoven, 2006), another thread that joins my work. As a reminder: experiential modeling immerses teacher trainees “in the use of technologies, while at the same time providing them with the freedom and framework within which to experience the practical application of theory in their own learning” (n.p.), and to develop their techno-pedagogy (Desjardins & Peters, 2007), or, more specifically, their semio-pedagogical competence (Guichon, 2009; Peraya 2000).

A secondary aim was to illustrate the impact of materials design on generating SP. The way we framed “materials” was influenced by Levy and Stockwell (2006), that is, encompassing tasks, software, courseware, websites, online courses, programs and – of significance – also learning environments or contexts. In Hauck and Warnecke (2012) we see tasks and materials designed to foster SP at the interface between content and process materials in communicative language teaching. On the one hand, such tasks and materials deal with reflective content, such as what motivates us to engage and enables us to participate online; on the other, they draw on the affordances of the environment to help shape online communication and interaction, and thus SP, to gradually emerge in the participants’ exchanges.

The Project

The data for the study comes from a training programme for OU ALs which was innovative in several respects, being designed to:

- raise AL's awareness of the relevance of SP in online learning and teaching, first for their own benefit
- find out about fostering SP skills in their students through task design for VLEs.

It allowed the ALs to experience from a student's point of view the learning and teaching they were about to facilitate ("experiential modeling"). Finally, the programme also drew on Allwright's (2003) and Allwright and Hanks' (2009) understanding of "exploratory practice" or "inclusive practitioner research", which foregrounds the learners' perspective, in this case the ALs as learners (see also Fuchs et al., 2012).

Methods

We followed the approach taken by Arnold and Ducate (2006) and other SP researchers by carrying out a content analysis of the trainees' asynchronous forum interactions through the lens of the Col framework (Garrison et al., 2000), using Swan's (2002) adaptation of the original coding template for SP indicators.

We wanted to explore the dynamics among participants in their task performance during the training as reflected in their postings to the training forum and

subsequently to their respective tutor group fora (the forum each tutor shared with their students once the module had started).

Participants

The participants were 9 ALs representing a multifaceted Col, many of whom were new to the OU and new to teaching online but had some experience of using email for teaching and learning purposes. They were also new to the unique blend of students (native speakers of English and speakers of English as an additional language). Seven participants were new to tutoring via a forum.

Their students were a mixed cohort of adult learners in terms of academic histories, linguistic backgrounds, range of digital literacy skills and objectives for studying beyond EAP Online and as such, representative of the typical OU student body.

Tasks

Each week the participants carried out three tasks. The first task (see Figure 11) related to their previous teaching experience (mostly in face-to-face settings). The second task asked them to engage with research findings or practitioner recommendations. The third asked them to reflect on their current experiences both in the EAP Online classroom with their students and as part of the tutor trainee group. They were also invited to relate these experiences to the scholarly input from Task 2 and their own teaching background (Task 1).

We termed this the “storyline approach”, where participants are made aware of the interrelationship between the tasks they carry out, the training program as a whole, their past and current teaching practice, and their own and others’ understanding of

the processes and dynamics they are involved in. The process showed “how tasks – or rather the activities that comprise participants’ task performances – serve as a form of mediation that can bring about learning” (Ellis, 2003, p. 185). Figure 11 gives an example of this.

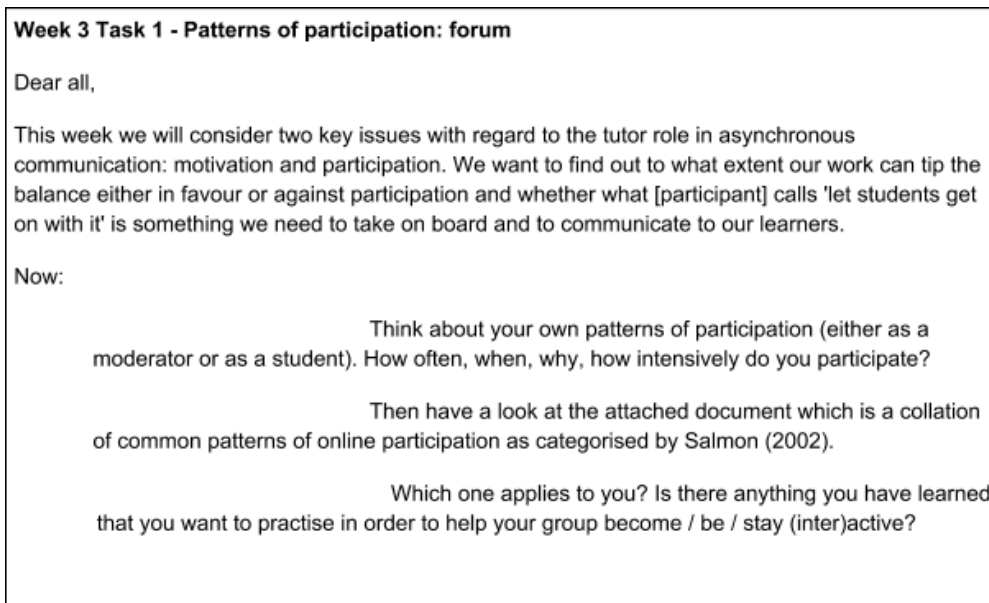


Figure 11: Patterns of Participation (Hauck & Warnecke, 2012)

Main findings

SP emerged as the central driving force for a successful CoI such as the trainees and the student groups they subsequently taught. In fact, our content analyses of AL contributions to the training forum establishes SP as the *conditio sine qua non* for learning in technology-mediated contexts and as a core digital literacy skill. Hence, its pivotal role in asynchronous as well as synchronous online language learning and teaching where the processes the students are involved in are – by default –

mediated twice: by the technology used and by the second or additional language (see also Hampel & Hauck, 2006; Kurek & Hauck, 2014).

We were able to show that it is the mediation effect of task performance (Ellis, 2003), coupled with increasing awareness of the affordances of the online environment (contextual knowledge), that allowed participants to consciously develop SP: “through seeing and experiencing how others project themselves into the environment, how others interact with one another and how others react to [one’s] personal efforts to cultivate a social presence” (Kehrwald, 2010, p. 47) or, in other words, “experiential modeling” (Hoven, 2006).

To that effect, tasks needed to be designed to draw learners’ attention to ways of using modes and their affordances which are conducive to demonstrating availability for, and willingness to, participate in interaction (Kehrwald, 2008), or the ability to send and read SP cues (Kehrwald, 2010).

The teacher trainees’ forum contributions provided new insights into the notion of online participation and challenged aspects of Garrison et al.’s (2000) CoI model. They highlighted the need for a different way of conceptualising what happens in technology-mediated learning contexts by considering aspects such as learners’ participatory literacy as reflected in their multimodal competence and as a precondition for establishing SP online. In line with Morgan’s (2011) critique of Garrison et al. (2000), we ask for a re-consideration of the CoI’s tripartite approach which separates SP from cognitive and teaching presence. We argue with Morgan that the COI “does not consider the complexities of the community’s global and local

contexts, [...] and how power, agency, and identities are negotiated in these multicultural contexts” (p. 2).

Galley, Conole and Alevizou’s (2011) “community indicators” are proposed as an alternative framework for online learning and teaching in general, and for language learning and teaching in technology-mediated environments in particular (see Figure 12). We suggest a re-consideration of SP in the light of this framework as an overarching construct that is both the means and the end of online communication and interaction, and the result of participatory literacy. Finally, we make the case for SP as one of the guiding principles for material and task design for both (language) teaching and learning and (language) teacher education in such contexts.

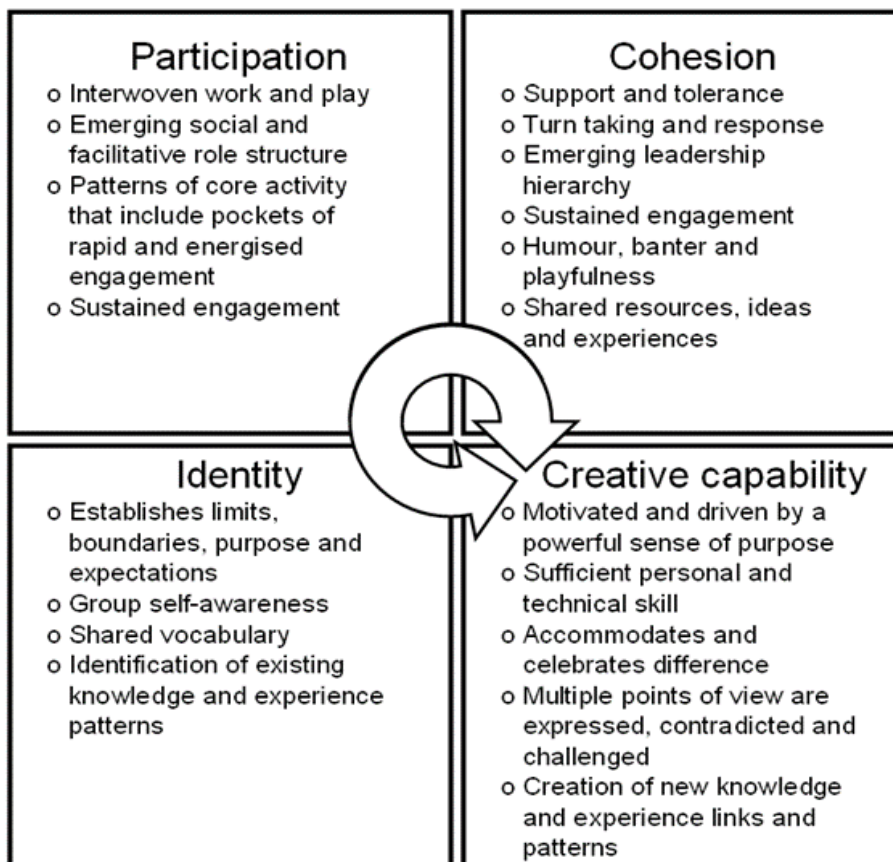


Figure 12: Community Indicators Framework (Galley et al., 2011)

As the tasks and materials used in this study are specific to the online setting rather than the subject, they are readily transferable to the learning and teaching of any language as well as other content in VLEs.

- 15. Hauck, M., Galley, R., & Warnecke, S. (2016). Researching participatory literacy and positioning in online learning communities. In: F. Farr & L. Murray (Eds.), *The Routledge Handbook of Language Learning and Technology. Routledge Handbooks in Applied Linguistics* (pp. 71–87). London: Routledge.**

The TESOL-Electronic Village Online (EVO) 2012 module “Tutoring with Web 2.0 tools – Designing for Social Presence” provided the background for this invited book chapter. Similar to its original version (see Hauck & Warnecke, 2012), the EVO training module was designed to develop effective learner-centred online moderation skills with a focus on the role of SP and the participatory literacy skills needed to build it. As the EVO is open to practitioners from all subject areas, participants represented an even more diverse community than ALs and students who participated in the original training module, in terms of their educational, social and cultural backgrounds, online learning and teaching skills, and digital literacy skills.

In Hauck et al. (2016), we expand and further develop Galley et al.’s (2011) Community Indicators Framework (CIF), which positions the work among the theoretical contributions selected for this thesis. The CIF had emerged out of an attempt to more systematically capture transactions and emerging patterns of activity on a social networking site for educators (Cloudworks) in order to provide guidance for communities using the site. It accounts for aspects such as identity, creative capability and participatory literacy. In our view, it provides a more effective way of

representing the development of the democratic, learner-centred and identity-building processes online which electronic media facilitate (Warschauer 1999; see also Hampel & Hauck, 2006; Kurek & Hauck, 2014).

We propose to conceive of participatory behaviours as “positioning”. This moves us beyond Kehrwald’s (2008) notion of “projecting oneself”, towards a notion of shifting patterns in the way we relate to others online, in direct response to the learning context, its modes and affordances. We draw on Davies and Harre’s (1990) concept of “positioning” as a way to describe how humans relate to their contexts and “a dynamic alternative to the more static concept of role” (van Langenhove & Harre, 1999, p. 14). Morgan (2011) considers this concept in relation to teaching presence, one of the three elements in the Col. She concludes: “If we truly want to understand effective teaching presence, it is perhaps timely to focus on conditions and affordances that the context provides, and pay greater attention to the role of positioning” (p. 4). The same focus on contextual affordances, we hold, is called for with regard to SP.

Based on our findings from the TESOL module, we also suggest replacing the category of ‘creative capability’ with ‘creative agency’, to highlight that creative skills and actions can be developed and turn into agency rather than perceiving them as static qualities. In Galley et al.’s (2011) model, the arrows serve to represent movement through the categories towards creative productivity. We put forward that these arrows describe the participatory processes from which SP arises and manifests itself (see Figure 13).

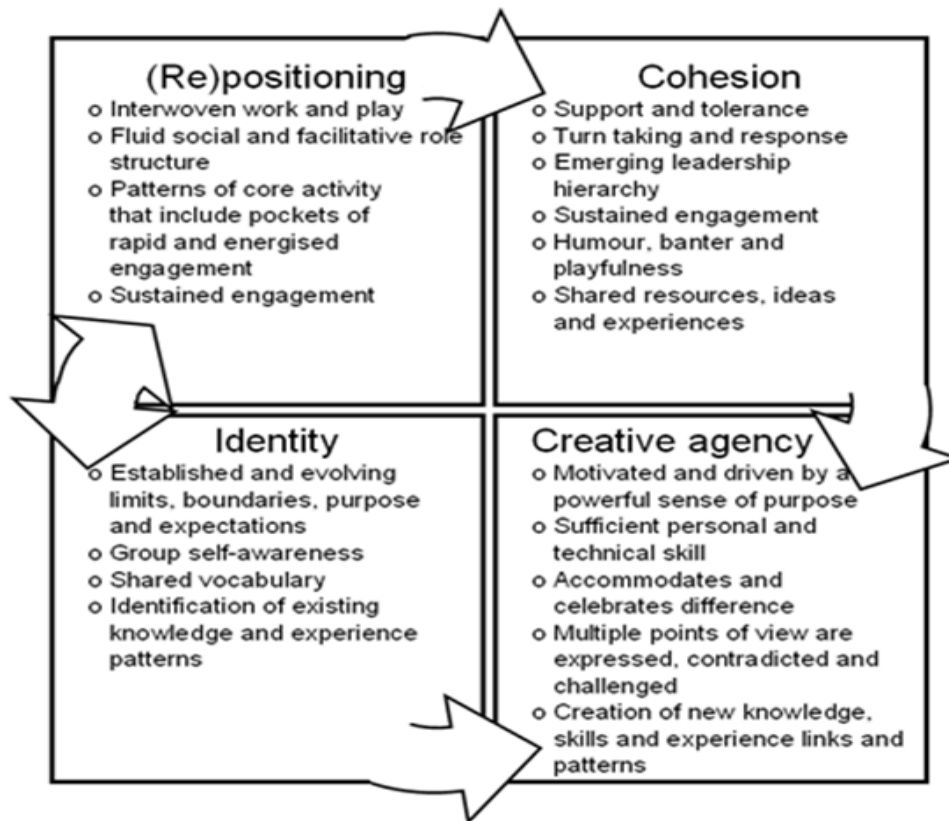


Figure 13: Revised CIF (Hauck et al., 2016)

We propose SP as an overarching construct and as both the means and the end of communication and interaction in online communities. It is dependent on participatory literacy as understood by Pegrum (2009), and therefore on multimodal competence (Kress, 2003) too. Tasks designed to spark collaborative reflection on issues related to participation and SP are particularly well-suited to foster SP itself and should therefore become an integral part of teacher and learner preparation for technology-mediated contexts. We illustrate how the participants' engagement in tasks designed to trigger exchanges on participation led to reflection, discussion and learning about the relevance of SP in online learning communities. At the same time,

it helped SP emerge among the trainees. By witnessing how others “project themselves into the environment, how others interact with one another and how others react to their personal efforts to cultivate a Social Presence” (Kehrwald 2010: 47) participants acquired the skill to send, receive and interpret SP cues, drawing on the affordances of communication modes available to them. They also found out about the way roles and identities can shift through and in interaction and were able to engage in the process of positioning and re-positioning. This, in turn, allowed them to revisit and re-conceptualise their position in the online interactions and to strategically use their creative agency.

The same framework was used in a telecollaborative pre-service teacher training programme between DoL and the Foreign Language Education Department (FLED) at Boğaziçi University, Istanbul/Turkey, which provided the data presented and discussed in Hauck and Satar (2018), the last publication to form part of this PhD by published work.

- 16. Hauck, M., & Satar, H. M. (2018). Learning and teaching languages in technology-mediated contexts: The relevance of social presence, co-presence, participatory literacy and multimodal competence. In R. Kern & D. Develotte (Eds.), *Screens and scenes: Online multimodal communication and intercultural encounters* (pp. 133-157). London: Routledge.**

As in the previous two studies presented in section 4.5, we hypothesise in this case study research that the ability to send and read SP cues is a precondition for sustained participation in technology-mediated learning contexts and meaningful collaboration. Nonetheless we foreground issues related to modes and affordances and refine our understanding of the latter.

In Hampel and Hauck (2006) – inspired by the work of Kress and colleagues – we conceive of affordances as the possibilities and constraints of modes, such as images, sounds, and words and their co-occurrence, i.e. “multimodality”. Lee (2007), however, points to Norman’s conceptualisation of affordances as “perceived affordances”, which takes human beings’ perceptions and experiences into consideration. This fits well with the original framing of SP by Short, Williams and Christie (1976) that includes a participant’s perception of the medium and its affordances as being “shaped by how people perceive what various representational resources can or cannot do for them” (Lee, 2007, p. 227), while also aligning with Kehrwald’s definition of SP as subjective projections of self into online environments, and subjective assessments of how others project themselves. This understanding has an impact on our appreciation of contextual knowledge (Hauck, 2005), highlighting the need to acknowledge that it is learner-specific as well as prone to change.

Thus, affordances are neither neutral nor are they a static phenomenon. Hence our renewed call for tasks which gradually enhance acquaintance with modes and affordances in virtual spaces used for the teaching and learning of languages and cultures and other subjects.

The Project

The study is based on a five-week telecollaborative pre-service teacher training module between the former Department of Languages (DoL) at the OU and the Foreign Language Education Department (FLED) at Boğaziçi University in Istanbul, Turkey. The objectives were presented as follows:

- Immersion in an online learning context and experiencing online teaching from a student's point of view.
- Exploring the nature and role of SP in online learning and teaching contexts.
- Finding out about meaning-making, communication and participation in online learning and teaching contexts.

We used the principles of case study research (see Chapter 3), selecting one student (Aylin) as an instrumental case through purposeful sampling. Her contributions offered rich evidence for theory development and were representative of other students who displayed a similar developmental path during the training in terms of participatory literacy skills and SP.

Methods

In order to explore our hypothesis (see above), we gathered a mix of data, including a pre-intervention questionnaire, profile pages in Canvas, the Learning Management system (LMS) that served as the training hub, written and/or multimodal forum posts and four journal entries per participant.

Our scrutiny of text-only forum posts was guided by principles of qualitative content analysis, which aims for systematic “analysis of texts within their context of

communication” (Mayring 2000, n.p.). We also drew on computer-mediated discourse analysis, utilising linguistic units of analysis as described by Herring (2001, 2004): structure, meaning, interaction, social behavior, and interaction patterns. For the multimodal contributions (e.g. online posters), we employed multimodal analysis, considering how participants employed and orchestrated various semiotic resources in specific social situations and practices (Kress & van Leeuwen 2001; Norris 2004).

Participants

Overall, there were 36 pre-service English teachers (31 females and 5 males) between 20 and 22 years of age. The pre-intervention questionnaire revealed that over half perceived themselves as regular users of social media (Facebook) and online learning materials, with the British Council’s ELT materials being the most popular example. The majority had never contributed to a blog or sent a tweet, though. A similar percentage had not yet engaged in professional networks such as LinkedIn.

Findings

The data that Aylin created on her journey through the training program allowed us to illustrate how she advanced her participatory literacy skills and cultivated her SP. It is also a case in point for the transient and learner-specific nature of contextual knowledge. The online poster (Figure 14) she designed in the activity where students were invited to create a visual representation of their presence and participation

patterns using Glogster.edu is the most striking piece of evidence to this effect. It was a follow-on task to that outlined in Figure 11 (Hauck & Warnecke, 2012). Together with her reflective comments it reveals that she is a skilful user of various representational resources to project SP and thus qualifies as a successful semiotic initiator. For a detailed analysis see Hauck and Satar (2018).



Figure 14: Copy of Aylin's poster (Hauck & Satar, 2018)

Methodologically, the mapping of “the storyline approach” that guided the training design (Hauck & Warnecke, 2012) onto the approach to data analysis and the presentation of findings was a novelty in the three studies summarised in section 4.5.

The storyline approach makes trainees systematically aware of the interrelationship between the tasks they carry out and the processes and dynamics they are involved in, and their use of modes and affordances to send and read SP cues. The approach to data analysis documents how through online participation and collaboration the trainees' multimodal communicative competence, participatory literacy and SP develop and emerge (see also Figure 13).

Another novelty was the number of researchers involved in the data analysis in Hauck and Satar (2018): four colleagues participated as teacher-researchers in the collection and interpretation of the data. In addition, a third-year undergraduate from Boğaziçi University contributed as a research assistant to our analysis. His interpretations and comments brought us closer to the students' perceptions and understandings. By using multiple data sources – including, for the first time, computer mediated discourse analysis – and by including several researchers, we were able to increase the validity and reliability of our analysis. We also continually searched for contradictory evidence when choosing and analysing data for our case study and drew on comparisons with other cases where appropriate.

In sum: This study and other work presented in sections 4.1–4.5 has shown that task-based awareness-raising for modes and meaning-making allows us to address semiotically uninformed engagement with tools, applications and artefacts in technology-mediated learning and teaching of languages and cultures. Such engagement is often accompanied by a lack of critical and evaluative skills, among young people in particular. Yet, as Bezemer and Kress (2016, p. 8) remind us, “[s]ign makers, including young people, now need to understand the semiotic potentials of a much wider range of resources.” Thus, multimodal communicative competence, which also impacts participatory literacy and SP online, is both the pre-condition and the catalyst for rich interaction and collaboration in VLEs. Those who are multimodally aware and skilled will find it easier to alternate their roles as semiotic responders and semiotic initiators than those who lack such awareness and competence.

Integrating task-based awareness-raising into online curricula will also allow us to get a handle on what, due to technological progress and innovation, remains a moving target: the learning context.

Chapter 5 Concluding remarks and further research interests

In their 2016 publication entitled *Multimodality, Learning and Communication*, Bezemer and Kress (2016) describe the current situation as follows:

[...] significant changes include the shift in frequency of (multimodal) text making, and coupled with the rise of different platforms, the range of occasions on which texts are made, and the range of audiences. Sign makers, including young people, now need to understand the semiotic potentials of a much wider range of resources [...] involved in the design and production of any text.

However, as a result of the ever-increasing amount of semiotic resources available for meaning-making and communicating which accompanies these trends, Hampel's (2006) assertion seems as valid today as it was over a decade ago: that learners should not be thought of as competent users of the new media, aware of the affordances and knowledgeable about how to use them constructively. The same holds true for Jenkins et al.'s (2006) "awareness dilemma", which is the assumption that users are reflecting on their media experiences and can articulate what they learn from their participation.

Unsurprisingly, another issue highlighted throughout my work which continues to percolate through the literature, PhD studies in particular (see Chapter 6), is the need for online educators to be able to illustrate and model for their students the

interdependence between being multimodally competent, as reflected in informed semiotic activity, and the ability to display participatory literacy skills, establish SP, make meaning, communicate and exercise agency – and thus also autonomy.

The pedagogical approach I have been proposing is also promoted by some of my colleagues. Kern (2014), for example, wants to see students exposed to “a broader scope of symbolic enquiry” which fosters “a critical perspective that will prepare them to understand and shape future language and literacy practices” (p. 341). Yet, to engage in such symbolic enquiry, I would agree with Coccetta (2018), (language) learners will need a metalanguage that allows them to talk about and describe “how semiotic resources are co-deployed in specific texts and to relate their insights to these texts’ contexts of situation and culture” (p. 19). This applies to multimodal texts in particular, that is, any artefact created with the help of a range of representational resources. While Cocetta considers the benefits of fostering multimodal communicative competence with regard to text studies in English only, the approach she suggests comes closest to the one I have been promoting in my work for the study of languages and cultures and other subject areas.

As I write these concluding remarks, the beginning of a new thread is emerging in the cloth of my scholarly work. I have started to highlight the need to develop *critical* digital literacies which, in line with Brown (2017), I see as a pre-condition for “enabling a greater sense of personal and collective agency to help address some of the bigger issues confronting the future of humanity in uncertain times” (n.p.).

My growing interest in the critical dimension of digital literacies is informed by my alignment with Kern's (2014) call for a "relational pedagogy", which aims at preventing learners in general, and language learners in particular, from jumping into superficial conclusions about who others are and how they behave and express themselves. It encourages them to consider past as well as present literacy practices, offering them perspectives that allow them "to engage critically with today's media but also to help shape the language and literacy practices that will develop with new technologies of the future" (p. 353). The latter echoes Kress' (2000c) understanding of learner agency which I continue to endorse. The work of some of my colleagues moves into a similar direction. Dudeney, Hockly and Pegrum, for example, in the forthcoming second edition of their volume entitled *Digital Literacies* (2013), have been revising their digital literacies framework in the light of both technological and socio-political developments of the last half-decade. They use Brexit and Trump's America as an example to attract our attention to the socio-political aspects of digital literacies. In an era of clashes between trends towards superdiversity on the one hand and countervailing political attempts to stem the free flow of people and communications on the other, the socio-political aspects of digital literacies need to be considered. In addition to the existing elements of their framework such as intercultural literacy and participatory literacy, they put more emphasis on ethical literacy – how we interact with and treat others – and critical literacy which according to Pegrum "is about thinking all this through" (email exchange). Like Kern (2014) and myself, he sees these as lenses for approaching difference and for thinking about ourselves in relation to difference. Therefore, the question that researchers and practitioners in technology-mediated learning of

language and cultures should be asking in my view, is how we can support our learners – including teachers as learners – more than just linguistically in the contemporary socio-political climate, or indeed in any socio-political climate.

Similarly, in the epilogue of her PhD thesis, Helm (2016) reminds us of the political and humanitarian challenges we are facing and sees a need to develop critical thinking as much as media literacy to support especially young (language) learners in engaging with difference. As de Souza (2013) writes, “preparing learners for confrontations with differences of all kinds becomes an urgent current pedagogical objective that can be achieved through critical literacy” (n.p.) including, I hold, critical digital literacy. Kellner (2002, p. 166) puts it as follows:

In the dynamically evolving and turbulent global culture, multiple literacies necessitate multicultural literacies, being able to understand and work with a heterogeneity of cultural groups and forms, acquiring literacies in a multiplicity of media, and gaining the competences to participate in a democratic culture and society.

Meanwhile, I continue to argue that the semiotic agility (Kern, 2015) of both learners and teachers, as well as the semiotic complexities of online contexts, need to be considered. In an abstract of a panel proposal I reviewed for the 2018 conference of the American Association for Applied Linguistics (AAAL), the authors ask pertinent questions to that effect: “How do we account for the entanglements of modes and human intent and action, and their mutual informativity and impact? For the semiotic impact of multimodality on how people encounter one another, often at a distance

and asynchronously? For understandings forged within and across diverse social and cultural groups and spaces?”.

I strongly feel that these aspects of digital literacies, need to become an integral part of technology-mediated learning and teaching of languages and cultures, with a view to building more and stronger intercultural and cross-cultural bridges online. Yet again, telecollaboration, or VE, seems best suited to implement this approach, with telecollaborative teacher education before all else. As the following announcement by the Virtual Exchange Coalition (2018, n.p.) reminds us:

The world is increasingly interdependent. The next generation will have to address major global challenges, virtually all of which require multi-lateral and cross-cultural cooperation ... Virtual exchanges make it possible for every young person to access high-quality international cross-cultural education.

Outside languages education, others such as Mark Brown, director of the National Institute for Digital Learning at Dublin City University, have also started to politicise digital literacies. He compares the digital literacy framework developed by JISC in the UK, which – drawing on the original work of Sharpe and Beetham (2010) – has evolved into a Digital Capability Framework (JISC, 2016 cited in Beetham, 2017), to similar work carried by the NMC in the USA as reported by Alexander et al. (2016). He concludes that while they “propose quite different frameworks, the common feature of the work of JISC and the NMC is that digital skills, literacies and capabilities encompass both functional and critical dimensions” (Brown, 2017, n.p.).

Yet Brown identifies a gap in our current understanding of digital literacies which the definition originally proposed by JISC (2014) brings to the fore, i.e. “those capabilities which *fit* an individual for living, learning and working in a digital society” (p. 1). “If digital literacies are core to what it means to be an educated person in the 21st Century,” he observes, “then our thinking needs to go beyond preparing people to *fit* the type of inequitable and socially unjust societies we have created over the past century” (Brown, 2017, n.p.). He sees a critical approach to digital literacies as an opportunity to “reshape and reimagine our societies where according to a recent Oxfam (2017) report eight men own the same amount of wealth as the poorest part of the world” (n.p.).

It is in this spirit that in my view technology-mediated learning and teaching of languages and cultures in the 21st century should address defining aspects of digital citizenship such as identity, wellbeing and rights and responsibilities. How educators define digital literacies, Brown concludes, “is inherently political and cannot be separated from issues of power and control” (2017, n.p.). As a result, the socio-political context becomes “critical” to how we define and understand digital literacies and digital citizenship.

Among the many attempts at capturing the defining elements of digital literacies, Belshaw’s (2015) work comes closest in this respect: cultural, cognitive, constructive, communicative, confident, creative, critical and civic. He explicitly acknowledges that it is important to learn how to use digital technologies for public engagement, global citizenship and the enhancement of democracy – for better lives and more sustainable futures.

Chapter 6 Reception of the publications

This chapter looks at the reception of the publications presented in Chapter 4, sections 4.1 – 4.5: their impact in numerical terms, as well as in terms of beneficiaries, projects, contributions to professional organisations and policy making.

6.1 Impact in numerical terms

To evidence the impact of my research in numerical terms, I have drawn on the metrics provided by Google Scholar which allow authors to keep track of citations of their publications. In August 2018 my work - 46 articles and chapters overall - had been cited 1558 times (see Figure 15):

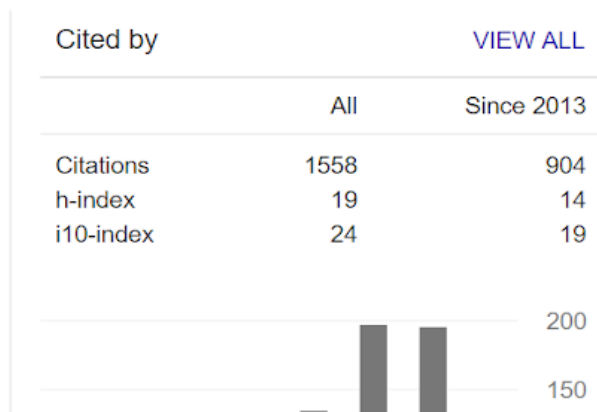


Figure 15: Google Scholar Profile - Hauck, August 2018

At the time of writing, my h-index was 19. This index, invented by Hirsch in 2005, is a numerical indication of how productive and influential a researcher is. Hirsch's intention was to create numerical evidence of a researcher's true contribution to the field, as raw citation counts can lead to one-off successes having "an undue and even distorting effect on our overall evaluation of a researcher's contribution" (Spicer, 2015). Hirsch also wanted to introduce some rigour to decision-making in relation to applications for grants and tenure in the US-American academic context.

An h (= Hirsch) index is attributed based on the number of papers (h) that have been cited at least h times, which means that h equals the number of papers that have received at least h citations (see Figure 16).

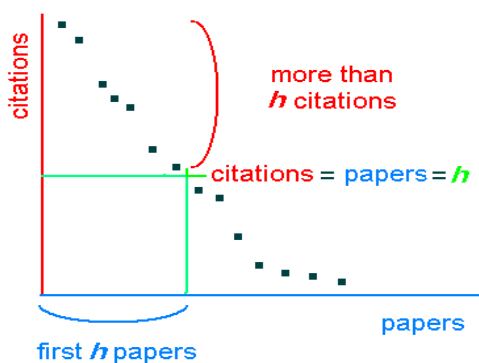


Figure 16: Calculation of h-index (Spicer, 2015)

According to Google Scholar, 19 of my publications have been cited *at least* 19 times in other research papers. The number of my publications with a minimum of 10 citations (i10-Index), a measure only used by Google Scholar to establish the productivity of a researcher, is 24.

To address the question of what the h-index measure for a Professor, Associate or Assistant Professor should be, and whether it is different for each discipline, Iles (2013) examined the h-index of 88 academics from non-UK Russell group Universities who had identified themselves as full Professors on Google Scholar. He found that the mean h-index was 24 and the median 20, with the top 25% of Professors having an h-index of 30 or greater. There are, however, discipline variations:

- Computer Science H-index mean 23, median 21
- Psychology H-index mean 26, median 19
- Nursing H-index mean 20, median 18
- Social Sciences H-index mean 19, median 16
- Physics/Maths H-index mean 23, median 22
- Bio-medicine H-index mean 28, median 25

While Hirsch proposed that after 20 years of research, an h-index of 20 is good, 40 outstanding, and 60 exceptional, he also points to the somewhat rough nature of the h-index as an indicator of scientific performance (Hirsch 2015, p.4):

Obviously a single number can never give more than a rough approximation to an individual's multifaceted profile, and many other factors should be considered in combination in evaluating an individual.

In his summary of the limitations, Oswald (2017) mentions artificial boosting of the h-index through self-citation and the fact that it does not take into account the number of authors on a paper. As a result, many citations of a co-authored paper are given the same importance as a similar number of citations of a single-authored

publication. Moreover, the index penalises early career researchers who have not yet published much, as well as high profile researchers who have only a small number of ground-breaking and highly cited publications. Finally, review articles tend to have a greater impact on the h-index than original papers since they are generally cited more often. To sum up: the main attractiveness of the h-index resides in its simplicity. It also allows non-experts to gain a first impression of a researcher's contribution to the field.

As the figures above illustrate, the h-index is generally higher in natural sciences, where researchers publish more, and often shorter, papers with a higher number of co-authors, in comparison to the mean and median in social sciences and humanities where there tend to be fewer publications, longer articles or books with fewer co-authors (Harzing, 2016). For social sciences then, the recommendation on the Impact Blog of the London School of Economics and Political Science is to use "Harzing's Publish or Perish (HPoP)/Google publications count" as it "has the great advantage of computing an h score index automatically for all authors" (LSE Public Policy Group, 2011). The citation numbers provided in section 6.3 are based on Google Scholar.

Equally important is the question of whom the beneficiaries of my research have been, what kinds of benefit they have gained from engaging with my work and what other types of impact my publications have had so far.

6.2. Impact in terms of beneficiaries, contributions to professional organisations, projects and policy making

6.2.1 Beneficiaries

Among those who have drawn individual benefit from my research, three groups can be distinguished: other researchers, teachers and students.

Researchers

An example that falls into this first category is a recent citation of two of my early publications in Zhou and Wei (2018). They provide an overview of “state-of-the-art research into technology-enhanced language learning strategies” based on sixty-six publications including Hauck (2005; publication 3) and Hauck and Hampel (2008; publication 8). Looking at strategic, self-regulated language learning with technology, the authors follow Oxford’s (2011) tripartite approach to differentiating strategic self-regulation in face-to-face contexts: cognitive and metacognitive strategies, affective and meta-affective strategies, and sociocultural-interactive strategies and meta-social strategies. In the section on cognitive and metacognitive strategies they use Hauck (2015) to emphasise the need to provide opportunities for learners to develop metacognitive awareness in technology-enhanced environments in order to become autonomous. In the section on sociocultural-interactive strategies, Hauck and Hampel (2008) is in fact the only publication they refer to, highlighting the new set of strategies we identified – socio-environmental strategies – in telecollaborative learning and teaching of languages and cultures.

Another recent example is Avgousti's (2018) systematic review of the literature on online intercultural exchanges (OIEs) and ICC development focusing on the modality used for each exchange. She draws on semiotics to explore "studies conducted in university contexts in relation to the impact of Web 2.0 tools – and especially multimodality – on learners' development of ICC" (n.p.). Four of my publications feature in her review, two of which – Hauck (2007) and Hauck (2010a) – are among those presented in Chapter 4 (publications 6 and 9). The author points to my work as providing an exhaustive discussion of the impact of multimodal communicative competence (MCC) on the success of OIEs.

A final example is Sun's (2017) review bringing together CALL research from 1998 until 2016 and research in the field of learning design. The author relies on Hauck and Warnecke (2012; publication 14) to question Garrison et al.'s Community of Inquiry framework, in particular its isolating views of the social and cognitive presence in CMC-based language learning. As a result of Hauck and Warnecke (2012), she observes, "SP [Social Presence] was moved right into the centre of the language learning and teaching process, and placed at the centre of material and task design" (p. 578). Similarly, Thomas, Reinders and Warschauer (2012) refer to Hauck and Warnecke (2012) in *Contemporary computer-assisted language learning*, as "advancing effective principles of design" (p. 9).

The influence of my work both in the European and North American CALL research communities has also been highlighted by those with networking influence in our field. What follows are their views of my work as reflected in selected quotes. Full references can be found in Appendix 2.

Professor Jozef Colpaert, director of the LINGUAPOLIS Language Institute at the University of Antwerp and chief editor of the *CALL Journal*, of which I am one of two assistant editors, describes my contribution as follows: “Mirjam is known as a highly committed CALL researcher who enjoys pushing the boundaries of our field and whose expertise ... is recognised in Europe and beyond”; or, as Robert Blake, former president of CALICO puts it: “She has been an active, if not truly dynamic force, in two CALL research organizations, CALICO and EUROCALL – in other words, both the American and European professional groups interested in CALL research. Her own research program in studying the processes involved in computer-mediated communication (CMC) has been groundbreaking, always at the cutting edge of research”. Professor Andreas Müller-Hartmann’s (Pädagogische Hochschule Heidelberg, Germany) testimonial speaks to my ability to create effective working relationships in the research and scholarship context: “I have come to know Mirjam as an extremely reliable partner and a great researcher who is always open to new ideas and approaches and who is eager to collaborate closely with her partners, all the while being ready to spearhead new ideas and activities.” Finally, Professor Nicolas Guichon from the ICAR research institute at the Université Lumière Lyon states: “Mirjam has certainly reached a point in her career where she has become an undisputed international reference in the field of computer-assisted language learning”.

At the Open University I am one of the research conveners in the School of Languages and Applied Linguistics, where I mentor colleagues in my role as line manager. Full references for the selected quotes that follow can be found in

Appendix 3: “Mirjam has played a significant role in my academic professional development in both teaching and research [...] She has helped me along the way by giving me the confidence to go and present papers at international conferences such as EUROCALL and OER and to start writing articles for publication [...] Under Mirjam’s supervision I have moved from thinking that I was not able to do serious research to submitting an EdD proposal”, H  l  ne Pulker states. Sylvia Warnecke, OU languages staff tutor in Scotland mentions the following:

I personally experienced Mirjam’s exceptional skills in fostering the research and scholarship careers of others since she listens to suggestions, readily shares her expertise, involves others in discussions and teaches others through active engagement. She was very supportive in helping me develop my own research profile when we planned and ran scholarship projects, wrote peer-reviewed articles and book chapters, as well as presented together at conferences.

Teachers and students

An example of this group of beneficiaries also has Hauck and Warnecke (2012; see above) as its starting point. In this publication we report on a teacher training programme for OU tutors preparing to tutor in an online-only context and claim that SP can be learned through a task-based approach (see Chapter 4, section 4.5, publication 14). A version of the training programme tailored to learning and teaching in online contexts beyond the OU was offered to the 2012 TESOL-Electronic Village Online (EVO): “Tutoring with Web 2.0 tools – Designing for Social Presence”. The training was designed to develop effective learner-centred online moderation skills

across the curriculum at tertiary level, with a focus on SP. It was open to practitioners from all subject areas, and participants from around the globe represented a multifaceted community in terms of educational, social and cultural backgrounds and digital literacy skills. Further iterations followed – all upon invitation - in telecollaborative online settings for universities in Europe and the USA preparing their staff to teach online and at a distance. One of the studies carried out on the back of these training events is documented in Hauck and Satar (2018, p. 133–157; publication 16).

In 2014, I was invited to a secondment as Professional Development Lead at the Center for Collaborative Online International Learning (COIL) at the State University of New York (SUNY) following a presentation of my research in SP on its interrelationship with multimodal communicative competence and how we can train for it at the annual COIL Center Symposium 2013. With 64 colleges, SUNY is the largest State University system in the US. My work there, from October 2014 to April 2016, influenced the design of over 200 non-accredited COIL-enhanced modules across colleges and curricula. I also had sole responsibility for the professional development preparing SUNY academics and their international teaching partners for the telecollaborative delivery of these modules. I drew on the research underpinning the training module reported in Hauck and Warnecke (2012) and the updated version for the EVO “Tutoring with Web 2.0 tools – Designing for Social Presence” (see above).

Jon Rubin, who was the director of the COIL Center at the time, describes the impact of my work as follows (see Appendix 4):

During her tenure as Professional Development Lead for the SUNY COIL Center, Mirjam Hauck was a transformative presence in [...] the emerging field of virtual exchange. She drew on her experience in teacher education based on her comprehensive research in the field, guiding and supporting SUNY faculty in designing, setting up, implementing and evaluating hundreds of COIL-enhanced virtual exchange courses. [...] Her research-based, highly-skilled approach to facilitation was of profound help to me while I was director of the COIL Center. She set a high standard that not merely SUNY, but other participating higher education institutions have continued to try to emulate and that modelling has helped the virtual exchange field develop.

Among my responsibilities at the COIL Center was that of training the participants of the COIL Latin America Partnership Program which developed telecollaborative partnerships between teachers from SUNY campuses and teachers from universities in Latin America through an initiative branded as the COIL Latin America Academy (LAA). Table 3 shows the Latin America Academy impact summary in figures:

Academy	LAA1	LAA2	LAA3	Total
SUNY Professors	9	11	15	35
Latin American Professors	9	13	17	37
SUNY Campuses	7	7	13	20
Latin American Campuses	4	6	10	12

Total Courses	18	23	32	73
Students Participating (est.)	375	475	650	1500

Table 3: Latin American Academy (LAA) impact summary

Another example in this category of beneficiaries of my work comes from my contribution as co-investigator in the EVALUATE project (see also 6.2.2). The project consortium worked with 52 teacher training institutions from across Europe. My research on SP features prominently in the training manual for project participants, building on Hauck and Warnecke (2012; publication 14) and Kurek and Hauck (2014; publication 12).

In a supporting statement for the UK Research Excellence Framework (REF) impact narrative and with reference to Kurek and Hauck (2014), Dr Carolin Fuchs (City University, Hong Kong) also mentions the positive influence of my work (see Appendix 5 for the full reference):

Trainee teachers need to be introduced to Telecollaboration and Virtual Exchange themselves first, that is experience the use of appropriate digital pedagogical skills before they can apply them in their own telecollaborative exchanges with their students. The framework for task design to this effect co-developed by Mirjam Hauck has helped me to develop tasks and task sequences for teacher training to this effect.

Lastly, my work is referred to in numerous students' MA and PhD theses (see section 6.3).

6.2.2 Professional organisations and funded projects

Professional organisations

The European Association for Computer-Assisted Language Learning (EUROCALL) provides a European focus for the promulgation of innovative research, development and practice relating to the use of technologies for language learning. Among its members and attendees at the annual EUROCALL conferences are many colleagues from outside Europe, attracted among other things by the work of the association's special interest groups (SIGs). While chairing the EUROCALL Teacher Education SIG (2009 –2016), I led research workshops at the Université de Lyon (*European workshop on teacher education in CALL: towards a research agenda*, 2010), at the Universitat Autònoma de Barcelona (*Getting the Bigger Picture: Language Teacher Competences in CMC Settings*, 2011), and at the Università di Bologna (*Learning through sharing: Open Resources, Open Practices, Open Communication*, 2012). Since being elected President of EUROCALL in 2017, one of my objectives has been to continue the Critical CALL agenda initiated at EUROCALL 2015 and to make research and practice of CALL for social inclusion and conflict transformation one of the association's endeavours in the immediate future. In view of the political and humanitarian challenges Europe is currently facing, I see a need to develop critical thinking and digital literacy to support people, young people in particular, in engaging with difference. CALL as a discipline and EUROCALL as an organisation that fosters research and practice in technology-mediated communication have an important role to play to this effect. Establishing links with

organisations specialising in setting up, running, collecting and analysing data of virtual exchanges such as the Sharing Perspectives Foundation, Search for Common Ground, Soliya Connect and UNICOLLABORATION have been first steps in this direction.

Projects

In the field of education, the mutual influence of research and practice is an ever-present aim. My interest in the interdependence between multimodal and intercultural communicative competence in telecollaborative teacher training is an example of this, as evidenced in Hauck (2010a; publication 9). In this area, I have been able to help influence practice through the following activities:

- Principal investigator in the TRIDEM project (reported in publications 6–8), designed and implemented during my invited secondment year-long secondment as research scholar in the Modern Languages Department at Carnegie Mellon University (CMU) in 2005, for which I had received funding from the British Academy.
- Co-investigator in the Integrating Telecollaborative Networks into Foreign Language Higher Education (INTENT) project which ran from 2011 until 2014.
- Co-founder, trainer and researcher for UNICollaboration: The International Organisation of Telecollaboration and Virtual Exchange (www.unicollaboration.org), the main outcome of the INTENT project, which promotes the development and integration of research and practice in telecollaboration and virtual exchange across all disciplines and subject areas in higher education internationally.

Beneficial influence on these latter projects can be seen by the nomination of INTENT as a “success story” at the interface of research and practice by the Directorate-General for Education and Culture of the European Commission, and by a quote from Ton Koenraad, Director of the educational training and consultancy firm TELLConsult. He points to Hauck (2007, publication 6) as “the start of the development of a body of research that helped develop and underpin pedagogical & methodological approaches specifically for (language) learning and teaching in these new virtual, multi-user and multi-modal spaces and helped define the teacher competences involved.” He acknowledges my role as “a senior member of an expanding group of leading researchers” who has “contributed relevant insights on related topics including social presence and assessing virtual exchange (Hauck, 2010) and task design (Hauck & Warnecke, 2012)” (see Appendix 5 for full reference).

On the work we carried out together within UNICollaboration, Dr. Sauro from Malmö University writes the following (see Appendix 5 for the full reference):

Mirjam Hauck [‘s] work on social presence and assessing virtual exchange have informed my teaching and practice". Further, “[Hauck’s research] on critical perspectives on teaching and learning with technology and critical digital literacies has informed my implementation and my own research. These critical perspectives have informed the design of tasks I have used as well as the type of in class mentoring and support I provide students engaging in a virtual exchange.

Finally, my work can be seen to have benefited the field of Initial Teacher Training, a research topic that attracted EU funding in 2017. Expanding my studies in telecollaboration, I was able to lead the research into the development of participants' digital-pedagogical competencies in the EVALUATE project, a European policy experimentation carried out by the INTENT consortium (see also 6.2.3). Short for Evaluating and Upscaling Telecollaborative Teacher Education, this project was indeed an 'upscale' involving 33 telecollaborative exchanges and over a thousand trainees from 52 teacher education institutions in Europe and beyond.

In EVALUATE I drew on my work on multiliteracies and digital literacies – Fuchs et al. (2012; publication 11), Kurek and Hauck (2014; publication 12) and Hauck and Kurek (2017; publication 13). I was able to show the impact of task-based training in digital literacies focusing on tools and applications and their respective modes and affordances, as put forward in publications 11 and 12 and put into practice in this project.

The following graph (Figure 17) is an example from the evaluation, which took the shape of a qualitative analysis of the teacher trainees' reflective comments (learner diaries), coded independently by a colleague and myself and processed using NVivo, a qualitative data analysis application:

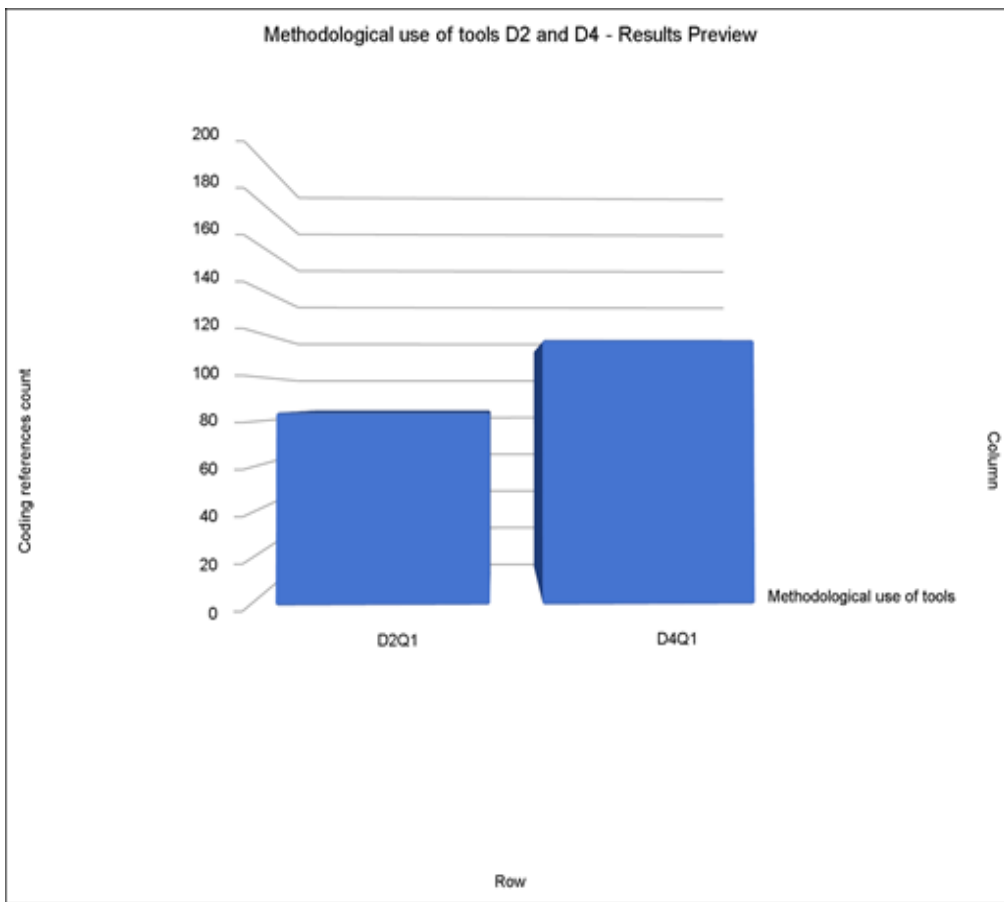


Figure 17: Methodological use of tools (EVALUATE)

It shows a clear increase between diary entry 2 (D2) – early on in the training – and the final diary entry (entry 4 (D4)) in the participants’ methodological use of online tools and applications after training in multimodal awareness.

Telecollaboration, increasingly referred to as virtual exchange (VE), is a long-time central interest in my research. As I experienced during my secondment at SUNY/COIL, it is now spreading beyond language teaching in HE, to such an extent that in January 2018, the INTENT consortium sought to encourage the systematic

mainstreaming of VE across disciplines in HE institutions in the EU and elsewhere. In its latest project, Evidence-Validated Online Learning through Virtual Exchange, or EVOLVE, I represent the OU as co-investigator. Drawing on my most recent work (see Chapter 5), I train participating teachers in designing and delivering telecollaborative exchanges with a focus on *critical* digital literacy skills development.

6.2.3 Policy making

EVALUATE is a European Policy Experimentation project in the fields of Education, Training and Youth funded by Erasmus+ Key Action 3. My research contributes to the following policy impacts:

- Telecollaboration is taken on as part of Initial Teacher Education curricula in teacher training institutions across Europe.
- Participation in telecollaborative training is explicitly mentioned in the “Additional Information” section of the European Diploma Supplement.
- The public authorities partners (representatives from the education ministries of Germany and Hungary, Portugal and Spain who are part of the consortium) organise further teacher training programmes for teacher educators in their countries/regions.
- Telecollaboration is incorporated into the Public Authorities’ other projects and initiatives.
- Telecollaboration is mentioned and recommended in Public Authorities’ publications and strategy papers.

In the next section I provide an overview of citations of publications 1–16 presented in Chapter 4, sections 4.1 to 4.5.

6.3 Citations

For each of the publications in Chapter 4, I have selected and listed citations which spread from the first time my work was mentioned in the literature to recent references including MA and doctoral theses referencing my research. Visual representations of citation numbers for each publication – where available – are taken from Google Scholar. Each image is followed by a note summarising the ‘tenor’ of the citations that follow. A fuller version of each citation can be found in the Appendix 1.

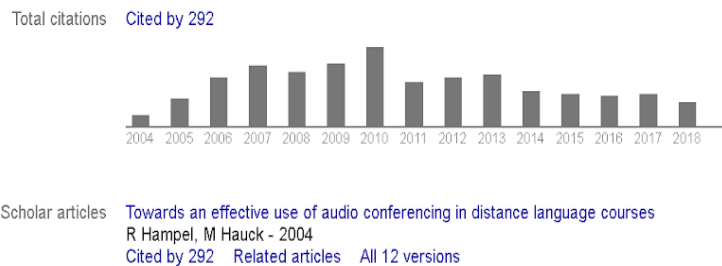
1. Hauck, M. (2004). Exploring the link between metacognitive knowledge, efficient strategy use and learner autonomy in distance language learning. In U. Bernath & A. Szücs (Eds.), *Supporting the learner in distance education and e-learning: Proceedings of the Third EDEN research workshop* (pp.183-190). Oldenburg: Universität Oldenburg.

These conference proceedings are based on a presentation given at the Third European Distance Education Network (EDEN) research workshop. They have hardly been cited in the literature (7 citations, among which one self-citation in Hauck, 2005). However, as they mark the starting point of my research and developing scholarly arguments as presented in Chapter 4, they are included in my list of publications submitted for the degree of PhD by Published Work.

Shakarami, A., & Abdullah, M.H. (2011). Management of language learning strategies: the case of Net-Generation ESL tertiary learners. *Journal for International Business and Entrepreneurship Development*, 5(4), 287–298.

The respondents of the study seemed to have developed knowledge of how to approach a learning task in order to get the most of it. Hauck (2004, p. 67) calls the strategy self-management and define it as “understanding the conditions that help one successfully accomplish language learning tasks in independent and virtual learning contexts and arranging for the presence of those conditions in such contexts.

2. Hampel, R., & Hauck, M. (2004) Towards and effective use of audio conferencing in distance language education. *Language Learning & Technology*, 8(1), 66–82.



Tenor of the citations: a core contribution to a growing body of research exploring the benefits of synchronous voice-based CMC and which takes multimodality into account.

Wang, Y. (2004). Supporting Synchronous Distance Language Learning with Desktop Videoconferencing. *Language Learning & Technology*, 8(3), 9–121.

At the same time, the issue of lack of body language and of depersonalization of communication in text- and audio-based CMC has been recognized by scholars such as Lecourt (1999), Kress & van Leeuwen (2001), and Hampel & Hauck (2004). The findings from Hampel & Hauck support the above arguments from a participant's point of view. They point out that when "tutors do not receive visual clues and body language, it is easier for students unsure of what is going on to sit quietly without participating and without getting help or encouragement" (p. 78)

Rosell-Aguilar, F. (2005). Task Design for Audiographic Conferencing: Promoting Beginner Oral Interaction in Distance Language Learning. *Computer Assisted Language Learning*, 18(5), 417-442.

However, the literature agrees that synchronous audiographic CMC "is an ideal medium for collaborative learning through social interaction both with tutors and with peers" (Hampel & Hauck, 2004, p. 68) ... The challenge of multimodality in the online conferencing medium (Hampel, 2003; Hampel and Hauck 2004): the fact that the medium provides a combination of visual, verbal and written elements through the computer places greater demands on those users who are unfamiliar with it - although it also affords materials that better support activities by using graphics, images, text and voice to enhance, focus, or generate input and opportunities for output and interaction.

Weller, M., Pegler, C., & Mason, R. (2005). Use of Innovative Technologies on an E-Learning Course. *The Internet and Higher Education*, 8(1), 61-71.

Hampel and Hauck (2004) describe the use of The Open University's Lyceum system to support a distance education German course. Student feedback was largely positive although technical issues were still significant.

Heins, B., Duensing, A., Stickler, U., & Batstone, C. (2007). Spoken interaction in online and face-to-face language tutorials. *Computer Assisted Language Learning*, 20(3), 279-295.

[...] a number of articles provide insight into different aspects of the practical use of online audio in the language learning context: exemplified by Lyceum these findings focus on the role of the tutor (Hauck & Haezwindt, 1999; Shield, Hauck, & Hewer, 2001; Hampel & Stickler, 2005), task design (Hampel & Hauck, 2004; Rosell-Aguilar, 2005) and issues of multimodality (Kötter, Shield, & Stevens 1999; Hampel & Hauck, 2006).

Lee, L. (2007). Fostering second language oral communication through constructivist interaction in desktop videoconferencing. *Foreign Language Annals*, 40(4), 635-639.

The evaluations of particular projects, such as [...] Lyceum (Hampel and Hauck, 2004) [...] have demonstrated the usefulness of videoconferencing in distance learning. The findings offer insight into how the medium has contributed to learners' intercultural communicative competence through group debates on the issues of the target culture.

Wang, Y., & Chen, N-S. (2007). Online Synchronous Language Learning: SLMS over the Internet. *Innovate: Journal of Online Education*, 3(3), n.p.

Despite their wish to improve their proficiency in a given language, distance language learners ... become very frustrated when they cannot converse spontaneously in face-to-face situations. This problem has been well documented (see Hampel and Hauck 2004; Kötter 2001; Wang and Sun 2000; White 2003). [...] technologies are effective to a certain point, but none of them have addressed the needs of distance language learners in a comprehensive manner [...] confirms the results of studies on the impact of video technologies on building a learning community, increasing learner confidence, and reducing learner isolation (Bloomfield 2000; Lake 1999; Stacey 1999; Hampel and Hauck 2004).

Dooley, M. (2008). New competencies in a new era? Examining the impact of a teacher training project. *ReCALL*, 21(3), 352–359.

[R]ecently considerable work and effort has been put into endeavours to improve teachers' knowledge, attitudes and preparation so that they can efficiently use ICT in their teaching (Bonk et al., 1996; Smerdon et al., 2000; Burniske & Monke, 2001; Salaberry, 2001; Hampel & Hauck, 2004).

Levy, M., & Stockwell, G. (2008) *CALL Dimensions: Options and Issues in Computer-Assisted Language Learning*. Oxon, UK: Routledge.

In addition, as Hampel and Hauck (2004) noted, the effective integration of conferencing is complex both pedagogically and technically, and failure to plan for each of these has the potential to detract from the language-learning environment. Still, the value of conferencing in language learning is indisputable, providing a means through which learners can practice oral and aural skills even when geographically separated from their communication partners.

Levy, M. (2009). Technologies in Use for Second Language Learning. *The Modern Language Journal*, 93(S1), 769–782.

Applications designed to enable learners to develop their oral skills at a distance ... include virtual learning environments (VLEs) that employ audio and video conferencing (Hampel and Hauck, 2004). [...] This potential for simultaneous, multimodal interaction through parallel channels is an important area for future research.

Stockwell, G. (2010). Effects of Multimodality in Computer-Mediated Communication Tasks. In R. Thomas & H. Reinders (Eds.), *Task-Based Language Learning and Teaching with Technology* (pp. 83–104). London: Continuum.

[...]

(e.g. Collentine, 2009; Hampel & Hauck, 2004). This is not surprising

Blake, R. (2011). Current Trends in Online Language Learning. *Annual Review of Applied Linguistics*, 31, 19–35.

Recently, the CALL field has witnessed a veritable explosion in the number of studies examining the use and effectiveness of CMC (e.g., Hampel and Hauck, 2004; Lomicka & Lord, 2009; Meskill, 2009).

Bueno Alastuey, M.C. (2011). Perceived benefits and drawbacks of synchronous voice-based computer mediated communication in the foreign language classroom. *Computer Assisted Language Learning*, 24(5), 419–432.

[I]n the last few years, a growing body of research has explored the benefits of synchronous voice-based CMC (SVCMC) [,,] (also called audiographic conferencing (see, e.g. Hampel, 2003; Hampel & Hauck, 2004), whose similarity to face-to-face communication may prepare students better for the challenge of real-life oral communication.

Lai, C., & Li, G. (2011). Technology and Task-Based Language Teaching: A Critical Review. *CALICO Journal*, 28(2), 498–521.

The works by Hampel and her colleagues (Hampel & Hauck, 2004; Hampel, 2006) [...] reported positive perceptions from learners and teachers on online tutorials that adopted a TBLT approach.

Wang, Y., & Chen, N-S. (2012). The collaborative language learning attributes of cyber face-to-face interaction: the perspectives of the learner. *Interactive Learning Environments*, 20(4), 311-330.

[R]ecent studies on interaction via audio conferencing have also contributed to our understanding of the depth of this kind of synchronous collaborative language learning (see Hampel, 2006; Hampel & Hauck, 2004; Hauck & Hampel, 2005) [...]

Benson, P. (2013). *Autonomy in practice. Teaching and Researching Autonomy* Routledge 2nd Ed., (pp. 121–198). Oxon, UK: Routledge.

The literature includes a number of accounts of experiments using new technologies [...] Hampel and Hauck's (2004) work with online tutorials using audio-graphic conferencing tools. ...Outside the conventional classroom, new technologies are clearly having this kind of effect by expanding the scope of interaction in tandem learning (Kotter, 2002; Mullen et al., 2009) and distance education (Hampel and Hauck, 2004; Lamy and Goodfellow 1999).

Peterson, M. (2016). *Computer Games and Language Learning*. US: Palgrave Macmillan.

User errors caused by limited computer skills and difficulties managing multimodal interfaces represent additional problems (Hampel and Hauck, 2004).

Hanawa, H., Song, X., Mengyuan, T. & Inoue, T. (2017). The Combined Use of Audio and Visual Media in Computer Conferencing towards Equality in Asymmetric Second-Language Conversation. *International Journal of Linguistics and Communication*, 5(2), pp. 40–52.

When Native speakers (NS) talk with Non-native speakers (NNS)[...] CMC research has examined this in relation to online meetings working on more balanced participation with better quality of conversations (Chun, 1994; Hampel & Hauck, 2004) [...] Our study is motivated by earlier research: how CMC helped balanced participation on discussion (Chun, 1994; Hampel & Hauck, 2004).

Charbonneau-Gowdy, P. (2018). Beyond Stalemate: Seeking Solutions to Challenges in Online and Blended Learning Programs. *The Electronic Journal of e-Learning*, 16(1), 56–66.

Hampel and Hauck (2004) conducted a study on one of the first audio/video large-scale international online language programs offered by the Open University in Great Britain. [...] from the vast experience acquired from offering Open University courses, along with the scholarship in this area, the authors

also drew attention to the presence of challenges and the demands that these courses place on teachers.

Cohen, C., & Wigham, C. (in press). A comparative study of lexical word search in an audioconferencing and a videoconferencing condition. *Computer Assisted Language Learning*.

Indeed, initial studies focused on how synchronicity and multimodality within audioconferencing environments may enhance learners' oral participation, speaking skills and collaboration (Hampel & Hauck, 2004; Ciekanski & Chanier, 2008; Vetter & Chanier, 2006).

Doctoral thesis

Xue, X. (2017). *Effects of Different Types of Annotations on College Students' Foreign Language Learning in the Synchronous Multimodal Computer-Mediated Communication Environment* (Doctoral Thesis, Florida State University).

A computer-mediated approach to language instruction [...] provides them [learners] with opportunities to use the language in authentic communication settings and get to know more about a foreign culture as an extension to their knowledge (Hampel & Hauck, 2004).

3. Hauck, M. (2005). Metacognitive knowledge, metacognitive strategies, and CALL. In J. L. Egbert & G. Petrie (Eds.), *CALL Research Perspectives* (pp. 65–86). New Jersey, USA: Lawrence Erlbaum.



Tenor of the citations: among the first studies to highlight the importance of metacognitive knowledge and skills for autonomous online distance language learning and the need for learner preparation to this effect.

Heift, T., & Schulze, M. (2007). *Errors and Intelligence in Computer-Assisted Language Learning: Parsers and Pedagogues*. Abingdon: Routledge.

Others [...] argue for a particular theoretical focus in CALL research (e.g. meta-cognitive knowledge (Hauck, 2005) [...]).

Fischer, R. (2007). How do we know what students are actually doing? Monitoring students' behavior in CALL. *Computer Assisted Language Learning*, 20(5), 409–422.

It goes without saying that metacognitive knowledge and skills underlie successful autonomous learning, and several researchers have emphasized the need to develop such knowledge and skills in distance education language learners (Hauck, 2005 [...]).

O'Bryan, A., & Hegelheimer, V. (2009). Using a Mixed Methods Approach to Explore Strategies, Metacognitive Awareness and the Effects of Task Design on Listening Development. *Canadian Journal of Applied Linguistic*, 12(1), 9–38.

[L]earners who have regular opportunities to develop their metacognitive awareness through training may become more autonomous language learners (Hauck, 2005). Thus, it is an important goal for any strategy training

program [...] to help raise students' metacognitive awareness of the learning process.

Zou, X. (2011). What Happens in Different Contexts and How to Do Learner Autonomy Better? Teacher Development: *An international Journal of Teachers' Professional Development*, 15(4), 421–433.

Autonomous learning is not only an individual and gradual process of self-awareness which involves the sharing of control between teachers and learners, [...] but also a gradual increase in relation to awareness of learning contexts (Hauck 2005).

Dalbani, H. (2012) English Language Learning Strategies at the Syrian Virtual University: students' and Teachers' Perceptions. *Damascus University Journal*, 28(1), 55–84.

Hauck (2005) [...] contends that the degree to which language learners are aware of both themselves - their attitudes, aptitudes and beliefs – and of the affordances of the learning environment, and the degree to which they demonstrate control and flexibility in the use of metacognitive strategies such as self-management are interdependent.

Gomez Alvarez, L., Sandoval Zuniga, M.S., & Saez Carrillo, K. (2012). Comprensión Auditiva en Inglés Como L2: Efecto de La Instrucción Explícita de Estrategias Metacognitivas para su Desarrollo. *Revista de Lingüística Teórica y Aplicada*, 50(1), 69–93.

Por eso, se consideran esenciales para el aprendizaje, ya que propenden a que los aprendientes sean más autónomos, estratégicos, eficientes y proactivos, tanto en su aprendizaje en general [...] como en la adquisición de la L2 (Hauck, 2005).

Guichon, N., & Cohen, C. (2012). Enhancing L2 Learners' Noticing Skills through Self-Confrontation with their own Oral Production Performance. *Recherche et pratiques pédagogiques en langues de spécialité. Cahiers de l'APLIUT*, 31(3), 87–104.

In the field of L2 learning, metacognitive knowledge concerns both language use and language learning (Hauck 2005) [...] Hauck characterizes “good language learners [...] as being those who are aware of their perceptions, attitudes, and abilities and are knowledgeable about the learning process” (2005: 73).

Manoochehr, J., & Behrooznia, S. (2012). The Effect of Anxiety on Reading Comprehension among Distance EFL Learners. *International Education Studies*, 5(2), 159–174.

Except for the study of Hauck (2005) [...] there is little that particularly investigates anxiety in the distance learning context.

Hampel, R., & De Los Arcos, B. (2013). Interacting at a Distance: A Critical Review of the role of ICT in Developing the Learner–Context Interface in a University Language Programme. *Innovation in Language Learning and Teaching*, 7(2), 158–178.

For Hauck (2005), the need for distance language learners to understand and manage themselves and their learning (White 2003) applies equally to language learners in online self-directed learning spaces. [...] Hauck's research on activities designed to foster learner self-awareness served to substantiate two hypotheses: that 'instructed self-management skills contribute to an increase in learners' self and contextual knowledge' and also 'help distance learners to deal with affective factors such as language anxiety in both face-to-face and virtual learning contexts' (Hauck and Hurd 2005).

Ranalli, J. (2013). Designing Online Strategy Instruction for Integrated Vocabulary Depth of Knowledge and Web-Based Dictionary Skills. *CALICO Journal*, 30(1), 16–43.

These principles could prove useful in addressing recently discussed needs to help learners make more strategic and self-directed use of CALL resources (Hauck, 2005; Hauck & Hampel, 2008 [...]), particularly in contexts where processing demands are likely to be high.

Stickler, U., & Lijing, S. (2013). Supporting Chinese Speaking Skills Online. *System*, 41(1), 50–69.

The necessity of preparation that goes beyond the technical issues becomes more and more prevalent: [...] cognitive and metacognitive challenges (Hauck, 2005; Hauck and Hampel, 2008) [...] are all valid considerations when preparing students to make the most of their online learning.

Coşkun, A., & Ghaemi, H. (2015). Integrating Technologically-Enhanced Self-Regulated Strategies into Writing English as a Foreign Language Classes. *International Online Journal of Educational Sciences*, 7(2), 1–14.

Self-regulated learning has recently gained a lot of attention in foreign language education [...] that learners who are able to undertake the

responsibility of their own learning process are more likely to become autonomous, and thus successful language learners (Hauck, 2005).

Nosratinia, M., Ghavidel, S., & Zaker, A. (2015). Teaching metacognitive strategies through Anderson's model: does it affect EFL learners' listening comprehension? *Theory and Practice in Language Studies*, 5(6), 1233–1243.

[I]t has been stated that possessing high levels of metacognitive awareness enables learners to become more autonomous language learners (Hauck, 2005).

Shakarami, A., Hajhashemi, K., & Caltabiano, N.J. (2017). Compensation Still Matters: Language Learning Strategies in Third Millennium ESL Learners. *Online Learning*, 21(3), 235–250.

Hauck (cited in Hauck & Hurd, 2005) points out that “online language learning makes learners aware of themselves, their attitudes, aptitudes and beliefs and of the affordances of the learning environment and the degree to which they demonstrate flexibility and control” (p. 4).

Taki, S., & Esmaeili, Z. (2017) Shadowing and EFL Listening Comprehension: Focus on Metacognitive Strategy Use, Self-efficacy and Achievement. *Journal of Teaching English for Specific and Academic Purposes*, 5(4), 727–738.

On the other hand, learners who use metacognitive strategies are more proficient learners (Hauck, 2005).

Jose, K. (2018). Blending Cognitive and Socio-constructive Pedagogies: Building Autonomous Readers in the ESL Classroom. In R.J. Ponniah & S. Venkatesan (Eds.), *The Idea and Practice of Reading* (pp. 57–84). Berlin: Springer.

Learners who have a wider repertoire of metacognitive strategies and are in control of their metacognition in terms of choosing the right strategy that the context demands are therefore potential autonomous language learners (Hauck, 2005).

Ranalli, J. (2018). L2 Strategy Instruction: Enhancing Research and Practice through the Mediation of Technology. In B. Zou & M. Thomas (Eds.), *Handbook of Research on Integrating Technology Into Contemporary Language Learning and Teaching* (pp. 202-2017). Hershey: IGI Global.

Experts in the field of computer-assisted language learning (CALL) have discussed these issues from the standpoint of technology, focusing on the

need to prepare learners to thrive in the digital age (e.g. [...] Hauck, 2005; Hauck & Hampel [...]).

Doctoral theses

McBride, K. (2007). *The Effect of Rate of Speech and CALL Design Features on EFL Listening Comprehension and Strategy Use* (Doctoral Thesis, The University of Arizona).

Thus, the department has developed activities to “foster learner reflection on the following: self-knowledge, beliefs about self, beliefs about learning in general, beliefs about language learning in particular” (Hauck, 2005, pp. 79–80), and they have found that self-knowledge and metacognitive awareness lead to successful strategy use and this aided SLA.

De Los Arcos, B. (2010). *Emotion in Online Distance Language Learning: Learners’ Appraisal Of Regret And Pride In Synchronous Audiographic Conferencing* (Doctoral Thesis, The Open University).

As early as 2002, fourteen OU learners of German at advanced level participated in five online sessions during which they reflected on the process of language learning in a virtual environment [...] (Hauck, 2005). [...] For Hauck (2005) this urgency applies equally to language learners in online self-directed learning spaces and she adds that “the degree to which language learners are aware of both themselves (...) and of the affordances of the learning environment, and the degree to which they demonstrate control and flexibility in the use of MCSs such as self-management and thus autonomy, are interdependent (Hauck, 2005: 68–69).

Hashimoto, K. (2012). *Exploring the Relationship between L2 Blogging, Learner Autonomy, and L2 Proficiency Levels: A Case Study of Post-Secondary Japanese L2 Learners* (Doctoral Thesis, The University of California, Santa Barbara).

Drawing on the theoretical perspective that learner autonomy, which signifies self-management, is developed through using metacognitive strategies and metacognitive knowledge (Hauck, 2005), [...] Autonomous learners exert metacognitive knowledge (Hauck, 2005; Little, 2008). [...]

When demonstrating learner autonomy in such contexts without the presence of instructors’ guidance, learners exercise self-management of their learning by deploying metacognitive strategies based on their metacognitive knowledge about the task, the strategy, and themselves as learners (Hauck, 2005; White, 1995).

De Jesus, O.N. (2014). *International Undergraduate English Language Learners' Perception of Language and Academic Acquisition through Online Learning: A Qualitative Phenomenological Study* (Doctoral Thesis, Liberty University).

Hauck (2005) emphasized that learners who have regular opportunities to develop their metacognitive awareness through training may become more autonomous language learners.

Fincham, N. X. (2015). *Metacognitive Knowledge Development and Language Learning in the Context of Web-based Distance Language Learning: A Multiple-Case Study of Adult EFL Learners in China*. (Doctoral Thesis, Michigan State University).

Hauck (2005) stressed that the need for distance language learners to understand and manage themselves and their learning should apply equally to language learners in online self-directed learning spaces, highlighting the importance of learner's knowledge of the affordances and constraints of the technology-enriched learning environment. [...]

Knowledge of context is another important aspect of MCK, [...] This dimension of MCK is of particular relevance to today's rapidly advancing technology-mediated language learning environments faced by foreign language learners. For example, studies of self-directed language learning via audio and audiographic conferencing have shown that "a high level of person and contextual knowledge and the degree to which learners have control over it at various stages of the learning process are pivotal to effective learning in such environments" (Hauck, 2005, p. 72).

[...] Hauck (2005) stresses that the need for distance language learners to understand and manage themselves and their learning applies equally to language learners in online self-directed learning spaces.

Nasri, M.N. (2016). *A reconceptualisation of self-directed learning in a Malaysian context* (Doctoral Thesis, University of Edinburgh).

In relation to the SDL concept [...], Hauck (2005) [...] assert that the use of metacognitive strategies [...] would help learners to have more control and be in charge of their learning. [...].

4. Hauck, M., & Hurd, S. (2005). Exploring the link between language anxiety and learner self-management in open language learning contexts. *European Journal of Open, Distance and E-Learning*, 8(2), n.p.

Total citations Cited by 96

Tenor of the citations: A publication that draws attention to the interrelationship between speaking anxiety and language learner self-management skills in both face-to-face *and* online contexts with their additional multimodal demands.

White, C. (2006). Distance Learning of Foreign Languages. *Language Teaching*, 39(4), 247–264.

Hauck & Hurd (2005) [...] A contribution of the study is that it explores the kinds of anxiety that can arise within multimodal virtual learning spaces, especially in relation to the variety and simultaneity of modes available, and the extra dimension this adds to the need for learner self-management.

Stonebrink, D. (2008). *Web-based English Language Learning with Wimba Voice Technologies*. Tempe, Arizona: Maricopa Community College.

The negative influence of anxiety on language development is well-documented in the literature ([...] Hauck and Hurd, 2005 [...]).

Nakazawa, K. (2009). Student Engagement in Online Language Learning: A Case Study Examining the Online Delivery of Tertiary Language Courses. *International Journal of Learning*, 16(7), 405–414.

[...] good instruction and timely feedback to keep students on track are very helpful, as is suggested in studies pertaining to the link between language anxiety and learner self-management (Hauck and Hurd 2005).

Kessler, G. (2010). Fluency and anxiety in self-access speaking tasks: the influence of environment. *Computer Assisted Language Learning*, 23(4), 361–375.

Anxiety has been found to negatively influence speaking performance (Aida, 1994) and the ability to self-manage in online learning (Hauck & Hurd, 2005) [...] open learning environments can help students use self-management strategies to lower anxiety (Hauck & Hurd, 2005).

Dalbani, H. (2011). Autonomy in Distance English Language Learning. *Damascus University Journal*, 27(3+4), 81–117.

According to Hauck and Hurd (2005), materials in distance language learning play a central role as the teaching voice. [...] And to help students develop awareness of themselves and encourage an autonomous approach, learning strategy sections are embedded into the course materials and thus reflect an indirect and contextualized approach to strategy training. “The aim is gradually to shift the locus of control from teacher to learner and build learners’ confidence in taking an active part in their own learning” (Hauck and Hurd: 2005).

Miyazoe, T., & Anderson, T. (2012). Voice Interaction Online. In Q. Lin (Ed.), *Advancement in Online Education: Exploring the Best Practices* (pp. 39–67). US: Nova Science Publishing.

Speaking anxiety is relevant to online voice interaction in two ways ... speaking anxiety that learners potentially experience when talking online without sharing the same physical space with associated interpersonal clues ([...] Hampel, Felix, Hauck, and Coleman, 2005; Hauck and Hurd, 2005 [...]).

Jauregi, K., de Graaff, R., van den Bergh, H., & Kriz, M. (2012). Native/non-native speaker interactions through video-web communication: a clue for enhancing motivation? *Computer Assisted Language Learning*, 25(1), 1–19.

According to Hauck and Hurd, anxiety levels are likely to be lowered if students can learn in a non-threatening environment which encourages them to try things out and have fun, which builds confidence and promotes respect for different learning styles, approaches and personality traits.

Xiao, J. (2012). Successful and unsuccessful distance language learners: an 'affective' perspective. *Open Learning: The Journal of Open, Distance and e-Learning*, 27(2), 121–136.

Our findings lend support to the argument that there is a link between anxiety and learner self-management (Hauck & Hurd, 2005).

Grant, S., Huang, H., & Pasfield-Neofitou, S. (2013). Language Learning in Virtual Worlds: The Role of Foreign Language and Technical Anxiety. *Journal of Virtual Worlds Research*, 6(1), 1–9.

Since Horwitz et. al. (1986), there have been a number of investigations into FLA [...] in f2f and distance settings (M. Hauck & S. Hurd, 2005).

Hampel, R., & De Los Arcos, B. (2013). Interacting at a distance: a critical review of the role of ICT in developing the learner–context interface in a university language programme. *Innovation in Language Learning and Teaching*, 7(2), 158–178.

The authors endorse Hauck and Hurd's (2005) argument that learners' self-management skills [...] can help reduce anxiety, ... and that language learners need to develop an awareness of the origin of their emotions (positive and negative), including self, others and the context of interaction... Those who believe in their effectiveness as learners, [...] set themselves higher learning goals and are determined to succeed regardless of the obstacle, be it of a linguistic, technical or affective nature (Hauck and Hurd 2005; Hampel and Hauck 2006).

Chang, R., Wang, Y., & Hung, H.-H., & Borst, S. (2015). Chinese Language Learners' Foreign Language Anxiety in Online Text Chatting. Paper presented at the annual meeting of the American Council on the Teaching of Foreign Languages (ACTFL), San Diego, California. Available at: https://www.researchgate.net/publication/314104414_Chinese_Language_Learners%27_Foreign_Language_Anxiety_in_Online_Text_Chatting/references

Consistent with previous studies ([...] Hauck & Hurd, 2005 [...]), less confidence in language proficiency is still one of the major reasons that causes nervousness, even in CMC activities.

Kruk, M. (2017). Changes in foreign language anxiety: A classroom perspective. *International Journal of Applied Linguistics*, 27(3), n.p.

In addition, researchers [...] determine the role of anxiety in the field of distance learning (e.g., Hauck and Hurd, 2005) and account for the relationship between anxiety and language learning in computer technology [...].

MA and doctoral theses

Ahmed, I. (2012). *Investigating Students' Experiences of Learning English as a Second Language at the University of Sindh, Jamshoro, Pakistan* (Doctoral Thesis, University of Sussex).

Phenomenography [...] The analysis of students' learning experiences in ESL programmes in higher education has been heavily influenced by this perspective ([...] Hauck and Hurd 2005 [...]).

Chang, H.J. (2012). *The Development of Collaborative Learning Practices in an Online Language Course* (Doctoral Thesis, Newcastle University).

[S]everal studies have suggested that an online language learning course structure encouraged students to develop their metacognitive learning strategies to be successful students (Hauck and Hurd, 2005 [...]).

Baez-Holley, M. (2013). *Foreign Language Anxiety in the Classroom and in an Online Environment* (Doctoral Thesis, Indiana State University).

[Q]uestionnaires and other qualitative methods such as interviews and audio-recordings were used [...] This instrument has been used in several studies (Hauck & Hurd, 2005; Hurd, 2006) and it is considered to be reliable [...]

Many early studies done in the area of foreign language anxiety have revealed that speaking is the language skill that causes the most anxiety among students ([...] Hauck & Hurd, 2005 [...]) [...]

Third, online students realize that much of the responsibility for learning lies with themselves (Hauck & Hurd, 2005).

Mosquera Gaviria, C. P. (2013). *Applying Metacognitive Strategies for Vocabulary Acquisition through Learning Portfolios* (MA Thesis, Universidad de La Sabana Chía).

On the other hand, (Hauck, 2005) states that learners who have developed their metacognitive awareness are likely to become more autonomous language learners.

Schofield, S. E. (2013). *School Administrators' Perceptions of Alabama's ACCESS Distance Learning Program* (Doctoral Thesis, Auburn University).

They stress that conscious selection of strategies and self-directed involvement are characteristics of an autonomous approach, and particularly relevant to those learning in independent contexts (Hauck & Hurd, 2005).

Melchor Couto, S. (2014). *El uso de mundos virtuales para la interacción oral en el aula de lenguas extranjeras y su impacto en las variables afectivas* (Doctoral Thesis, Universidade de Vigo).

Some authors claim that anonymity may disinhibit users ([...] Hauck and Hurd, 2005:16 [...]), therefore creating a more relaxed environment for FL practice [...]

Finally, the comments provided by the participants have confirmed the existence of effects already mentioned here and described by a number of authors, such as the fact that CMC communication provides a safe environment ([...] Hauck and Hurd, 2005:16 [...]).

Ni Loingsigh, D. (2015). *Minority Language Advising in the Workplace: Contextual Practices, Relational Knowing, Mandate, and Change* (EdD Thesis, Maynooth University).

Focusing on the distance learning environment, Harris (2003) and Hauck and Hurd, (2005) emphasise the importance of the learning site, life roles, and support for language learning. Some anxiety-related problems noted are fear of making mistakes, fear of not being understood, "freezing" when called on to speak in front of others, not matching up to expectations, and feeling too much is expected of oneself (Hauck and Hurd, 2005).

Fincham, N. X. (2015). *Metacognitive Knowledge Development and Language Learning in the Context of Web-based Distance Language Learning: A Multiple-Case Study of Adult EFL Learners in China* (Doctoral Thesis, Michigan State University).

[...] L2 researchers who highlight the importance of contextual knowledge in today's technology-rich language learning environment (Hauck & Hurd, 2005 [...]). [...] The variety and simultaneity of modes available to make meaning

and the additional technological challenges they raise can lead to confusion and uncertainty, which can cause learning difficulty and anxiety for language learners (Hauck & Hurd, 2005).

Bollinger, A. (2017). *Foreign Language Anxiety in Traditional and Distance Learning Foreign Language Classrooms* (Doctoral Thesis, Liberty University).

Some studies explored causes of anxiety (Coryell & Clark, 2009), anxiety-producing activities, and anxiety-reducing strategies (Hauck & Hurd, 2005). [...] only a few studies comparing anxiety experienced by students in traditional and distance learning foreign language classes (e.g. Hauck & Hurd, 2005; Pichette, 2009).

Yılan, S. M. (2017). *'Take your Time' to 'Find yourself!': An Exploration of Scaffolded Autonomous Elearning Environments amongst International Students in a UK University* (Doctoral Thesis, University of Southampton).

Considering the use of self-talk to encourage learners to control their learning, rather than engage in an uncontrolled learning process (Zimmerman & Martinez-Pons, 1986), and to increase awareness of learning (Hauck & Hurd, 2005) [...].

5. Hampel, R., & Hauck, M. (2006). Computer-Mediated Language Learning: Making Meaning in Multimodal Virtual Learning Spaces. *The JALT CALL Journal*, 2(2), 3–18.

Total citations Cited by 99



Scholar articles [Computer-mediated language learning: Making meaning in multimodal virtual learning spaces](#)
R Hampel, M Hauck - *The JALT CALL Journal*, 2006
[Cited by 99](#) [Related articles](#) [All 7 versions](#)

Tenor of the citations: an important acknowledgement that in online language learning contexts the mediating effects of digital and multimodal tools needs to be taken into consideration and corresponding competences need to be developed.

Heins, B., Duensing, A., Stickler, U., & Batstone, C. (2007). Spoken Interaction in Online and Face-to-Face Language Tutorials. *Computer Assisted Language Learning*, 20(3), 279–295.

Moreover, a number of articles provide insight into different aspects of the practical use of online audio in the language learning context: exemplified by Lyceum these findings focus on [...] issues of multimodality (Kötter, Shield, & Stevens 1999; Hampel & Hauck, 2006).

Coleman, J., & Furnborough, C. (2010). Learner Characteristics and Learning Outcomes on a Distance Spanish Course for Beginners, *System*, 38(1), 14–29.

Distance learning and online learning are by no means synonymous, but the progressive, theory-driven introduction of new technologies (Hampel and Hauck, 2006) has led to widespread use of online conferencing [...] A distinctive pedagogy with targeted tutor training is required ([...] Hampel, 2009, Hampel and Hauck, 2006 [...]).

Helm, F., & Guth, S. (2010). The multifarious goals of telecollaboration 2.0: Theoretical and practical implications. In F. Helm & S. Guth (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 69–106). Bern: Peter Lang.

Indeed, multimodal communication systems are increasingly used in telecollaboration because of the affordances they offer, but the complexity of these environments means that students need to develop multimodal communicative competence and familiarity with “the ‘grammar’ of additional modes such as the visual” (Hampel and Hauck 2006:12).

Hopkins, J.E. (2010). Distance Language Learners' Perceptions of Assessed, Student-led Speaking Tasks via a Synchronous Audiographic Conferencing Tool. *Innovation in Language Learning and Teaching*, 4(3), 235-258.

An additional reported advantage is that the multimodal nature of SAC environments allows users to select the mode of communication most appropriate to the task at hand, while at the same time catering to different learning styles (Chun and Plass 2000; Hampel 2003; Hampel and Hauck 2006).

Yanguas, Í. (2010). Oral Computer-Mediated Interaction between L2 Learners: It's about Time. *Language Learning & Technology*, 14 (3), 72–93.

We should begin by acknowledging that different modes of communication allow for different ways of communicating [...] the material resources themselves (i.e., the computer, the headset, etc) play an important role when making meaning in the CMC context, they certainly offer “new possibilities for representation and communication” (Hampel & Hauck, 2006, p. 8).

Pegrum, M. (2011). Modified, Multiplied, and (Re-) mixed; Social Media and Digital Literacies. In M. Thomas (Ed.), *Digital Education: Opportunities for Social Collaboration* (pp. 9–36). London: Palgrave.

Language learners could introduce the target language(s) into the mix, learning to codeswitch between tongues at the same time as they learn to codeswitch between semiotic modes (Hampel & Hauck, 2006).

Helm, F. (2013). A Dialogic Model for Telecollaboration. *Bellaterra Journal of Teaching and Learning Language and Literature*, 6(2), 28–48.

Research studies have reported on the many outcomes of different telecollaborative projects, such as gains in [...] multimodal communicative competence (Hampel & Hauck, 2006; Dooly & Hauck, 2012).

Plastina, A.F. (2013). Multimodality in English for Specific Purposes: Reconceptualizing Meaning-Making Practices. *Revista de Linguas para Fines Especificos*, 19, 372–396.

Hampel and Hauck (2006) claim that [...] language learners will have to become competent in both switching linguistic codes and switching semiotic modes and to do so consciously (p. 12).

Messina Dahlberg, G., & Bagga-Gupta, S. (2013). Communication in the virtual classroom in higher education: Linguaging beyond the boundaries of time and space. *Learning, Culture and Social Interaction*, 2(3), 127–142.

Discussing multimodal meaning making, Hampel and Hauck postulate that “it is the individuals' needs and interest, with their personal, cognitive, affective and social dimension that together with task and institutional demands determine the direction of the remaking of the resources available to them” (2006: 6).

Devi S.I., Zaini, A., & Pramela, K. (2014). Deployment of Multimodal Tools by Net Geners: The Avatars of the Multiliterate World. *Procedia - Social and Behavioral Sciences*, 118, 94–101.

Communication in today's virtual environment empowers the users by providing them access to tools which enable e them to design, author and publish their own multimodal texts in, for example, blogs or wikis (Hampel & Hauck 2006).

Helm, F. (2015). The Practices and Challenges of Telecollaboration in Higher Education in Europe. *Language Learning and Technology*, 19(2), 197–217.

[...] students participating in telecollaboration [...] need to be able to become competent in both switching linguistic and semiotic codes, as well as “become fluent in new codes such as online speech and writing and image” (Hampel & Hauck, 2006, p. 12). [...] the challenges and cognitive demands that meaning making in multimodal environments has been found to place on learners (Hampel & Hauck, 2006).

Ittzes Abrams, Z. (2016). Possibilities and challenges of learning German in a multimodal environment: a case study. *ReCALL*, 28(3), 343–363.

[...] since multimodal communication ultimately requires agency on the part of the speaker/user (Hampel & Hauck, 2006 [...]).

White, C. (2017). Distance Language Teaching with Technology. In A. Chapelle and S. Sauro (Eds.), *Handbook of Technology and Second Language Teaching and Learning* (pp. 134–148). New Jersey: John Wiley & Sons.

[...] the affordances and constraints of task-based videoconferencing environments for distance language teaching [...] the new demands they placed on language learners and teachers. [...] “making meaning in multimodal virtual learning spaces” (Hampel and Hauck 2006), and the complexity of that challenge has been identified as one of developing multimodal literacy.

Cocchetta, F. (2018). Developing university students’ multimodal communicative competence: Field research into multimodal text studies in English. *System*, 77, 19-27.

In the international context, discussions on multiliteracy in the L2 classroom include [...] Hampel and Hauck (2006) [...] Hampel and Hauck (2006) examine the concept of multiliteracy and its implications for language teaching and learning in CMC environments.

De Paepe, L., Chang, Z., & Koen, D. (2018). Development and implementation of online Dutch L2 courses in adult education: educators’ and providers’ perceptions of constraints and critical success factors. *Innovation in Language Learning and Teaching*, 12(1), 1–15.

Online learning also demands many new skills and an understanding of the online learning pedagogy from the teachers ... and the skill to design activities that ‘make efficient use of multiple modalities to ensure that learners stretch, change, adapt and modify all elements available’ (Hampel and Hauck 2006, 465).

Doctoral theses

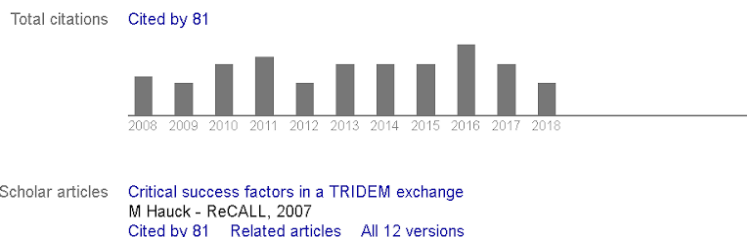
De los Arcos, B. (2010). *Emotion in Online Distance Language Learning: Learners' Appraisal of Regret and Pride in Synchronous Audiographic Conferencing* (Doctoral Thesis, The Open University).

Hampel and Hauck (2006) [...] look at multimodality in the context of language teaching and learning [...] to explore the demands that a multimodal environment puts on its users. [...] they need to learn to represent meaning in more than one mode at a time, understand each mode and how to use different modes constructively, while remaining aware of intercultural values and the affective demands of new media (Hampel & Hauck, 2006) [...] Hampel and Hauck (2006) [...] learners need to be supported by task designers and tutors [...] promoting tutor training to [...] realize the democratic disposition of the medium [...] new literacies requires that language learners become familiar with the electronic medium [...] aware, among other aspects, of its affective demands (Hampel & Hauck, 2006).

Álvarez Valencia, J.A. (2014). *Language, Learning, and Identity in Social Networking Sites for Language Learning: The Case of Busuu* (Doctoral thesis, The University of Arizona).

In [...] CALL/CMC there is already research that hints at the potential of multimodality in fostering language learning. [...] Broadly speaking, this research supports the idea that multimodal communication plays a positive role in CMC-based language teaching and learning ([...] Hampel & Hauck, 2006 [...]).

6. Hauck, M. (2007). Critical Success Factors in a TRIDEM Exchange. *ReCALL*, 19(2), 202–223.



Tenor of the citations: while CMC, telecollaboration in particular, furthers language learners intercultural communicative competence development, this publication highlights the impact of the learners' multimodal communicative competence on their telecollaborative interactions. It is based on research which expands the traditional bilateral format of these exchanges.

Audras, I. & Chanier, T. (2008). Observation de la Construction d'une Compétence Interculturelle dans des Groupes Exolingues en Ligne. *ALSIC*, 11(1), 175–204.

[...] sur l'influence du niveau de compétence communicative dans des environnements multimodaux dans l'expérience Tridem, le lecteur pourra se reporter à Hauck (2007).

Möllering, M., & Ritter, M. (2008). "To niche or not to niche" oder: zum Stellenwert digitaler Medien im fremdsprachlichen Klassenzimmer. In A. Müller-Hartmann & M. Schocker-v. Ditfurth (Eds.), *Aufgabenorientiertes Lernen und Lehren mit Medien: Ansätze, Erfahrungen, Perspektiven in der Fremdsprachendidaktik* (pp. 85–97). Bern: Peter Lang.

Hauck ... schlägt eine Art Risikoabschätzung (risk assessment) vor [...] (2007: 218) [...] "It also raises the question whether 'success' or 'failure' continue to be operable concepts in the context of online language learning in general in telecollaboration in particular. Should they not rather be replaced by 'relative awareness gain' with regard to both intercultural differences and 'cultural characteristics' of the learning environment and its use?" (Hauck 2007: 221).

Lee, L. (2009). Promoting Intercultural Exchanges with Blogs and Podcasting: A Study of Spanish–American Telecollaboration. *Computer Assisted Language Learning*, 22(5), 425–443.

L2 research on CMC has shown that learners benefit from online exchanges through negotiation of meaning and form (e.g. Lee, 2006; Tudini, 2007), as well as develop their intercultural communication competence (ICC) through telecollaboration (e.g. [...] Hauck, 2007 [...]).

O'Dowd, R., & Ware, P. (2009). Critical Issues in Telecollaborative Task Design. *Computer Assisted Language Learning*, 22(2), 173–188.

The learning outcomes of these telecollaborative exchanges have varied greatly and have demonstrated how online intercultural collaboration can contribute to the development of areas as diverse as learner autonomy [...] linguistic accuracy and fluency [...] intercultural awareness ... online intercultural communication skills [...] and electronic literacy (Hauck, 2007).

Örnberg Berglund, T. (2009). Multimodal Student Interaction Online: An Ecological Perspective. *ReCALL*, 21(2), 186–205.

[...] However, providing tools for synchronous interaction does not automatically result in an efficient and constructive interaction setting, as many different factors may affect the interaction taking place ([...] Hauck, 2007; Hauck & Youngs, 2008).

Roggenkamp, D. (2009). *Applying computer supported collaborative learning principles to telecollaboration*. Prepared for LLMC Conference, 2009, National Foreign Language Resource Center, University of Hawaii at Manoa.

Telecollaboration programs include planned sequences of bilingual group projects, usually combining culture learning with language learning. [...] An additional consideration is the multi-modal, polycontextual nature of CMC in telecollaboration as has been reported by Belz (2004), Hauck (2007) [...].

Helm, F., & S. Guth (2010). The multifarious goals of Telecollaboration 2.0: Theoretical and Practical Implications. In F. Helm & S. Guth (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 69–106). Bern: Peter Lang.

Hauck (2007 and in this volume) has highlighted the importance of the impact of varying levels of participants' multimodal communicative competence both

on learners' experience and interaction and on their intercultural communicative competence.

Lewis, T., Chanier, T. & Youngs, B. (2011). Multilateral Online Exchanges for Language and Culture Learning. *Language Learning & Technology*, 15(1), 3–9.

In recent years efforts have been made to expand the bilateral format to accommodate a multiplicity of partners and a more pluralistic approach to intercultural learning (see Hauck, 2007; Hauck & Lewis, 2007; Hauck & Youngs, 2008).

O'Dowd, R. (2011). Online Foreign Language Interaction: Moving from the Periphery to the Core of Foreign Language Education. *Language Teaching*, 44(3), 368-380.

Recent years have seen a third 'generation' or model of telecollaborative exchanges emerging [...] Learners may also be engaged, not in bilateral exchanges, but in more complex multilateral group setups which involve, for example, language learners from three countries (TRIDEM exchanges; Hauck 2007).

Yang, Y.F. (2011). Learner Interpretations of Shared Space in Multilateral English Blogging. *Language Learning & Technology*, 15(1), 122–146.

Studies in digitally mediated communication have explored how language learners co-construct and mediate with each other in telecollaboration or online exchange projects. On what common ground and conditions they can work together successfully is of concern in these studies ([...] Hauck, 2007 [...]).

Helm, F. (2013). A Dialogic Model for Telecollaboration. *Bellaterra Journal of Teaching and Learning Language and Literature*, 6(2), 28–48.

Exchanges may be multilateral, involving more than two groups in any one exchange (Müller-Hartmann, 2006; Hauck, 2007; Hauck & Lewis, 2007).

Thomas, M. (2014). Researching Machinima in Project-Based Language Learning: Learner-Generated Content in the CAMELOT Project. In E. Dixon, & M. Thomas (Eds.), *Researching Language Learner Interactions Online: From Social Media to MOOCs* (pp. 283-302). Texas, USA: Calico Monograph Series (13).

While it has been found that the teacher's involvement in online interactions can greatly influence group dynamics (Hauck, 2007), there is a lack of

consensus on the level of instructor intervention needed to facilitate student participation and promote deeper learning in asynchronous discussions.

Kleban, M., & Bueno-Alastuey, C. (2015). Creating Pedagogical Knowledge through Electronic Materials in a Telecollaboration Project for Pre-Service Teacher Trainees. In A. Gimeno, M. Levy, F. Blin, & D. Barr (Eds.), *WorldCALL: Sustainability and Computer-Assisted Language Learning*. London, UK: Bloomsbury Publishing.

Hauck (2007) reported that students enhanced their general ICT skills as a result of using the digital tools necessary for participating in a telecollaborative exchange ... telecollaboration projects (Hauck 2007, 2013) have analysed the effect of collaborative practices on some areas related to techno-pedagogical knowledge (awareness of available technologies and their affordances, etc.).

McKinnon, S., Smith, A. M.J., & Thomson, J. (2015). A Window to the World: Using Technology to Internationalise Entrepreneurship Education. *Journal of Perspectives in Applied Academic Practice*, 3(3), 15–23.

Hauck (2007, p. 220) emphasises that “areas of conflict and misunderstanding can be turned into key moments of cultural learning for both tutors and learners [...] Assessing the overall success of the pilot is complex. Hauck (2007, p. 221) challenges the idea of using concepts such as ‘success’ or ‘failure’ and suggests replacing them with ‘relative awareness gain’.

Çiftçi, E. Y. (2016). A Review of Research on Intercultural Learning through Computer-Based Digital Technologies. *Educational Technology & Society*, 19(2), 313–327.

[T]he current literature has revealed that there was and will be a need for training participants for technology-based competences or for the required tools before any online exchange takes place (Chun, 2011; Hauck, 2007; Lee & Markey, 2014) [...] It therefore seems that the backbone of successful online intercultural interactions is a meticulous design (Hauck, 2007).

Ensor, S., Kleban, M., & Rodrigues, C. (2017). Telecollaboration: foreign language teachers (re)defining their role. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 20, n.p.

More recently telecollaboration has been related to the development of [...] "multimodal communicative competence" (Hauck, 2007), or multiliteracies (Hauck, 2010; Guth & Helm, 2012).

Lin, W-C., Shie, J-S., & Holmes, P. (2017). Enhancing intercultural communicative competence through online foreign language exchange: Taiwanese students' experiences. *Asian Journal of Applied Linguistic*, 4(1), 73–88.

In recent years, efforts have also been made to engage language learners in either traditional binary schema of bilateral telecollaborative exchanges (O'Dowd, 2005; Yang, 2011) or multilateral approach to intercultural learning (Hauck, 2007; Hauck & Youngs, 2008) [...].

Huang, L. (2018). Intercultural Education on the Theme of the Belt and Road Initiative: A Multimodality Oriented Pedagogical Design. In Y. Cheng, L. Song & L. Huang (Eds.) *The Belt & Road Initiative In The Global Arena: Chinese and European Perspectives* (pp. 35–54). Basingstoke: Palgrave Macmillan.

MA and doctoral theses

De los Arcos, B. (2010). *Emotion in Online Distance Language Learning: Learners' Appraisal of Regret and Pride in Synchronous Audiographic Conferencing* (Doctoral Thesis, The Open University).

Researchers [...] investigate the extent to which [...] multimodal environments influenced task design and learner interaction, and consider some of the factors that contribute to the success or failure of telecollaboration projects (Hauck, 2007; Hauck & Youngs, 2008). [...] Hauck (2007) focuses on discrepancies in the linguistic competence of participants, the disparity in their awareness of the different affordances of the electronic tools, affective variables [...] and their gain in cultural knowledge.

Guarda, M. (2013). *Negotiating a Transcultural Place in an English as a Lingua Franca Telecollaboration Exchange: A Mixed Methods Approach to the Analysis of Intercultural Communicative Competence and Third Space in an Online Community of Practice* (Doctoral thesis, Università degli Studi di Padova).

[A]n interesting form of telecollaborative partnerships is the one which involves more than two cultures [...]: an example for this is the Tridem project described in Hauck (2007) and Hauck and Lewis (2007) [...], which involved the use of both languages and the exploration of a variety of cultures.

Pol, L. (2013). *Telecollaboration in Secondary Education: An Added Value?* (Master thesis, Faculty of Humanities, Utrecht University).

Another study compared the use of synchronous and asynchronous communication and aimed to determine how these tools affected “learner experience and interaction and [...] the development of ICC” (Hauck, 2007, p. 205).

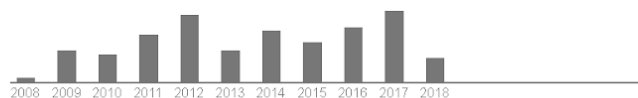
Feitosa de Carvalho, E. (2015). *Bringing Awareness About Differences Between Teacher-Partners While Designing and Implementing Telecollaborations* (MA Thesis, Utrecht University).

It may be seen as an opportunity for learners to practice “intercultural communication,” which is very important in the development of intercultural communication skills ([...] Hauck, 2007 [...]). [...] Depending on the amount of effort dedicated by learners to the tasks, previous ICT knowledge and some ICT training during “pre-exchange briefings,” TC may help in the development of ICT skills (Hauck, 2007).

The development of learner autonomy is one of the goals of telecollaborative tasks ([...] Hauck, 2007 [...]).

7. Hauck, M., & Youngs, B. (2008). Telecollaboration in multimodal environments: The impact on Task Design and Learner Interactions. *Computer Assisted Language Learning*, 21(2), 87–124.

Total citations Cited by 116



Scholar articles [Telecollaboration in multimodal environments: The impact on task design and learner interaction](#)
M Hauck, BL Youngs - *Computer Assisted Language Learning*, 2008
[Cited by 116](#) [Related articles](#) [All 7 versions](#)

Tenor of the citations: a publication that provides evidence for the need to draw the attention of those involved in telecollaboration to the influence the online medium and its affordances have on how they communicate and engage with each other. It also shows the pivotal role played by the tasks carried out.

Deutschmann, M., & Panichi, L. (2009). Talking into empty space? Signalling involvement in a virtual language classroom in Second Life, *Language Awareness*, 18(3-4), 310–328.

[A]uthors also point to the limited number of studies exploring the possibilities/limitations of audio synchronous tools (Hampel, 2003; Hauck & Youngs, 2008; Jauregi & Banados, 2008). [...] and how the affordances of the environment influence participation become central concerns to online educators [...].

Lee, L. (2009) Promoting Intercultural Exchanges with Blogs and Podcasting: A Study of Spanish-American Telecollaboration, *Computer Assisted Language Learning*, 22(5), 425–443.

However, only limited research has been conducted using Web 2.0 tools for telecollaboration (Ducate & Lomicka, 2005; Hauck & Youngs, 2008).

Örnberg Berglund, T. (2009). Multimodal Student Interaction Online: An Ecological Perspective. *ReCALL*, 21(2), 186–205.

Previous research on language learning in multimodal online environments has often been concerned with audio-visual tools (an extensive review is available in Hauck & Youngs, 2008).

Wang, F. (2012). Using Second Life to assist EFL Teaching: we do not have to sign in to the program, *TechTrends*, 56(4), 15–18.

As researchers pointed out, a successful learning activity does not depend on technology (Colpaert, 2006), but on its design (Hampel, 2006; Hauck & Youngs, 2008; Zhao, 2003).

González-Lloret, M., & Ortega, L. (2014). Towards technology-mediated TBLT. In M. González-Lloret, & L. Ortega (Eds.), *Technology-mediated TBLT: Researching Technology and Tasks*. Amsterdam, The Netherlands: John Benjamins Publishing Company.

In addition, two task-related issues have received considerable attention by the CALL research community. [...] The other is the importance of task design in successful telecollaborations in the service of intercultural learning ([...] Hauck & Youngs 2008 [...]).

Kurek, M. (2015). Designing Tasks for Complex Virtual Learning Environments. *Bellaterra Journal of Teaching & Learning Language & Literature*, 8(2), 13–32.

As Hauck and Youngs (2008) have it, the modes that tools offer are specific to a particular environment and “their affordances determine how such applications can be used” (Hauck & Youngs, 2008, p. 7). They continue that “individual affordances create distinct learning environments allowing for different levels of interaction” (ibid., p. 20).

Fuchs, C. (2016). “Are you able to access this website at all?” – team negotiations and macro-level challenges in telecollaboration. *Computer Assisted Language Learning*, 29(7), 1152–1168.

At the same time, the project provided participants with a pipeline for exploring and experimenting with technology and collaborative task design, which can in turn help support their digital literacy ([...] Hauck & Youngs, 2008 [...]).

Guo, S., & Möllering, M. (2016). The implementation of task-based teaching in an online Chinese class through web conferencing, *System* 62, 26–38.

Recently, there are increasing calls to investigate TBLT in multimodal online learning environments (Hauck & Youngs, 2008; Stockwell, 2010).

O'Dowd, R. (2016). Emerging Trends and New Directions in Telecollaborative Learning. *CALICO Journal*, 33(3), 291–310.

Studies on the impact of videoconferencing and multimodal communication are very present in the recent literature (Barron & Black, 2015; Hauck & Youngs, 2008).

Del Rosal, K., Conry, J., & Wu, Sumei. (2017). Exploring the fluid online identities of language teachers and adolescent language learners, *Computer Assisted Language Learning*, 30(5), 390–408.

Hauck and Youngs (2008) found that the type of technology used in a telecollaboration and the design of collaborative tasks influenced participants' perceptions about their level of connection.

Renner, J. (2017). Negotiation of meaning and language-related episodes in synchronous, audio-based Chinese-German eTandem. *CercleS*, 7(1), 137–159.

The studies by [...] Hauck and Youngs (2008) [...] serve as a foundation for the following case study insofar as their main concern is the interplay between different modalities, such as audio-chat and text-chat, for negotiations and feedback.

Luo, H., & Yang, C. (2018): Twenty years of telecollaborative practice: implications for teaching Chinese as a foreign language. *Computer Assisted Language Learning*. *Computer Assisted Language Learning*, 31(1-2), 1–16.

[T]asks play an important role in determining the learning outcomes of telecollaboration ([...] Hauck & Youngs, 2008 [...]) [...] Asynchronous text-based communication has a few benefits for language learning, ... creating 'more scope for developing closer relationships with their learning partners' (Hauck & Youngs, 2008, p. 103). [...] Videoconferencing allows learners to [...] engage in more 'life-like' interaction (Hauck & Youngs, 2008) [...] different tools offer different advantages (Hauck & Youngs, 2008).

Cohen, C., & Wigham, C. (in press). A comparative study of lexical word search in an audioconferencing and a videoconferencing condition. *Computer Assisted Language Learning*.

More recent studies have investigated the contributions of the webcam in videoconferencing environments and the ways in which the interlocutor's image, that gives access to communicative resources including gestures, facial expressions, body movements and gaze, may contribute to more active communication and better mutual understanding. Such studies have explored analysis units including [...] task design (e.g., Hauck & Youngs, 2008).

MA and doctoral theses

Pol, L. (2013). Telecollaboration in Secondary Education: An Added Value? (Master thesis, Faculty of Humanities, Utrecht University).

Providing students with the opportunity to improve their IC (Liaw, 2006 and Hauck & Youngs, 2008), and [...] through this, their independence (Fuchs, Hauck & Müller-Hartmann, 2012) can be reasons for setting up an exchange.

Wunder, I. (2017). The influence of cultural background on teaching and learning in synchronous online sessions (Doctoral thesis, Department of Educational Research, Lancaster University).

[T]he existing [...] body of research which has its origin in telecollaboration ([...] Hauck & Youngs, 2008) [...] The need for and the affordances of teacher training have been researched intensively in the field of CALL and it can be argued that the actual topic of foreign language teaching is one layer of mediation put on top of technology-mediated learning ([...] Hauck and Youngs, 2008).

8. Hauck, M., & Hampel, R. (2008). Strategies for Online Environments. In S. Hurd & T. Lewis (Eds.), *Language Learning Strategies in Independent Settings* (pp. 283–302). Bristol: Multilingual Matters.

Tenor of the citations: The publication belongs to the few examples in the literature on online language learning that argues for learner training in strategy use.

Meskill, C., & Sadykova, G. (2011). Introducing EFL faculty to online instructional conversations. *ReCALL*, 23(3), 200–217.

[T]he current distance education literature [...] underscores the interactive and personal aspects of online learning (Dringus, 1999; King, 2002), aspects that have been echoed strongly in research specific to language education (Hauck & Hampel, 2008; Meskill & Anthony, 2007).

Lai, C., & Morrison, B. (2013). Towards an Agenda for Learner Preparation in Technology-Enhanced Language Learning Environments. *CALICO Journal*, 30(2), 154–162.

Thus, fostering the prerequisite attitudes, knowledge and skills becomes crucial if we want to engage language learners in active and effective use of technology-mediated language learning environments ([...] Hauck & Hampel, 2008 [...]).

Ranalli, J. (2014). Technology-Mediated L2 Strategy in Instruction and its Potential to Enhance Evaluation and Research. *International Journal of Computer-Assisted Language Learning and Teaching*, 4(4), 44–59.

[T]echnology-based environments [...] bring with them challenges, including [...] the related need for training to facilitate learners' effective use of them. CALL researchers have called for instruction to help learners make more

strategic and self-directed use of such resources (Hauck & Hampel, 2008 [...]).

Doctoral theses

Ranalli, J. (2012). *The VTT Project: A web-based platform for strategy instruction and research into self-regulated learning of L2 vocabulary* (Doctoral Thesis, Iowa State University).

This paper has proposed principles for the design of online L2 strategy instruction, based on the concepts of cognitive load, complex cognitive skill, and multimedia learning. These principles could prove useful in addressing recently discussed needs to help learners make more strategic and self-directed use of CALL resources (Hauck, 2005; Hauck & Hampel, 2008; Winke & Goertler, 2008), particularly in contexts where processing demands are likely to be high.

Gang, L. (2017). *Estratégias Utilizadas por Aprendentes de Português Língua Estrangeira: Estudantes Universitários Falantes de Língua Materna Chinesa* (Doctoral Thesis, Universidade de Lisboa).

A importância das LLS na aprendizagem online é também assinalada por Hauck e Hampel (2008). As autoras consideram que tal se deve ao facto de a interação realizar-se em situações menos familiares ou em circunstâncias que são frequentemente usadas para fins comunicativos e que não são propriamente criadas para o ensino de LE. [...] As autoras sublinham que ainda se sabe muito pouco sobre a forma como os aprendentes empregam as LLS e desenvolvem a competência estratégica quando estudam online.

9. Hauck, M. (2010a). Telecollaboration: At the interface between Multimodal and Intercultural Communicative Competence. In S. Guth & F. Helm (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 219–244). Bern: Peter Lang.

Cited by 49 (no graph available)

Tenor of the citations: a study that focuses on multimodal communicative competence and new media literacies and discusses their relevance to the main tenet of telecollaboration: intercultural competence development.

Jauregui, K. (2011). La negociación de procesos de escritura a través de la videocomunicación. *Quaderns de Filologia. Estudis lingüístics*, Vol. XVI, 81–103.

Diversos estudios han mostrado que la comunicación multimodal (Hauck, 2010) que se genera en entornos tecnológicos [...] donde confluyen el lenguaje escrito, oral y electrónico [...] contribuye al análisis crítico de elementos lingüísticos y tipográficos presentes en el texto y a la sensibilización de que uno escribe para determinados lectores.

Hampel, R., & De los Arcos, B. (2013). Interacting at a distance: a critical review of the role of ICT in developing the learner–context interface in a university language programme. *Innovation in Language Learning and Teaching*, 7(2), 158–178.

Hauck (2010a) explored notions of multimodal and intercultural communicative competence. The study suggests that raising awareness regarding both the media used and the intercultural experience helps learners to take greater control of their learning context and to collaborate more successfully.

O'Dowd, R. (2013). Telecollaboration and CALL. In M. Thomas, H. Reinders & M. Warschauer (Eds.), *Contemporary Computer Assisted Language Learning* (pp.

123–139). London/New York: Bloomsbury.

Spijkerbosch, P. (2013). CMC in a Japanese educational context. *Studies in Language and Literature*, 33(1), 140–162.

Hauck (2010) outlines what she describes as the ‘interdependence of multimodal and intercultural communicative competencies’.

Dunne, B.G. (2014). Reflecting on the Japan-Chile Task-Based Telecollaboration Project for Beginner-Level Learners. *TESL Canada Journal*, 31(8), 175-186.

The current research landscape predominantly focuses on either the development of intercultural (communicative) competence ([...] Hauck, 2010 [...]) or the advantages of the multimodal use of combined technologies, ([...] Hauck, 2010 [...]).

Lindner, R., & Méndez Garcia, M. (2014). The Autobiography of Intercultural Encounters through Visual Media: exploring images of others in telecollaboration. *Language, Culture and Curriculum*, 27(3), 226–243.

Hauck (2010) suggests that multimodal communicative competence – ‘i.e. the ability to understand the combined potential of various modes of meaning making’ (Royce, 2002, p. 226), including written and spoken language and visual resources – is directly linked to the ability to analyse the cultural make-up of a learning environment and the acquisition of intercultural competence [...]. This is a challenging mix, which, as Hauck points out, needs to be taken into account both in learner and tutor training for telecollaboration and in the design of telecollaboration tasks.

Grau, M., & Legutke, M. (2015). Linking Language Learning Inside and Outside the Classroom – Perspectives from Teacher Education. In D. Nunan & J.C. Richards (Eds.), *Language Learning Beyond the Classroom* (pp. 263–272). Abingdon: Routledge.

own ways. The published research in this field suggests that misunderstandings or even communication breakdowns are not uncommon, often caused by the very nature of computer-mediated communication (Hauck, 2010). Teachers who engage in virtual or face-to-face encounters with their classes need to be aware of

Frutos, M.J.R. (2016). Multimodale Interaktion in einer zweisprachigen Community. In C. Baechler, E.M. Eckkrammer, J. Müller- Lancé & V. Thaler (Eds.), *Medienlinguistik 3.0 – Formen und Wirkung von Textsorten im Zeitalter des Social Web* (pp. 329-346). Mannheim: Frank & Timme.

Hauck (2010: 243) unterscheidet bei *Modi* zwischen dem gesprochenen Modus, dem geschriebenen Modus, dem Bild-Modus und dem Gebärden-Modus:

- spoken mode (code – including languages and language varieties, vocabulary, syntax, voice and pronunciation, nonverbal signals)

Cappellini, M. (2017). La télécollaboration vue par la communication exolingue—Pour un enrichissement mutuel de deux traditions de recherche. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 20, n.p.

Cela amène [...] à la définition d'une compétence multimodale (Hauck, 2010; Dooly & Hauck, 2012) [...] La notion d'affordance [...] fournit une entrée à la fois sur le rapport dialectique entre un locuteur et son environnement et sur la construction transmodale du sens ([...] Hauck, 2010). La première observation est que, conformément à d'autres études dans la littérature (par exemple, Hauck, 2010), la co-construction du sens et des séquences latérales se fait effectivement par une orchestration des modes, autrement dit de manière transmodale.

González-Lloret, M. (2017). Technology for Task-based Language Teaching. In A. Chapelle and S. Sauro (Eds.), *Handbook of Technology and Second Language Teaching and Learning* (pp. 234-247). New Jersey: John Wiley & Sons.

This adds value to technology-mediated TBLT since students would be developing their digital, multimodal, and informational literacies (Warschauer, 2007) at the same time that they are developing their language competence; two essential life skills for the citizens of tomorrow. This requires teachers to

be knowledgeable in the use of multiple technologies as well as experienced in the development of tasks (Hauck 2010).

Combe, C. (2017). Télécollaboration informelle 2.0 : le vlogue d'un américain en français sur YouTube. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 20, n.p.

Hauck (2010) souligne également que développer des compétences multimodales – au sens où Kress en 2003 l'entendait, c'est-à-dire savoir exprimer des idées au travers de modes aussi différents que les mots, les images fixes ou mobiles ou les modèles 3D – sont nécessaires à l'apprenant 2.0.

Al Khateeb, A. (2018). Assessing English Teachers as a Foreign Language (EFL) Telecollaborative Competence: A Case Study from Saudi Arabia, *English Language Teaching*, 11(4), 55-69.

Hauck (2010) confirms that telecollaborative tasks involve 'the development of language proficiency, intercultural communicative competence and new media literacies.

MA and doctoral theses

Malinowski, D. (2011). *Where is the Foreign? An Inquiry into Person, Place, and the Possibility of Dialogue in an Online French Language Class* (Doctoral Thesis, University of California, Berkeley).

[M]ore recent studies ...and explore the relationship between intercultural and multimodal competence (Hauck, 2010).

Guarda, M. (2013). *Negotiating a transcultural place in an English as a lingua franca telecollaboration exchange: a mixed methods approach to the analysis of intercultural communicative competence and third space in an online Community of Practice* (Doctoral Thesis, University of Padova).

[T]he computer and above all the Internet have profoundly changed the way language learners come into contact and interact with learning partners worldwide in a way that seems to foster [...] their new online literacies (Guth and Helm 2010; Hauck 2010).

Panichi, L. (2014). *Participation in language learning in virtual worlds. An exploratory case-study of a Business English course* (Doctoral Thesis, University of Hull)

It is with the use of audio-graphic conferencing platforms in particular, however, that the initial discussion of multimodality in CMCL has been framed ([...] Hauck, 2010 [...]).

Wang-Szilas, J. (2016). *Les enjeux de l'intégration de l'e-Tandem en didactique des langues-cultures étrangères : interactions entre apprenants et dynamique institutionnelle dans un dispositif universitaire sino-francophone* (Doctoral Thesis, Université Sorbonne Paris Cité)

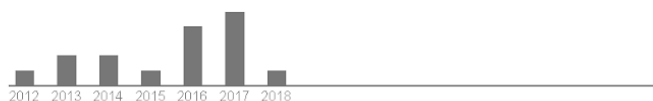
Hauck résume trois défis pour les interlocuteurs engagés dans une communication dite télécollaborative : « engaging with meaning making via multiple modes in a new, online culture while depending on limited written and/or oral proficiency in another language » (Hauck, 2010: 227).

Wunder, I. (2017). *The influence of cultural background on teaching and learning in synchronous online sessions* (Doctoral Thesis, Lancaster University).

Hauck's findings that "the learner's multimodal communicative competence, awareness of the cultural characteristics of the learning environment, i.e. the cultural dependency of tools, communicative norms and personal styles (Thorne 2003), and gain in intercultural competence as understood by Byram (1997)" (2010, p. 8) are interrelated, can be used to educate teachers about [...] their own teaching in virtual classrooms.

10. Hauck, M. (2010b). The enactment of task design in Telecollaboration 2.0. In M. Thomas & H. Reinders (Eds.), *Task-based language learning and teaching with technology* (pp. 197–217). London: Continuum.

Total citations [Cited by 16](#)



Scholar articles [The enactment of task design in telecollaboration 2.0](#)
M Hauck - Task-based language learning and teaching with ..., 2010
[Cited by 16](#) [Related articles](#) [All 5 versions](#)

Tenor of the citations: a chapter that fills a gap in technology-mediated language learning and TBLT by taking account of multimodality and digital literacy.

Banegas, D.L. (2013). ELT through Videoconferencing in Primary Schools in Uruguay: First Steps. *Innovation in Language Learning and Teaching*, 7(2), 179–188.

This was prompted by the need to discuss the relationship between Task-Based Learning, teacher development and technology (Hauck 2010; Raith and Hegelheimer 2010) in this particular context.

González-Lloret, M., & Ortega, L. (2014). Towards technology-mediated TBLT An introduction. In M. González-Lloret & L. Ortega (Eds.), *Technology-mediated TBLT: researching technology and tasks* (pp. 1–22). Amsterdam: John Benjamins Publishing Company.

Studies of CMC tasks are concerned not just with language learning, but also with the acquisition of intercultural competence ([...] Hauck 2010 [...]). In this line of research, we are seeing a shift in the investigation of TBLT and technology from purely cognitive studies to those with a sociocultural and intercultural focus, as well as a focus on the development of digital literacies.

Kurek, M. (2015). Designing Tasks for Complex Virtual Learning Environments. *Bellaterra Journal of Teaching & Learning Language & Literature*, 8(2), 13–32.

[T]echnology mediation has [...] given rise to a wide range of new types of multimodal interaction, be it with content or with other learners. Therefore Hauck (2010) argues that the activities designed for online contexts should first make appropriate use of multiple modalities and, then, also promote learners' digital literacy [...]. As Hauck's arguments go "varying affordances require varying e-literacy skills (ibid., p. 204).

Ittzes Abrams, Z. (2016). Possibilities and challenges of learning German in a multimodal environment: a case study. *ReCALL*, 28(3), 343–363.

Scholars in computer-mediated second language (L2) learning have called for research to fill in this gap by reflecting critically on task design and the subsequent implementation process ([...] Hauck, 2010). [...] the data serve to highlight the possibility of research on TBLT in computer-mediated environments ([...] Hauck, 2010) and on multimodality [...] to inform L2 pedagogy.

Kurek, M., & Müller-Hartmann, A. (2017). Task design for telecollaborative exchanges: In search of new criteria. *System*, 64, 7–20.

Hauck makes the same claims as to training online tutors "in the design of activities that make appropriate use of multiple modalities" (Hauck, 2010, p. 206), due to the fact that new concepts of telecollaboration [...] comprise "the development of language proficiency, intercultural communicative competence and new media literacies" (Hauck, 2010, p. 200). [...] This process of task implementation and the changes that ensue to the original task(s) have been well documented in telecollaborative research (e.g. [...] Hauck, 2010).

Doctoral thesis

van de Zwaard, R. (2017). Patterns of (negotiated) interaction during telecollaboration between native and advanced non-native speakers (Doctoral Thesis, University of Amsterdam)

Using digital technology and testing the effectiveness of digital communication within task-based L2-learning have only recently attracted widespread academic attention (e.g. Hauck, 2010 [...]).

11. Fuchs, C., Hauck, M., & Müller-Hartmann, A. (2012). Promoting learner autonomy through multiliteracy skills development in cross-institutional exchanges. *Language Learning & Technology*, 16(3), 82–102.

Total citations [Cited by 59](#)



Scholar articles [Promoting learner autonomy through multiliteracy skills development in cross-institutional exchanges](#)
C Fuchs, M Hauck, A Müller-Hartmann - *Language Learning & Technology*, 2012
[Cited by 59](#) [Related articles](#) [All 12 versions](#)

Tenor of the citations: the authors show that telecollaboration not only offers opportunities for exploratory teaching practice, but also fosters the development of the competences required to teach with multimodal technologies such as multimodal communicative competence and multiliteracy as well as the development of autonomy.

To be noted: The definition of learner autonomy which underpins Fuchs, Hauck & Müller-Hartmann (2012) was one of the main references in the call for contributions to a CALICO Monograph on “Learner Autonomy and Web 2.0” in 2016. In their call for contributions the editors (Lewis, Mompean and Cappellini) wrote the following: “Of equal importance is the opportunity afforded by Web 2.0 of using multiple modes for making meaning, in learning to communicate online. This has enabled some to suggest a possible recasting of learner autonomy in the digital world as ‘the informed use of a range of interacting resources in context’ (Palfreyman, 2006; Fuchs, Hauck and Müller-Hartmann, 2012). The monograph was published in 2017.

Cutrim Schmid, E., & Hegelheimer, V. (2014). Collaborative Research Projects in the Technology-Enhanced Language Classroom: Pre-service and In-service Teachers Exchange Knowledge about Technology. *ReCALL*, 26(3), 315–332.

Fuchs, Hauck and Mueller-Hartmann (2012) reported on two empirical case studies following a task-based telecollaborative learning format, in which they investigated the competencies (future) language teachers require in order to develop first their own and then their learners' autonomy in online and blended settings. [...] they discuss the benefits of two specific approaches in CALL teacher education – experiential modeling (Hoven, 2006) and exploratory practice (Allwright & Hanks, 2009) – in supporting the development of such competencies.

Murray, G. (2014). Autonomy in Language Learning as a Social Construct. In: G. Murray (Ed.) *Social Dimensions of Autonomy in Language Learning* (pp. 233–249). London: Palgrave Macmillan, London.

Fuchs et al. (2012) describe a telecollaboration project whereby language learners, student teachers and tutors became more aware of modes and meaning-making online and multiliteracy skills development based on hands-on analysis of web resources and social networking tools (2012: 82).

White, C. (2014). The Distance Learning of Foreign Languages: A Research Agenda. *Language Teaching*, 47(4), 538–553.

A hallmark of DLL is the absence of direct teacher mediation of learning activities, [...] learners must [...] develop the ability to manage their own learning [...]. It is this feature which has made DLL such an interesting site for research into learner autonomy ([...]Fuchs, Hauck & Müller-Hartmann 2012 [...]). A key question is whether and how students adapt over time to the affordances in those student-led settings, as part of their developing individual and collaborative autonomy.

Williams, L., Abraham, L.B., & Bostelmann, E.D. (2014). A Discourse-Based Approach to CALL Training and Professional Development. *Foreign Language Annals*, 47(4), 614–629.

Fuchs, Hauck, and Müller-Hartmann (2012), for example, found that participants in a task-based telecollaborative project developed an awareness of the constraints and affordances of Web 2.0 tools [...] the findings from these studies provide important guidance for training future teachers across the secondary and postsecondary levels to use and evaluate the use of Computer-Assisted Language Learning (CALL) tools.

Turula, A., & Raith, T. (2015). Telecollaboration insights: Learning from exchanges that fail. *The EUROCALL Review*, 23(2), 19–37.

To mention just a few, they include: [...] Fuchs et al. (2012) [...]. These books, chapters and papers are stories of effective design of the exchanges overall as well as descriptions of tasks that have been proved successful. Reading about them is educational in a number of ways: [...] as a source of pedagogical models of telecollaboration, from the very idea and exemplary procedures to task design.

Hoffstaedter, P., & Kohn, K. (2015). Telecollaboration for Intercultural Foreign Language Conversations in Secondary School Contexts: Task Design and Pedagogic Implementation. TILA Research Results on Telecollaboration. Available at: www.sprachlernmedien.de/wp-content/uploads/2016/07/Hoffstaedter-Kohn-2015_TILA-research-study-TC-task-design-ped-implem.pdf

A multimodal approach ... can also be successfully deployed for enabling pupils to explore and practise the full range of oral and written modes of communication under different technological conditions and to develop the required digital literacy skills (Fuchs, Hauck, & Müller-Hartmann, 2012).

Vinagre, M. (2015). Training Teachers for Virtual Collaboration: A Case Study. *British Journal of Educational Technology*, 47(4), 787–802.

The integration of virtual collaborative (telecollaborative) exchanges in the foreign language classroom has become increasingly popular in the last 20 years. The implementation of these exchanges worldwide entails engaging students in international communication and collaboration with partners of different cultures and in distant locations with the aim of developing both language skills and intercultural competence (Belz, 2004). Research has also shown the potential of this activity for developing learner autonomy (Fuchs, Hauck & Müller-Hartmann, 2012), pragmatic aspects through social relationships (Kinginger, 2000; Vinagre, 2008) and multiple literacies (Guth & Helm, 2011).

Csida, S., & Mewald, C. (2016). Primar WebQuest in Foreign Language Education. *International Journal for Lesson and Learning Studies*, 5(1), 45–59.

Fuchs et al. also suggest that Web 2.0 tools and environments are considered an increasingly popular and effective means to simultaneously increase the learners' systematic development of multiliteracy and autonomy.

Dugartsyrenova, V.A., & Sardegna, V.G (2016). Developing oral proficiency with VoiceThread: Learners' strategic uses and views. *ReCALL*, 29(1), 59–79.

[S]cholars have argued that, in addition to fostering multimodal communicative competence and promoting new forms of social engagement (Fuchs, Hauck & Müller-Hartmann, 2012), VT increases learners' engagement with the content itself because it appeals to multiple learning modalities [...].

Reinders, H., & White, C. (2016). 20 years of Autonomy and Technology: How far have we come and where to next? *Language Learning & Technology*, 20(2), 143–154.

Fuchs, Hauck, and Müller-Hartmann (2012), for example, describe two task-based telecollaborative projects involving four countries. [...] In these settings, autonomy was defined as entailing “the informed use of a range of interacting resources in context” (p. 82), and the aim was to promote autonomy through the development of multimodal communicative competence and multiliteracy.

Tanghe, S., & Park, G. (2016). “Build[ing] something which alone we could not have done”: International collaborative teaching and learning in language teacher education. *System*, 57,1–13.

[T]elecollaboration projects [...] have been found to be valuable in promoting student autonomy, developing multiliteracy skills, gaining multimodal communicative competence, and familiarizing teachers with technology use in the classroom (Fuchs, Hauck, & Müller-Hartmann, 2012).

Parmaxi, A., & Zaphiris, P. (2017). Web 2.0 in Computer-Assisted Language Learning: a research synthesis and implications for instructional design and educational practice. *Interactive Learning Environments*, 25(6), 704–716.

By combining Web 2.0 tools [...] researchers attempt to optimize the affordances of these tools. Amongst the benefits [...] reported [...] are [...] development of learner autonomy and e-literacy, when working in tools such as forums, wikis, and social bookmarking sites for language learning and teaching purposes (Fuchs et al., 2012).

Bueno-Alastuey, M.C., Villarreal, I., & Esteban, S.G. (2018). Can telecollaboration contribute to the TPACK development of pre-service teachers? *Technology, Pedagogy and Education*, 27(3), 1–15.

MA and doctoral theses

Lane, M. (2013). *An Instructional Module Template for Orientation to the Situated Practice of Oral Communication Online in the Community College* (MA Thesis, Gonzaga University).

Instructor awareness of the “constraints and possibilities in terms of online modes and meaning making can potentially increase learner autonomy” (Fuchs, Hauck, & Mueller-Hartmann, 2012, p. 84).

Pol, L. (2013). *Telecollaboration in Secondary Education: An Added Value?* (Doctoral Thesis, Utrecht University).

Providing students with the opportunity to improve their IC [...] and through this, their independence (Fuchs, Hauck & Müller-Hartmann, 2012) can be reasons for setting up an exchange.

Fincham, N. X. (2015). *Metacognitive Knowledge Development and Language Learning in the Context of Web-based Distance Language Learning: A Multiple-Case Study of Adult EFL Learners in China* (Doctoral Thesis, Michigan State University).

Central to this concept of multimodality is that technology-mediated environments offer the possibility to combine a variety of different modes in the making of texts, and the variety of web based or digital tools allow us to combine these modes easily for meaning-making (Fuchs et al., 2012).

Viafara Gonzalez, J.J. (2015). *Self-perceived (non) Nativeness and Colombian Prospective English Teachers in Telecollaboration* (Doctoral Thesis, The University of Arizona)

[...] ICFLE can support students' advancement in areas including multiliteracies and critical perspectives (Guth & Helm, 2012; Fuchs, Hauck & Müller-Hartmann, 2012; Train, 2005).

Yilan, S. M. (2017). *'Take your Time' to 'Find yourself!': An Exploration of Scaffolded Autonomous Elearning Environments amongst International Students in a UK University* (Doctoral Thesis, University of Southampton).

A number of studies have looked at the relationship between digital literacy and learner autonomy. For example, Fuchs, Hauck and Müller-Hartmann (2012) investigated 'the interrelationship between multimodal communicative competence, multiliteracy skills and autonomy' (p. 83). [...] Tasks should [...] enable them [learners] to be aware of the tools' affordances [...]. Digital literacy emerges as a crucial issue to consider [...] how students' digital literacy is interrelated with their autonomous learning and tools' scaffolding, as stated in the study of Fuchs et al. (2012).

12. Kurek, M., & Hauck, M. (2014). Closing the “digital divide” – a framework for multiliteracy training. In J. Pettes Guikema & L. Williams (Eds.), *Digital Literacies in Foreign and Second Language Education: Research, perspectives, and best practice* (pp. 119–140). CALICO Monograph Series (12). San Marcos, TX: CALICO.

Total citations Cited by 14



Scholar articles [Closing the “digital divide”–a framework for multiliteracy training *](#)
M Kurek, M Hauck - 2014
[Cited by 14](#) [Related articles](#) [All 2 versions](#)

Tenor of the citations: a chapter that introduces a framework for a scaffolded approach to the production of digital genres informed by multimodality.

Godwin-Jones, R. (2015). Contributing, Creating, Curating: Digital Literacies for Language Learners. *Language Learning & Technology* 19(3), 8–20.

Kurek and Hauck (2014) advocate the use of a three-tiered framework for training students to enable them to "move along a continuum from informed reception of technology mediated input through thoughtful participation in opinion-generating activities and up to creative contribution of multimodal output" (p. 120). [...] Kurek and Hauck (2014) point to the fact that many of the contributions to social networking sites can be categorized as "social grooming", with writing that is shallow and inconsequential.

Ittzes Abrams, Z. (2016). Possibilities and challenges of learning German in a multimodal environment: a case study. *ReCALL*, 28(3), 343–363.

Nonetheless, learners in this study seemed to benefit from the multimodal resources [...] [and] were able to decipher language as socially situated action (Jewitt, 2014). This awareness is crucial in a world that expects individuals “to operate within increasingly multilingual, multicultural, multimodal, multigenre, and multiuser contexts” (Kurek & Hauck, 2014: 123).

Rodrigues, P., & Bidarra, J. (2016). Transmedia Storytelling as an Educational Strategy: A Prototype for Learning English as a Second Language. *International Journal of Creative Interfaces and Computer Graphics*, 7(2), 56–67.

Kurek and Hauck (2014, p. 120) argue “language learners who can comfortably alternate in their roles as semiotic responders and semiotic initiators will reflect the success of training that takes account of multimodality as a core element of digital literacy skills. [...] Kurek and Hauck (2014, p. 122) highlight the importance of careful scaffolding and modeling to reduce the cognitive load – “dealing with vast amounts of multimodal information may exceed learner’s available cognitive capacity, leading to cognitive overload and, consequently, superficial interaction with the input in question ... it is even more complex in case of exposure to multimodal content in languages other than one’s L1” (Kurek & Hauck, 2014, p. 127).

Drawing from the multiliteracy training approach proposed by Kurek and Hauck (2014, p. 119) [...] the learner is guided from observation of the desired acts, through their interpretation to the final performance, with the teacher gradually withdrawing support” (Kurek & Hauck, 2014, p. 126). [...] Learners are expected not only to interpret the meaning conveyed through input but also to articulate their own opinions by deliberately choosing and imitating a particular convention or type of discourse” (Kurek & Hauck, 2014, p. 129).

Elola, I., & Oskoz, A. (2017). Writing with 21st century social tools in the L2 classroom: New literacies, genres, and writing practices. *Journal of Second Language Writing*, 36, 52–60.

[A]s Kurek and Hauck (2014) pointed out, our understanding of digital genres has shifted: [...] We can now select from a combination of writing, aural, and visual modes [...] These changes not only imply a broadening of the way we think about how a text is constructed, but also show us how a genre itself can be constructed and reconstructed and also how our notions of authorship may change.

Zheng, B., & Warschauer, M. (2017). Epilogue: Second language writing in the age of computer-mediated communication. *Journal of Second Language Writing*, 36, 61–67.

[T]echnology enhanced writing tends to be more collaborative and interactive, multimodal, and written for a wider audience (Godwin-Jones, 2015; Kurek & Hauck, 2014).

Doctoral thesis

Rodriguez, J. (2018). Exploring Digital Out-of-School Identity Construction And Multiliteracy Practices Of Two Teenagers: A European Case Study (EdD Thesis, University College London).

Kurek & Hauck (2014, p. 122) acknowledge that after The New London Group published their milestone manifesto *A Pedagogy of multiliteracies*, the shift from print to screen has been unfolding with accelerating speed and with a profound impact on how we think, make meaning, communicate, create social bonds, and learn. The massive scale of these changes has affected individual cognition, sociocultural practices and interpersonal relations and has been widely discussed in the literature.

- 13. Hauck, M., & Kurek, M. (2017). Digital Literacies in Teacher Preparation. In: S. Thorne & S. May (Eds.), *Language, Education and Technology. Encyclopedia of Language and Education, Third Revised Edition* (pp. 1–13). Heidelberg: Springer.**

No citations recorded as of yet. G. Kurek and I get regular requests for copies via researchgate.net. We have also been cited in abstracts submitted to the XVIIIth International CALL Research Conference at UC Berkeley (CAL), 7–9 July, 2017.

- 14. Hauck, M. & Warnecke, S. (2012). Materials design in CALL: social presence in online environments. In: M. Thomas, H. Reinders, H. & M. Warschauer (Eds.), *Contemporary Computer-Assisted Language Learning* (pp. 95–115). London: Bloomsbury.**

Total citations Cited by 12



Scholar articles

[Materials design in CALL: Social presence in online environments](#)
M Hauck, S Warnecke - Contemporary computer-assisted language learning, 2012
[Cited by 12](#) [Related articles](#) [All 4 versions](#)

Tenor of the citations: highlighted as a contribution which brought SP into the focus of CMC-based language learning and teaching and thus an important step towards Social CALL.

Satar, H., & Akcan, S. (2014). Pre-Service Language Teachers' Reflections on the Implementation of a Blended-Learning Environment. *Turkish Online Journal of Qualitative Enquiry*, 5(3), 42–61.

An online social presence training developed by Hauck and Warnecke (2012) was introduced [...]. The results [...] indicated that social presence training enhanced their awareness towards the active use of the online platform [...] [and] the significance of the interrelationship between task design and the maintenance of participation in a blended-learning environment.

Sun, S.Y.H. (2017). Design for CALL—possible synergies between CALL and design for learning. *Computer Assisted Language Learning*, 30(3), 575–599.

Col was also questioned by CALL researchers, e.g. Hauck and Warnecke (2012), for its isolating and hierarchical views of the social and cognitive dimensions in computer-mediated collaborative language learning. As a result, SP was moved right into the centre of the language learning and teaching process, and placed at the centre of material and task design. This led to the proposal by Thomas et al. (2012) of adding a fourth phase – Social CALL – to Bax's (2003) three phases.

Vinagre, M. (2017). Developing teachers' telecollaborative competences in online experiential learning. *System*, 64, 34–45.

Other studies (Guichon, 2009; Hauck & Warnecke, 2012) mention the importance of 'exploratory' teaching practice and the need for 'experiential modeling' in teacher education (Fuchs et al., 2012). The principles underlying these new models of teacher education are based on socio-constructivist approaches to learning which emphasize the importance of social interaction for the construction of shared knowledge.

Doctoral theses

Morales, S.M. (2015). *How in-service language teachers become effective users of CALL for online teaching and learning: a case study of their development process in a transformative online teacher training and development course* (Doctoral thesis, Newcastle University).

Content Analysis has been a widely used technique in the exploration of online learning environments ([...] Hauck and Warnecke, 2012). [...] This is because it provides tools to find, infer and understand interactions in mainly asynchronous online contexts [...] it is also possible to agree with Hauck and Warnecke (2012) that experiential learning supported the teachers' development, due to the fact that they were exposed to authentic materials and reflected on their use for online teaching.

Vázquez-Calvo, Boris, (2016). *Digital language learning from a multilingual perspective: the use of online language resources in the one-to-one classroom* (Doctoral Thesis, Universitat Pompeu Fabra)

También destacan los estudios que ofrecen sugerencias sobre el diseño de materiales, cuya principal crítica es la ausencia de variables socioculturales como relaciones de poder, agentividad, identidad, posibilidades de los dispositivos y herramientas y géneros discursivos en línea, entre otros, cuya presencia es escasa en los planteamientos de diseño (Hauck & Warnecke, 2012, p. 107).

15. Hauck, M., Galley, R. & Warnecke, S. (2016). **Researching participatory literacy and positioning in online learning communities.** In F. Farr & L. Murray (Eds.), *The Routledge Handbook of Language Learning and Technology. Routledge Handbooks in Applied Linguistics* (pp. 71–87). London: Routledge.

Total citations Cited by 2



Scholar articles [Researching participatory literacy and positioning in online learning communities](#)
S Warnecke, R Galley, M Hauck - The Routledge Handbook of Language Learning and ... , 2016
[Cited by 2](#) [Related articles](#) [All 6 versions](#)

Helm, F. (2018). Emerging Identities in Virtual Exchange. research-publishing.net.
Available at:
<https://research-publishing.net/book?10.14705/rpnet.2018.25.9782490057191>

A more recent framework has been developed for the analysis of the emergence of online communities, which includes identity as a category, the Community Indicators framework (Hauck, Galley, & Warnecke, 2016). Within this framework, establishing limits, boundaries, purposes, and expectations is a component of the group identity, as are shared vocabulary, group self-awareness, and identification of existing knowledge and experience patterns.

Doctoral thesis

Helm, F. (2016). *'I'm not disagreeing. I am just curious': Exploring identities through multimodal interaction in virtual exchange* (Doctoral Thesis, Universitat Autònoma de Barcelona).

Positionality in online groups or communities has been explored through the Community of Inquiry framework (Garrison, Anderson & Archer, 2000). [...] A more recent framework has been developed for the analysis of the emergence of online communities which includes identity as a category, and that is the Community Indicators Framework (Hauck, Galley & Warnecke, 2016). [...] All of these uses of text chat are categories in the Revised Community Indicators Framework (Hauck, Galley & Warnecke, 2016) which reflect online social presence (SP) [...]

In the previous section we have seen the creative agency of the group (one of the four Community Indicators in Hauck, Warnecke & Galley's (2016) framework discussed in the theoretical framework) as they constructively engaged in dialogue seeking to understand the narratives and diverse opinions of others as well as the underlying emotions and experiences which shape these [...] As Hauck, Galley & Warnecke (2016) affirm, it is through the expression of multiple points of view, but also the contradiction and challenging of these views that creation of new knowledge can take place.

- 16. Hauck, M., & Satar, M. (2018). Learning and teaching languages in technology-mediated contexts: The relevance of social presence, co-presence, participatory literacy and multimodal competence. In R. Kern & C. Develotte (Eds.), *Online Multimodal Communication and Intercultural Encounters: Theoretical and Educational Perspectives* (pp. 133–157). London: Routledge.**

This chapter has not yet been cited.

6.4 Impact factors of the journals where my work has been published

Publications 2, 4, 5, 6, 7 and 11 have been published in the *European Journal of Open, Distance and E-Learning*, the *JALTCALL Journal*, *Computer Assisted Language Learning*, *Language Learning and Technology* and in *ReCALL*. While the first two of these journals are neither ISI nor Scopus indexed, the latter three are.

Table 4 shows their respective impact factors:

Journal	Impact Factor
Computer Assisted Language Learning	1.928
Language Learning and Technology	2.113
ReCALL	2.206

Table 4: Impact factors of journals where some of my work has been published

Clarivate Analytics releases the Journal Citation Reports (JCRs) in June each year for the preceding year. Hence the data provided in Table 4 was the latest available at the time of writing. Clarivate Analytics allocates each indexed journal to a category. The journals where my work features are listed in the Linguistics JCR where ReCALL, for example, is ranked 13th out of 181 journals in this category. It is also listed in the *Education and Education Research JCR*, where it is ranked 46th out of 238.

Finally, Table 5 below shows the journals' impact factors in comparison, including those where my work has been published.

Journal	2012	2013	2014	2015	2016	2017	IF % difference (2016-2017)
ReCALL	1.118	1.226	1.378	1.128	2.333	2.206	-5.44%
Language Learning & Technology	1.379	1.929	1.128	1.382	2.293	2.113	-7.85%
Computer Assisted Language Learning	1.020	0.880	1.000	1.722	2.121	1.928	-9.09%
Foreign Language Annals	0.892	0.76	0.875	0.908	0.756	0.802	6.09%
English For Specific Purposes	1.146	0.953	1.659	1.143	1.311	1.362	3.89%
TESOL Quarterly	0.792	1.000	0.94	1.513	2.056	2.256	9.73%
Modern Language Journal	1.114	1.181	0.942	1.188	1.745	2.789	59.83%

Table 5: Related Journals' impact factor in comparison

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8. Appendices

Appendix 1: Citations of my work (fuller versions)

Fuller versions of the citations listed in Chapter 6 section 6.3 are given here with the relevant references to my work highlighted in bold.

1. Hauck, M. (2004). Exploring the link between metacognitive knowledge, efficient strategy use and learner autonomy in distance language learning. In U. Bernath & A. Szücs (Eds.), *Supporting the learner in distance education and e-learning: Proceedings of the Third EDEN research workshop* (pp.183-190). Oldenburg: Universität Oldenburg.

Shakarami, A., & Abdullah, M.H. (2011). Management of language learning strategies: the case of Net-Generation ESL tertiary learners. *Journal for International Business and Entrepreneurship Development*, 5(4), 287-298.

The respondents of the study seemed to have developed knowledge of how to approach a learning task in order to get the most of it. Hauck (2004, p. 67) calls the strategy self-management and define it as “understanding the conditions that help one successfully accomplish language learning tasks in independent and virtual learning contexts and arranging for the presence of those conditions in such contexts.

2. Hampel, R., & Hauck, M. (2004) Towards and effective use of audio conferencing in distance language education. *Language Learning & Technology*, 8(1), 66-82.

Wang, Y. (2004). Supporting Synchronous Distance Language Learning with Desktop Videoconferencing. *Language Learning & Technology*, 8(3), 90-121.

CMC-based oral interaction can be achieved through the use of audio conferencing tools (e.g., I-phone and NetMeeting). **The Open University developed its own Internet-based audio conferencing tool called Lyceum, which has been reported in a series of articles** (see Hampel &

Baber, 2003; **Hampel & Hauck, 2004**; Hauck & Haezwindt, 1999; Kötter, 2001; Kötter, Shield, & Stevens, 1999; Shield, Hauck, & Hewer, 2001). ...In a CMC context, the multimodal (visual, audio, and textual) nature of this environment is often regarded as beneficial to negotiation of meaning (see Chun & Plass, 2000). **At the same time, the issue of lack of body language and of depersonalization of communication in text- and audio-based CMC has been recognized by scholars such as** Lecourt (1999), Kress & van Leeuwen (2001), and **Hampel & Hauck (2004)**. **The findings from Hampel & Hauck support the above arguments from a participant's point of view. They point out that when "tutors do not receive visual clues and body language, it is easier for students unsure of what is going on to sit quietly without participating and without getting help or encouragement" (p. 78) ...**

From a sociocultural perspective, the impact of video on building a learning community, increasing confidence, and reducing isolation is also largely recognized in the literature (see Bloomfield, 2000; **Hampel & Hauck, 2004**; Lake, 1999; Stacey, 1999). These issues are especially typical of distance learners, who are physically isolated from one another, and video is perceived as being even more crucial in reducing the impact of the distance.

Rosell-Aguilar, F. (2005). Task Design for Audiographic Conferencing: Promoting Beginner Oral Interaction in Distance Language Learning. *Computer Assisted Language Learning*, 18(5), 417-442.

As the use of audiographic online conferencing for language learning is in its infancy and most research on CMC has been on written CMC (Chun, 1994; Kern, 1995; Lamy & Goodfellow, 1999; Warschauer, 1997), **the audiographic medium presents a number of challenges. These have only recently begun to be documented** (Cramer, 2001; Cziko & Park, 2003; Erben, 1999; Hauck & Haezwindt, 1999; Hewer & Shield, 2001; Kötter, Shield, & Stevens, 1999; Hampel, 2003; **Hampel and Hauck, 2004**; Lamy, 2004; Stockwell, 2004). **However, the literature agrees that synchronous audiographic CMC "is an ideal medium for collaborative learning through social interaction both with tutors and with peers" (Hampel & Hauck, 2004, p. 68) ... The challenge of multimodality in the online conferencing medium (Hampel, 2003; Hampel and Hauck 2004): the fact that the medium provides a combination of visual, verbal and written elements through the computer places greater demands on those users who are unfamiliar with it - although it also affords materials that better support activities by using graphics, images, text and voice to enhance, focus, or generate input and opportunities for output and interaction ...**

Hampel and Hauck (2004) reported on a study of a group of advanced learners ...**The main issues they found with the audiographic medium**

were participation and technical problems (audio quality and losing connection), technical overload on tutors and students, the lack of body language, and the fact that communication was less spontaneous ...

The course team also adhered to the recommendations by Hampel and Hauck (2004), that activities should be limited to a single tutorial and not require much preparation... At this stage, before major writing was undertaken, it was deemed appropriate to go through the process of developmental testing, with plenty of time to make changes depending on the results, following the recommendation from Hampel and Hauck (2004).

Weller, M., Pegler, C., & Mason, R. (2005). Use of Innovative Technologies on an E-Learning Course. *The Internet and Higher Education*, 8(1), 61–71.

Audio conferencing has been used in certain subject areas where real-time interaction is required, for example language learning. **Hampel and Hauck (2004) describe the use of The Open University's Lyceum system to support a distance education German course. Student feedback was largely positive although technical issues were still significant.**

Heins, B., Duensing, A., Stickler, U., & Batstone, C. (2007). Spoken interaction in online and face-to-face language tutorials. *Computer Assisted Language Learning*, 20(3), 279-295.

Hampel and Hauck (2004) show that the affordances of audio-graphic conferencing meet the requirements of the pedagogic framework for SLA in terms of providing opportunities for input, output and negotiation of meaning. Moreover, a number of articles provide insight into different aspects of the practical use of online audio in the language learning context: exemplified by Lyceum these findings focus on the role of the tutor (Hauck & Haezewindt, 1999; Shield, Hauck, & Hewer, 2001; Hampel & Stickler, 2005), task design (Hampel & Hauck, 2004; Rosell-Aguilar, 2005) and issues of multimodality (Kötter, Shield, & Stevens 1999; Hampel & Hauck, 2006)."

Lee, L. (2007). Fostering second language oral communication through constructivist interaction in desktop videoconferencing. *Foreign Language Annals*, 40(4), 635-639.

The evaluations of particular projects, such as ReLaTe (Buckett, Stringer, & Datta, 1991), Leverage (Zahner, Fauverge, & Wong, 2000), Lyceum (Hampel and Hauck, 2004), as well as NetMeeting--created by Microsoft (Wang, 2004), have demonstrated the usefulness of videoconferencing in distance learning. The findings offer insight into how the medium has contributed to learners' intercultural communicative competence through group debates on the issues of the target culture.

Wang, Y., & Chen, N-S. (2007). Online Synchronous Language Learning: SLMS over the Internet. *Innovate: Journal of Online Education*, 3(3), n.p.

Despite their wish to improve their proficiency in a given language, **distance language learners ... become very frustrated when they cannot converse spontaneously in face-to-face situations. This problem has been well documented (see Hampel and Hauck 2004; Kötter 2001; Wang and Sun 2000; White 2003).** In response, distance language educators and researchers have attempted to find a solution to this problem, experimenting with various technologies ... These technologies are effective to a certain point, but none of them have addressed the needs of distance language learners in a comprehensive manner... **This finding confirms the results of studies on the impact of video technologies on building a learning community, increasing learner confidence, and reducing learner isolation (Bloomfield 2000; Lake 1999; Stacey 1999; Hampel and Hauck 2004).**

Dooley, M. (2008). New competencies in a new era? Examining the impact of a teacher training project. *ReCALL*, 21(3), 352-359.

... a review of literature on the topic of teacher training and new technology gives the immediate impression that **recently considerable work and effort has been put into endeavours to improve teachers' knowledge, attitudes and preparation so that they can efficiently use ICT in their teaching (Bonk et al., 1996; Smerdon et al., 2000; Burniske & Monke, 2001; Salaberry, 2001; Hampel & Hauck, 2004).**

Levy, M., & Stockwell, G. (2008) *CALL Dimensions: Options and Issues in Computer-Assisted Language Learning*. Oxon, UK: Routledge.

In addition, as **Hampel** and Hauck (2004) noted, the effective integration of conferencing is complex both pedagogically and technically, and failure to plan for each of these has the potential to detract from the language-learning environment. Still, the value of conferencing in language learning is indisputable, providing a means through which learners can practice oral and aural skills even when geographically separated from their communication partners.

Levy, M. (2009). Technologies in Use for Second Language Learning. *The Modern Language Journal*, 93(S1), 769–782.

Applications designed to enable learners to develop their oral skills at a distance ... include virtual learning environments (VLEs) that employ audio and video conferencing (Hampel and Hauck, 2004). Typically, a

lesson in progress can have a number of technologies in simultaneous use: For example, the tutor might be using the whiteboard while explaining a teaching point through audio/video while the students are listening and using text chat to communicate with one another about the lesson. **This potential for simultaneous, multimodal interaction through parallel channels is an important area for future research.**"

Stockwell, G. (2010). Effects of Multimodality in Computer-Mediated Communication Tasks. In R. Thomas & H. Reinders (Eds.), *Task-Based Language Learning and Teaching with Technology* (pp. 83-104). London: Continuum.

Multimodality

As stated above, CMC in language-learning contexts most commonly occurs through a single mode of communication, such as through

are multimodal, and that in addition to the words it is also possible to perceive meaning from posture, gesture and body movement, facial expression and so forth. In many cases we are not even aware of the different modes or how we interpret the variety of messages that we receive in order to construct the meaning of a communication act.

Multimodality remains, however, a rather underdeveloped theoretical area (Jewitt, 2009), but it is gaining momentum in technological contexts, with the term being used quite broadly within CALL research

(e.g. Collentine, 2009; Hampel & Hauck, 2004). This is not surprising given that the development of new technologies means that it is quite

Blake, R. (2011). Current Trends in Online Language Learning. *Annual Review of Applied Linguistics*, 31, 19-35.

Recently, the CALL field has witnessed a veritable explosion in the number of studies examining the use and effectiveness of CMC (e.g., Hampel and Hauck, 2004; Lomicka & Lord, 2009; Meskill, 2009).

Bueno Alastuey, M.C. (2011). Perceived benefits and drawbacks of synchronous voice-based computer mediated communication in the foreign language classroom. *Computer Assisted Language Learning*, 24(5), 419-432.

Research on synchronous CMC has mainly concentrated on written-based CMC (see, e.g. Abrams, 2003; Kern, 1995; Warschauer, 1996) for its similarity to oral communication. **However, in the last few years, a growing body of research has explored the benefits of synchronous voice-based CMC (SVCMC) (Bueno, 2010; Jepson, 2005; Satar & O' Özdenir, 2008; Sauro, 2001; Yamada, 2009; Yamada & Akahori, 2007; Yang & Chang, 2008), also called audiographic conferencing (see, e.g. Hampel, 2003; Hampel & Hauck, 2004), whose similarity to face-to-face communication may prepare students better for the challenge of real-life oral communication.**

Lai, C., & Li, G. (2011). Technology and Task-Based Language Teaching: A Critical Review. *CALICO Journal*, 28(2), 498-521.

The works by Hampel and her colleagues (Hampel & Hauck, 2004; Hampel, 2006) further reported positive perceptions from learners and teachers on online tutorials that adopted a TBLT approach.

Wang, Y., & Chen, N-S. (2012). The collaborative language learning attributes of cyber face-to-face interaction: the perspectives of the learner. *Interactive Learning Environments*, 20(4), 311-330.

Some **recent studies on interaction via audio conferencing have also contributed to our understanding of the depth of this kind of synchronous collaborative language learning (see Hampel, 2006; Hampel & Hauck, 2004; Hauck & Hampel, 2005; Heins, Duensing, Stickler, & Batstone, 2007; Lamy, 2004; Levy & Kennedy, 2004; Rosell-Aguilar, 2006; Sykes, 2005; Vetter & Chanier, 2006).**

Benson, P. (2013). *Autonomy in practice. Teaching and Researching Autonomy* Routledge 2nd Ed., (pp. 121-198). Oxon, UK: Routledge.

The literature includes a number of accounts of experiments using new technologies including Lamy and Goodfellow's (1999) work with asynchronous conferencing, which, they argue, facilitates a kind of "slow motion" conversation that may encourage reflective practices and Hampel

and Hauck's (2004) work with online tutorials using audio-graphic conferencing tools. ...Outside the conventional classroom, new technologies are clearly having this kind of effect by expanding the scope of interaction in tandem learning (Kotter, 2002; Mullen et al., 2009) and distance education (Hampel and Hauck, 2004; Lamy and Goodfellow 1999).”

Peterson, M. (2016). *Computer Games and Language Learning*. US: Palgrave Macmillan.

User errors caused by limited computer skills and difficulties managing multimodal interfaces represent additional problems (Hampel and Hauck, 2004).

Hanawa, H., Song, X., Mengyuan, T. & Inoue, T. (2017). The Combined Use of Audio and Visual Media in Computer Conferencing towards Equality in Asymmetric Second-Language Conversation. *International Journal of Linguistics and Communication*, 5(2), pp. 40-52.

When Native speakers (NS) talk with Non-native speakers (NNS) in a common language... the structure of their communication is unbalanced and asymmetric. **Computer-mediated communication (CMC) research has examined this in relation to online meetings working on more balanced participation with better quality of conversations (Chun, 1994; Hampel & Hauck, 2004) [...]**

The purpose of this paper is to show how NS and NNS managed audio conference with the combined use of audio and text in conversations. **Our study is motivated by earlier research: how CMC helped balanced participation on discussion (Chun, 1994; Hampel & Hauck, 2004)**

Charbonneau-Gowdy, P. (2018). Beyond Stalemate: Seeking Solutions to Challenges in Online and Blended Learning Programs. *The Electronic Journal of e-Learning*, 16(1), 56-66.

Hampel and Hauck (2004) conducted a study on one of the first audio/video large-scale international online language programs offered by the Open University in Great Britain. In their study, they outlined some of the many advantages to learning that teachers potentially can accomplish in these kinds of programs such as:

- providing expansive learner feedback,
- promoting learner-learner communication and interaction,
- allowing socialization to take precedence over structural accuracy,

- giving access to meaningful communication to learners across linguistic and geographical boundaries.

Yet, **from the vast experience acquired from offering Open University courses, along with the scholarship in this area, the authors also drew attention to the presence of challenges and the demands that these courses place on teachers.**

Zhen, B., Lin, C.-H., & Hsu, Y.-Y. (2018). World Languages in Online and Blended K-12 Education. In K. Kennedy & R.E. Ferdig (Eds.), *Handbook of research on K-12 online and blended learning* (2nd ed., pp. 375-383). Pittsburgh, PA: ETC Press.

Delivering a language course online requires more than simply digitizing current teaching materials and posting them on the Web, or teaching in the same way as in face-to-face settings (Zhang, 2014). **Hampel and Hauck (2004) proposed five components that language learners should be provided within computer-mediated learning environments: 1) opportunities for interaction to negotiate meaning; 2) opportunities to hear or read modified comprehensible input; 3) opportunities to produce or write modified comprehensible output; 4) input that allows for a focus on target features of the second language; and 5) a rich context in which the second language facilitates comprehensible input.** All five can also be applied to online language learning.

Cohen, C., & Wigham, C. (in press). A comparative study of lexical word search in an audioconferencing and a videoconferencing condition. *Computer Assisted Language Learning*.

Indeed, initial studies focused on how synchronicity and multimodality within audioconferencing environments may enhance learners' oral participation, speaking skills and collaboration (Hampel & Hauck, 2004; Ciekanski & Chanier, 2008; Vetter & Chanier, 2006). More recent studies have investigated the contributions of the webcam in videoconferencing environments and the ways in which the interlocutor's image, that gives access to communicative resources including gestures, facial expressions, body movements and gaze, may contribute to more active communication and better mutual understanding. Such studies have explored analysis units including social presence (e.g., Guichon & Cohen, 2014; Satar, 2013), lexical explanations (e.g., Holt & Tellier, 2017; Wigham, 2017), word search (Cappellini, 2013; Nicolaev, 2012), teacher semio-pedagogical competence (e.g., Guichon & Wigham, 2016; Kozar, 2016) and task design (e.g., Hauck & Youngs, 2008).

Doctoral thesis

Xue, X. (2017). *Effects Of Different Types Of Annotations On College Students' Foreign Language Learning In The Synchronous Multimodal Computer-Mediated Communication Environment* (Doctoral Thesis, Florida State University).

A computer-mediated approach to language instruction may provide EFL learners greater and more affordable access to native speaker instructors. For schools and training institutions, the hiring cost may be reduced with more qualified native speaker instructors being able to teach in distance. **For learners, it provides them with opportunities to use the language in authentic communication settings and get to know more about a foreign culture as an extension to their knowledge (Hampel & Hauck, 2004).**

3. Hauck, M. (2005). **Metacognitive knowledge, metacognitive strategies, and CALL.** In J. L. Egbert & G. Petrie (Eds.), *CALL Research Perspectives* (pp. 65-86). New Jersey, USA: Lawrence Erlbaum.

Heift, T., & Schulze, M. (2007). *Errors and Intelligence in Computer-Assisted Language Learning: Parsers and Pedagogues*. Abingdon: Routledge.

Others [...] argue for a particular theoretical focus in CALL research (e.g., meta-cognitive knowledge (Hauck, 2005) [...], **visuality (Petrie, 2005), authenticity (Lotherington, 2005), culture (Gade Brander, 2005)).**

Fischer, R. (2007). How do we know what students are actually doing? Monitoring students' behavior in CALL. *Computer Assisted Language Learning*, 20(5), 409-422.

It goes without saying that metacognitive knowledge and skills underlie successful autonomous learning, and several researchers have emphasized the need to develop such knowledge and skills in distance education language learners (Hauck, 2005; Kaltenböck, 2001; Kötter, 2001).

O'Bryan, A., & Hegelheimer, V. (2009). Using a Mixed Methods Approach to Explore Strategies, Metacognitive Awareness and the Effects of Task Design on Listening Development. *Canadian Journal of Applied Linguistic*, 12(1), 9-38.

In addition, learners who have regular opportunities to develop their metacognitive awareness through training may become more autonomous language learners (Hauck, 2005). Thus, it is an important goal for any strategy training program to not only teach students a variety of strategies, but also to help raise students' metacognitive awareness of the learning process.

Zou, X. (2011). What Happens in Different Contexts and How to Do Learner Autonomy Better? Teacher Development: *An international Journal of Teachers' Professional Development*, 15(4), 421-433.

Autonomous learning is not only an individual and gradual process of self-awareness which involves the sharing of control between teachers and learners, while offering learners extended opportunities to take responsibility for their own learning (Boud 1988), but also a gradual increase in relation to awareness of learning contexts (Hauck 2005).

Dalbani, H. (2012) English Language Learning Strategies at the Syrian Virtual University: students' and Teachers' Perceptions. *Damascus University Journal*, 28(1), 55-84.

Hauck (2005) takes this notion a step further to include online learners. She contends that the degree to which language learners are aware of both themselves - their attitudes, aptitudes and beliefs – and of the affordances of the learning environment, and the degree to which they demonstrate control and flexibility in the use of metacognitive strategies such as self-management are interdependent.

Gomez Alvarez, L., Sandoval Zuniga, M.S., & Saez Carrillo, K. (2012). Comprensión Auditiva en Inglés Como L2: Efecto de La Instrucción Explícita de Estrategias Metacognitivas para su Desarrollo. *Revista de Lingüística Teórica y Aplicada*, 50(1), 69-93.

Como parte de las acciones regulatorias en la metacognición, las estrategias metacognitivas permiten a los aprendientes controlar su aprendizaje de la L2 al planificar, monitorear y evaluar su ejecución en una tarea dada. **Por eso, se consideran esenciales para el aprendizaje, ya que propenden a que los aprendientes sean más autónomos, estratégicos, eficientes y proactivos**, tanto en su aprendizaje en general (Anderson, 2002; Goh, 2002a) como en la adquisición de la L2 (Hauck, 2005).

Guichon, N., & Cohen, C. (2012). Enhancing L2 Learners' Noticing Skills through Self-Confrontation with their own Oral Production Performance. *Recherche et pratiques pédagogiques en langues de spécialité. Cahiers de l'APLIUT*, 31(3), 87-104.

In the field of L2 learning, metacognitive knowledge concerns both language use and language learning (Hauck 2005) ... At the other end of the continuum, Hauck characterizes “good language learners [...] as being those who are aware of their perceptions, attitudes, and abilities and are knowledgeable about the learning process” (2005: 73).

Manoochehr, J., & Behrooznia, S. (2012). The Effect of Anxiety on Reading Comprehension among Distance EFL Learners. *International Education Studies*, 5(2), 159-174.

Except for the study of Hauck (2005), Harris (2003), Hurd (2000 & 2002), Hurd et al. (2001), and White (1995, 1997, 1999), most explorations into

language anxiety concentrate on classroom-based learning and **there is little that particularly investigates anxiety in the distance learning context.**

Hampel, R., & De Los Arcos, B. (2013). Interacting at a Distance: A Critical Review of the role of ICT in Developing the Learner–Context Interface in a University Language Programme. *Innovation in Language Learning and Teaching*, 7(2), 158-178.

For Hauck (2005), the need for distance language learners to understand and manage themselves and their learning (White 2003) applies equally to language learners in online self-directed learning spaces. She adds that: the degree to which language learners are aware of both themselves (...) and of the affordances of the learning environment, and the degree to which they demonstrate control and flexibility in the use of [metacognitive strategies] such as self-management and thus autonomy, are interdependent. (Hauck 2005, 68–69). In her view, learners with a high level of metacognitive knowledge are also efficient in deploying self-management skills, that is, they are aware of how they learn best, and able to set up the learning conditions most favourable to them. **Hauck's research on activities designed to foster learner self-awareness served to substantiate two hypotheses: that 'instructed self-management skills contribute to an increase in learners' self and contextual knowledge'** and also 'help distance learners to deal with affective factors such as language anxiety in both face-to-face and virtual learning contexts' (Hauck and Hurd 2005). Raising learners' self-awareness is one requisite for building up their self-esteem and influencing their self-efficacy and achievement beliefs.

Ranalli, J. (2013). Designing Online Strategy Instruction for Integrated Vocabulary Depth of Knowledge and Web-Based Dictionary Skills. *CALICO Journal*, 30(1), 16-43.

These principles could prove useful in addressing recently discussed needs to help learners make more strategic and self-directed use of CALL resources (Hauck, 2005; Hauck & Hampel, 2008; Winke & Goertler, 2008), particularly in contexts where processing demands are likely to be high.

Stickler, U., & Lijing, S. (2013). Supporting Chinese Speaking Skills Online. *System*, 41(1), 50-69.

The necessity of preparation that goes beyond the technical issues becomes more and more prevalent: emotional needs ("learner anxiety", "online anxiety" (de los Arcos et al., 2009)), cognitive and metacognitive challenges (Hauck, 2005; Hauck and Hampel, 2008), social presence

(Satar, 2010), and the group dynamics of online synchronous interaction are all valid considerations when preparing students to make the most of their online learning.

Coşkun, A., & Ghaemi, H. (2015). Integrating Technologically-Enhanced Self-Regulated Strategies into Writing English as a Foreign Language Classes. *International Online Journal of Educational Sciences*, 7(2), 1-14.

Self-regulated learning has recently gained a lot of attention in foreign language education in such a way that there is a tendency among researchers to contemplate that **learners who are able to undertake the responsibility of their own learning process are more likely to become autonomous, and thus successful language learners (Hauck, 2005).**

Nosratinia, M., Ghavidel, S., & Zaker, A. (2015). Teaching metacognitive strategies through Anderson's model: does it affect EFL learners' listening comprehension? *Theory and Practice in Language Studies*, 5(6), 1233-1243.

On the other hand, **it has been stated that possessing high levels of metacognitive awareness enables learners to become more autonomous language learners (Hauck, 2005).**

Shakarami, A., Hajhashemi, K., & Caltabiano, N.J. (2017). Compensation Still Matters: Language Learning Strategies in Third Millennium ESL Learners. *Online Learning*, 21(3), 235-250.

Net-Generation language learners, faced with the requirements for, and opportunities of, a more self-directed environment, need to develop an awareness of the process of language learning and an understanding of their role in the shared learning spaces. **Hauck (cited in Hauck & Hurd, 2005) points out that “online language learning makes learners aware of themselves, their attitudes, aptitudes and beliefs and of the affordances of the learning environment and the degree to which they demonstrate flexibility and control” (p. 4).**

Taki, S., & Esmaili, Z. (2017) Shadowing and EFL Listening Comprehension: Focus on Metacognitive Strategy Use, Self-efficacy and Achievement. *Journal of Teaching English for Specific and Academic Purposes*, 5(4), 727-738.

Anderson (1999) considered metacognitive strategies as the most important strategies to develop learners' skills. O'Malley and Chamot argue that (1990) that learners without these strategies have no ability to monitor and regulate their development, performance, and future learning. **On the other hand,**

learners who use metacognitive strategies are more proficient learners (Hauck, 2005).

Jose, K. (2018). Blending Cognitive and Socio-constructive Pedagogies: Building Autonomous Readers in the ESL Classroom. In R.J. Ponniah & S. Venkatesan (Eds.), *The Idea and Practice of Reading* (pp. 57-84). Berlin: Springer.

Reviewing Good Language Learner models proposed by researchers in strategy studies, Rubin (in Johnson, 2005) points out that there may be some variation in the cognitive and socio-affective strategies used by various learners but there is seemingly little or no variation in the use of metacognitive strategies. While both expert and novice learners may use the same cognitive and socio-affective strategies, research consistently shows that the difference in success depends on the use of effective metacognitive strategies.

Learners who have a wider repertoire of metacognitive strategies and are in control of their metacognition in terms of choosing the right strategy that the context demands are therefore potential autonomous language learners (Hauck, 2005).

Ranalli, J. (2018). L2 Strategy Instruction: Enhancing Research and Practice Through the Mediation of Technology. In B. Zou & M. Thomas (Eds.), *Handbook of Research on Integrating Technology Into Contemporary Language Learning and Teaching* (pp. 202-2017). Hershey: IGI Global.

Experts in the field of computer-assisted language learning (CALL) have discussed these issues from the standpoint of technology, focusing on the need to prepare learners to thrive in the digital age (e.g., Barth & Klein-Wohl, 2011; Egbert, J., Akasha, O., Huff, L., Lee, H. G., 2011); **Hauck, 2005; Hauck & Hampel, 2008;** Hubbard, 2004, 2013; Lai, 2013; Lai, Yeung, & Hu, 2015; Winke & Goertler, 2008).

Doctoral theses

McBride, K. (2007). *The Effect of Rate of Speech and CALL Design Features on EFL Listening Comprehension and Strategy Use* (Doctoral Thesis, The University of Arizona).

An understanding of the importance of self-regulation in language learning has fostered successful and widely-applied programs at the Open University in the United Kingdom, a primarily online (distance education) university. ...

Thus, the department has developed activities to “foster learner reflection on the following: self-knowledge, beliefs about self, beliefs about learning in general, beliefs about language learning in particular”

(Hauck, 2005, pp. 79-80), and they have found that self-knowledge and metacognitive awareness lead to successful strategy use and this aided SLA.”

De Los Arcos, B. (2010). *Emotion In Online Distance Language Learning: Learners' Appraisal Of Regret And Pride In Synchronous Audiographic Conferencing* (Doctoral Thesis, The Open University).

As early as 2002, fourteen OU learners of German at advanced level participated in five online sessions during which they reflected on the process of language learning in a virtual environment, while engaged in activities aimed at helping them become better online learners (Hauck, 2005). ... For Hauck (2005) this urgency applies equally to language learners in online self-directed learning spaces and she adds that “the degree to which language learners are aware of both themselves (...) and of the affordances of the learning environment, and the degree to which they demonstrate control and flexibility in the use of MCSs such as self-management and thus autonomy, are interdependent (Hauck, 2005: 68-69).

Hashimoto, K. (2012). *Exploring the Relationship between L2 Blogging, Learner Autonomy, and L2 Proficiency Levels: A Case Study of Post-Secondary Japanese L2 Learners* (Doctoral Thesis, The University of California, Santa Barbara).

Drawing on the theoretical perspective that learner autonomy, which signifies self-management, is developed through using metacognitive strategies and metacognitive knowledge (Hauck, 2005), I explore how two more proficient and two less proficient learners self-managed their L2 learning and use in the blogging process by employing metacognitive strategies and metacognitive knowledge. Autonomous learners exert metacognitive knowledge ...(Hauck, 2005; Little, 2008). [...]

When demonstrating learner autonomy in such contexts without the presence of instructors' guidance, learners exercise self-management of their learning by deploying metacognitive strategies based on their metacognitive knowledge about the task, the strategy, and themselves as learners (Hauck, 2005; White, 1995).

De Jesus, O.N. (2014). *International Undergraduate English Language Learners' Perception of Language and Academic Acquisition through Online Learning: A Qualitative Phenomenological Study* (Doctoral Thesis, Liberty University).

Hauck (2005) emphasized that learners who have regular opportunities to develop their metacognitive awareness through training may become more autonomous language learners.”

Fincham, N. X. (2015). *Metacognitive Knowledge Development and Language Learning in the Context of Web-based Distance Language Learning: A Multiple-Case Study of Adult EFL Learners in China*. (Doctoral Thesis, Michigan State University).

Focusing on the role of language learners' MCK in computer-assisted language learning context, **Hauck (2005) stressed that the need for distance language learners to understand and manage themselves and their learning should apply equally to language learners in online self-directed learning spaces, highlighting the importance of learner's knowledge of the affordances and constraints of the technology-enriched learning environment.** ... more research is needed to understand how their understanding of themselves as online language learners and the learning process change as they interact with the learning context [...]

Knowledge of context is another important aspect of MCK, ... Rubin (2001) underscored the importance of language learners' knowledge of the learning context. **This dimension of MCK is of particular relevance to today's rapidly advancing technology-mediated language learning environments faced by foreign language learners. For example, studies of self-directed language learning via audio and audiographic conferencing have shown that “a high level of person and contextual knowledge and the degree to which learners have control over it at various stages of the learning process are pivotal to effective learning in such environments” (Hauck, 2005, p. 72).** [...]

Focusing on language learners' MCK in computer-assisted language learning context, **Hauck (2005) stresses that the need for distance language learners to understand and manage themselves and their learning applies equally to language learners in online self-directed learning spaces.**

Nasri, M.N. (2016). *A reconceptualisation of self-directed learning in a Malaysian context* (Doctoral Thesis, University of Edinburgh).

In relation to the SDL concept, Gibbs (1992, 2010), Victori and Lockhart (1995), Block (2004), **Hauck (2005)**, Hattie (2009) and Zhang and Seepho (2013) **assert that the use of metacognitive strategies** which require the learners to (i) be aware of their learning needs (self-awareness); (ii) be able to plan their learning strategy (selfplanning); (iii) be able to monitor their learning progress (self-monitoring); and (iv) evaluate their learning process

(self-evaluation) **would help learners to have more control and be in charge of their learning** [...].

4. Hauck, M., & Hurd, S. (2005). Exploring the link between language anxiety and learner self-management in open language learning contexts. *European Journal of Open, Distance and E-Learning*, 8(2), n.p.

White, C. (2006). Distance Learning of Foreign Languages. *Language Teaching*, 39(4), 247-264.

Hauck & Hurd (2005) conclude that self-management strategies contribute to an increase in learners' self- and contextual knowledge which can assist in reducing anxiety. **A contribution of the study is that it explores the kinds of anxiety that can arise within multimodal virtual learning spaces, especially in relation to the variety and simultaneity of modes available, and the extra dimension this adds to the need for learner self-management.** In these studies we have a picture of distance language learners developing knowledge of themselves, their learning processes and the possibilities within their immediate environment as they seek to integrate their characteristics, needs and circumstances with the affordances of the distance learning context.

Stonebrink, D. (2008). *Web-based English Language Learning with Wimba Voice Technologies*. Tempe, Arizona: Maricopa Community College.

The negative influence of anxiety on language development is well-documented in the literature (Felix, 2004; Hauck and Hurd, 2005; Neri, 2002; Poza, 2005; Tschirmer, 2001).

Nakazawa, K. (2009). Student Engagement in Online Language Learning: A Case Study Examining the Online Delivery of Tertiary Language Courses. *International Journal of Learning*, 16(7), 405-414.

Distance learning with ICT adds dimensions to studying. This fact **increases a student's anxiety**. To reduce this anxiety, **good instruction and timely feedback to keep students on track are very helpful, as is suggested in studies pertaining to the link between language anxiety and learner self-management (Hauck and Hurd 2005).**

Kessler, G. (2010). Fluency and anxiety in self-access speaking tasks: the influence of environment. *Computer Assisted Language Learning*, 23(4), 361-375.

Thus, the design of computer-assisted language learning (CALL) environments would benefit from an investigation of speaking anxiety. **Anxiety has been found to negatively influence speaking performance (Aida, 1994) and the ability to self-manage in online learning (Hauck & Hurd, 2005) ...** In terms of the type of CALL environment, **open learning environments can**

help students use self-management strategies to lower anxiety (Hauck & Hurd, 2005).

Dalbani, H. (2011). Autonomy in Distance English Language Learning. *Damascus University Journal*, 27(3+4), 81-117.

According to Hauck and Hurd (2005), materials in distance language learning play a central role as the teaching voice. They are the link between teacher and learner and are characterized by distinctive features. They are structured with explicit aims, objectives and learning outcomes. They include activities that give practice and encourage reflection. Such activities are carefully sequenced to provide steady progression and ensure variety in type, skill, grammatical/style focus. **And to help students develop awareness of themselves and encourage an autonomous approach, learning strategy sections are embedded into the course materials and thus reflect an indirect and contextualized approach to strategy training. “The aim is gradually to shift the locus of control from teacher to learner and build learners' confidence in taking an active part in their own learning” (Hauck and Hurd: 2005).**

Miyazoe, T., & Anderson, T. (2012). Voice Interaction Online. In Q. Lin (Ed.), *Advancement in Online Education: Exploring the Best Practices* (pp. 39-67). US: Nova Science Publishing.

[...] numerous studies have been done using Lyceum by Open University UK scholars (Kenning, 2010). **Speaking anxiety is relevant to online voice interaction** in two ways ... **speaking anxiety that learners potentially experience when talking online without sharing the same physical space with associated interpersonal clues** (de los Arcos, Coleman, and Hampel, 2009; Hampel, Felix, Hauck, and Coleman, 2005; **Hauck and Hurd, 2005**; Pichette, 2009).

Jauregi, K., de Graaff, R., van den Bergh, H., & Kriz, M. (2012). Native/non-native speaker interactions through video-web communication: a clue for enhancing motivation? *Computer Assisted Language Learning*, 25(1), 1-19.

This is in line too with the results of a study by Hauck and Hurd (2005) who found that only a small minority of their interviewees reported that distance learning increased their anxiety in language learning. They conclude that a face-to-face or online tutor plays an important role in reducing language learning anxiety, a role that the pre-service teacher native speakers seem to have performed successfully in our study. **According to Hauck and Hurd, “anxiety levels are likely to be lowered if students can learn in a non-threatening environment which encourages them to try things out**

and have fun, which builds confidence and promotes respect for different learning styles, approaches and personality traits.

Xiao, J. (2012). Successful and unsuccessful distance language learners: an 'affective' perspective. *Open Learning: The Journal of Open, Distance and e-Learning*, 27(2), 121-136.

Our findings lend support to the argument that there is a link between anxiety and learner self-management (Hauck & Hurd, 2005).

Grant, S., Huang, H., & Pasfield-Neofitou, S. (2013). Language Learning in Virtual Worlds: The Role of Foreign Language and Technical Anxiety. *Journal of Virtual Worlds Research*, 6(1), 1-9.

Since Horwitz et. al. (1986), there have been a number of investigations into FLA in Spanish, French, Hungarian EFL and Arabic (M. Hauck & S. Hurd, 2005; E. K. Horwitz, et al., 1986; Hussein, 2005; Toth, 2008), in f2f and distance settings (M. Hauck & S. Hurd, 2005).

Hampel, R., & De Los Arcos, B. (2013). Interacting at a distance: a critical review of the role of ICT in developing the learner–context interface in a university language programme." *Innovation in Language Learning and Teaching*, 7(2), 158-178.

The authors endorse Hauck and Hurd's (2005) argument that learners' self-management skills, which also include being able to control their emotions, can help reduce anxiety, ... and that language learners need to develop an awareness of the origin of their emotions (positive and negative), including self, others and the context of interaction... Those who believe in their effectiveness as learners, certain to master the necessary skills, set themselves higher learning goals and are determined to succeed regardless of the obstacle, be it of a linguistic, technical or affective nature (Hauck and Hurd 2005; Hampel and Hauck 2006).

Chang, R., Wang, Y., & Hung, H.-H., & Borst, S. (2015). Chinese Language Learners' Foreign Language Anxiety in Online Text Chatting. Paper presented at the annual meeting of the American Council on the Teaching of Foreign Languages (ACTFL), San Diego, California. Available at:
https://www.researchgate.net/publication/314104414_Chinese_Language_Learners%27_Foreign_Language_Anxiety_in_Online_Text_Chatting/references

Multiple studies have shown that students felt uncomfortable, stressed, or even experienced a "mental block" when they are required to interact using

the new language ([...] Hauck & Hurd, 2005 [...]). [...] **Consistent with previous studies ([...] Hauck & Hurd, 2005 [...]), less confidence in language proficiency is still one of the major reasons that causes nervousness, even in CMC activities.**

Kruk, M. (2017). Changes in foreign language anxiety: A classroom perspective. *International Journal of Applied Linguistics*, 27(3), n.p.

In addition, researchers investigate the concept of anxiety and the process of learning language skills and subsystems (e.g., MacIntyre & Gardner, 1994), create effective and dependable measures of language anxiety (e.g. Horwitz et al., 1986), identify anxiety and learning deficits (e.g., Sparks & Ganschow, 1993), **determine the role of anxiety in the field of distance learning (e.g., Hauck and Hurd, 2005)** and account for the relationship between anxiety and language learning in computer technology (e.g., Grant, Huang & Pasfield-Neofitou, 2013; Kruk 2016; Majid, Sharil, Luaran, & Nadzri, 2012).

MA and doctoral theses

Ahmed, I. (2012). *Investigating Students' Experiences of Learning English as a Second Language at the University of Sindh, Jamshoro, Pakistan* (Doctoral Thesis, University of Sussex).

Phenomenography, which was later used to develop quantitative questionnaires by Entwistle and Ramsden (1983) and Biggs (1987). **The analysis of students' learning experiences** in ESL programmes in higher education **has been heavily influenced by this perspective** (White 1999; Gabillon 2002; Bunts-Anderson 2004; Ming 2004; **Hauck and Hurd 2005**; Xiu-juan 2008; Lucas and Rojo-Laurilla 2008; Zhenhong and Zhin 2009; Noor 2010).

Chang, H.J. (2012). *The Development of Collaborative Learning Practices in an Online Language Course* (Doctoral Thesis, Newcastle University).

[...] **several studies have suggested that an online language learning course structure encouraged students to develop their metacognitive learning strategies to be successful students (Hauck and Hurd, 2005; Ushioda, 2005; White, 1997).**

Baez-Holley, M. (2013). *Foreign Language Anxiety in the Classroom and in an Online Environment* (Doctoral Thesis, Indiana State University).

The **questionnaires and other qualitative methods such as interviews and audio-recordings** were used in a major study in 2003 that included the participation of 500 students at IET (Hurd, 2006). **This instrument has been used in several studies (Hauck & Hurd, 2005; Hurd, 2006) and it is considered to be reliable [...].**

Many early studies done in the area of foreign language anxiety have revealed that speaking is the language skill that causes the most anxiety among students (Daly, 1991; Gregersen & Horwitz, 2002; **Hauck & Hurd, 2005**; Horwitz, 1986, 2001; Woodrow, 2006; Young, 1986) [...]

Third, **online students** realize that much of the **responsibility for learning lies with themselves (Hauck & Hurd, 2005).**”

Mosquera Gaviria, C. P. (2013). *Applying Metacognitive Strategies for Vocabulary Acquisition through Learning Portfolios* (MA Thesis, Universidad de La Sabana Chía).

On the other hand, **(Hauck, 2005) states that learners who have developed their metacognitive awareness are likely to become more autonomous language learners.**

Schofield, S. E. (2013). *School Administrators' Perceptions of Alabama's ACCESS Distance Learning Program* (Doctoral Thesis, Auburn University).

They stress that **conscious selection of strategies and self-directed involvement are characteristics of an autonomous approach, and particularly relevant to those learning in independent contexts (Hauck & Hurd, 2005).**

Melchor Couto, S. (2014). *El uso de mundos virtuales para la interacción oral en el aula de lenguas extranjeras y su impacto en las variables afectivas* (Doctoral Thesis, Universidade de Vigo).

The existing specialised literature presents contradictory opinions regarding the effects that the anonymity afforded by CMC media may have on users. **Some authors claim that anonymity may disinhibit users** (Bradley and Lomicka, 2000:362; **Hauck and Hurd, 2005:16**; Hampel et al., 2005:11;

Rosell-Aguilar, 2005), therefore creating a more relaxed environment for FL practice [...]

Finally, the comments provided by the participants have confirmed the **existence of effects already mentioned here and described by a number of authors, such as the fact that CMC communication provides a safe environment** (Bradley and Lomicka, 2000:362; **Hauck and Hurd, 2005:16**; Hampel et al., 2005:11; Rosell Aguilar, 2005).

Ni Loingsigh, D. (2015). *Minority Language Advising in the Workplace: Contextual Practices, Relational Knowing, Mandate, and Change* (EdD Thesis, Maynooth University).

Focusing on the distance learning environment, Harris (2003) and **Hauck and Hurd, (2005) emphasise the importance of the learning site, life roles, and support for language learning**. Some anxiety-related problems noted are **fear of making mistakes, fear of not being understood, “freezing” when called on to speak in front of others, not matching up to expectations, and feeling too much is expected of oneself (Hauck and Hurd, 2005)**. **These issues echo research done on the classroom situation...** Collaboration, the cohesion of the group, and common trust are also emphasised as important. **The findings of Hauck and Hurd (2005) reinforce this view**. Strategies used in the language learning on-line context will be drawn on again in subsequent chapters.

Fincham, N. X. (2015). *Metacognitive Knowledge Development and Language Learning in the Context of Web-based Distance Language Learning: A Multiple-Case Study of Adult EFL Learners in China* (Doctoral Thesis, Michigan State University).

In Flavell's original model of MCK, he distinguished three subcomponents of MCK, namely knowledge of person, task, and strategy. This model was later expanded and modified by Pintrich and colleagues to include knowledge of context and how it can influence cognition (Pintrich et al., 2000). **This addition is supported by L2 researchers who highlight the importance of contextual knowledge in today's technology-rich language learning environment (Hauck & Hurd, 2005; Jegede, Taplin, Fan, Chan, & Yum, 1999; Rubin, 2008)**. Still **another type of verbal report instrument that proves to be effective in eliciting L2 learners' MCK is the yoked subject technique. ... (Hauck & Hurd, 2005; White 1999b) [...]**

The variety and simultaneity of modes available to make meaning and the additional technological challenges they raise can lead to confusion

and uncertainty, which can cause learning difficulty and anxiety for language learners (**Hauck & Hurd, 2005**).

Bollinger, A. (2017). *Foreign Language Anxiety in Traditional and Distance Learning Foreign Language Classrooms* (Doctoral Thesis, Liberty University).

Most of the studies focusing on anxiety in distance learning foreign language classes were qualitative (e.g. Coryell & Clark, 2009; **Hauck & Hurd, 2005**; Hurd, 2007b; Hurd & Xiao, 2010; Xiao, 2012). **Some studies explored** causes of anxiety (Coryell & Clark, 2009), **anxiety-producing activities, and anxiety-reducing strategies (Hauck & Hurd, 2005)**. **However, distance learning foreign language classes have been ignored with only a few studies comparing anxiety experienced by students in traditional and distance learning foreign language classes (e.g. Hauck & Hurd, 2005; Pichette, 2009).**

Yilan, S. M. (2017). *'Take your Time' to 'Find yourself!': An Exploration of Scaffolded Autonomous Elearning Environments amongst International Students in a UK University* (Doctoral Thesis, University of Southampton).

Considering the use of self-talk to encourage learners to control their learning, rather than engage in an uncontrolled learning process (Zimmerman & Martinez-Pons, 1986), and to **increase awareness of learning (Hauck & Hurd, 2005)**, self-regulation (Zimmerman, 2002) and learning strategies (Rastegar & Kermani, 2015), the present study uses this concept to see how learners manage their learning on their own in e-learning environments (see Section 8.4.).

5. Hampel, R., & Hauck, M. (2006). Computer-Mediated Language Learning: Making Meaning in Multimodal Virtual Learning Spaces. *The JALT CALL Journal*, 2(2), 3-18.

Heins, B., Duensing, A., Stickler, U., & Batstone, C. (2007). Spoken Interaction in Online and Face-to-Face Language Tutorials. *Computer Assisted Language Learning*, 20(3), 279-295.

Moreover, a number of articles provide insight into different aspects of the practical use of online audio in the language learning context: exemplified by Lyceum **these findings focus on** the role of the tutor (Hauck & Haezewindt, 1999; Shield, Hauck & Hewer, 2001; Hampel & Stickler, 2005), task design (Hampel & Hauck, 2004; Rosell-Aguilar, 2005) and **issues of multimodality** (Kötter, Shield, & Stevens 1999; **Hampel & Hauck, 2006**).

Coleman, J., & Furnborough, C. (2010). Learner Characteristics and Learning Outcomes on a Distance Spanish Course for Beginners, *System*, 38(1), 14-29.

Distance learning and online learning are by no means synonymous, but the progressive, **theory-driven introduction of new technologies (Hampel and Hauck, 2006)** has led to widespread use of online conferencing, providing synchronous audio (and sometimes video) channels, synchronous textchat, and a range of supplementary tools including graphic interfaces such as shared whiteboards [...] **A distinctive pedagogy with targeted tutor training is required** (Hampel, 2003, Hampel, 2009, **Hampel and Hauck, 2006**, Hampel and Stickler, 2005, Hauck and Stickler, 2006).

Helm, F., & Guth, S. (2010). The multifarious goals of telecollaboration 2.0: Theoretical and practical implications. In F. Helm & S. Guth (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 69-106). Bern: Peter Lang.

Indeed, multimodal communication systems are increasingly used in telecollaboration because of the affordances they offer, but the complexity of these environments means that students need to develop multimodal communicative competence and familiarity with “the ‘grammar’ of additional modes such as the visual” (Hampel and Hauck 2006:12).

Hopkins, J.E. (2010). Distance Language Learners' Perceptions of Assessed, Student-led Speaking Tasks via a Synchronous Audiographic Conferencing Tool. *Innovation in Language Learning and Teaching*, 4(3), 235-258.

An additional reported advantage is that **the multimodal nature of SAC environments allows users to select the mode of communication most appropriate to the task at hand, while at the same time catering to different learning styles** (Chun and Plass 2000; Hampel 2003; **Hampel and Hauck 2006**).

Yanguas, Í. (2010). Oral Computer-Mediated Interaction between L2 Learners: It's about Time. *Language Learning & Technology*, 14 (3), 72-93.

We should begin by acknowledging that different modes of communication allow for different ways of communicating; it is important to emphasize that **the material resources themselves (i.e., the computer, the headset, etc) play an important role when making meaning in the CMC context, they certainly offer “new possibilities for representation and communication”** (Hampel & Hauck, 2006, p. 8).

Pegrum, M. (2011). Modified, Multiplied, and (Re-) mixed; Social Media and Digital Literacies. In M. Thomas (Ed.), *Digital Education: Opportunities for Social Collaboration* (pp. 9-36). London: Palgrave.

Students can sharpen their multiliteracy skills by using Web 2.0 tools [...] by building multimedia narratives in digital storytelling formats; and [...] by engaging in a simplified version of what Jenkins (2008) calls “transmedia storytelling,” [...] **Language learners could introduce the target language(s) into the mix, learning to codeswitch between tongues at the same time as they learn to codeswitch between semiotic modes** (Hampel & Hauck, 2006).

Helm, F. (2013). A Dialogic Model for Telecollaboration. *Bellaterra Journal of Teaching and Learning Language and Literature*, 6(2), 28-48.

Research studies have reported on the many outcomes of different telecollaborative projects, such as gains in language development, accuracy and fluency (Kötter 2003; Lee 2006), intercultural communicative competence (Belz, 2007; Möllering & Levy, 2012; O'Dowd, 2006), learner

autonomy (O'Rourke, 2006), **multimodal communicative competence** (Hampel & Hauck, 2006; Dooley & Hauck, 2012).

Plastina, A.F. (2013). Multimodality in English for Specific Purposes: Reconceptualizing Meaning-Making Practices. *Revista de Lenguas para Fines Especificos*, 19, 372-396.

Thus, developing multimodal communicative competence now needs to be at the forefront of ESP. In this regard, **Hampel and Hauck (2006)** claim that: In order to make meaning according to their interests and to engage in the remaking of resources and the design process, **language learners will have to become competent in both switching linguistic codes and switching semiotic modes and to do so consciously (p. 12)**.

Messina Dahlberg, G., & Bagga-Gupta, S. (2013). Communication in the virtual classroom in higher education: Languaging beyond the boundaries of time and space. *Learning, Culture and Social Interaction*, 2(3), 127-142.

Discussing multimodal meaning making, Hampel and Hauck postulate that "it is the individuals' needs and interest, with their personal, cognitive, affective and social dimension that together with task and institutional demands determine the direction of the remaking of the resources available to them" (2006: 6). The meaning making that occurs in virtual multimodal learning environments is challenging in that issues of multiliteracies become salient.

Devi S.I., Zaini, A., & Pramela, K. (2014). Deployment of Multimodal Tools by Net Geners: The Avatars of the Multiliterate World. *Procedia - Social and Behavioral Sciences*, 118, 94 – 101.

Communication in today's virtual environment empowers the users by providing them access to tools which enable e them to design, author and publish their own multimodal texts in, for example, blogs or wikis (Hampel & Hauck 2006) [...] **Hampel & Hauck (2006) assert that new media is likely to pose affective challenges** and varying degrees of motivation to certain groups of learners.

Helm, F. (2015). The Practices and Challenges of Telecollaboration in Higher Education in Europe. *Language Learning and Technology*, 19(2), 197-217.

Researchers have found that whilst video-conferencing can be highly motivating for **students participating in telecollaboration**, it also places

demands on them as they **need to be able to become competent in both switching linguistic and semiotic codes, as well as “become fluent in new codes such as online speech and writing and image” (Hampel & Hauck, 2006, p. 12).** [...] Audio/video conferencing was the most popular synchronous tool reported and seems to have been embraced in telecollaboration. This may be surprising if we consider **the challenges and cognitive demands that meaning making in multimodal environments has been found to place on learners (Hampel & Hauck, 2006).**

Ittzes Abrams, Z. (2016). Possibilities and challenges of learning German in a multimodal environment: a case study. *ReCALL*, 28(3), 343-363.

[...] help learners develop the skills to navigate and benefit from the rich resources that computer-mediated discourse can offer [...] This participant group was not ready to adopt full participatory roles (e.g. by posting reviews or commenting on the show on Facebook), but more advanced learners could be guided to do so, **since multimodal communication ultimately requires agency on the part of the speaker/user (Hampel & Hauck, 2006; Kress, 2010; Pegrum, 2011).**

White, C. (2017). Distance Language Teaching with Technology. In A. Chapelle and S. Sauro (Eds.), *Handbook of Technology and Second Language Teaching and Learning* (pp. 134-148). New Jersey: John Wiley & Sons.

Both research and practice have focused not only on the affordances and constraints of **task-based videoconferencing environments for distance language teaching**, but also **the new demands they placed on language learners and teachers**. The challenge for participants has been seen as one of **“making meaning in multimodal virtual learning spaces” (Hampel and Hauck 2006), and the complexity of that challenge has been identified as one of developing multimodal literacy.**

Cocchetta, F. (2018). Developing university students' multimodal communicative competence: Field research into multimodal text studies in English. *System*, 77, 19-27.

In the international context, discussions on multiliteracy in the L2 classroom include, Stein (2000), Stenglin and Iedema (2001), Royce (2002; 2007), **Hampel and Hauck (2006)**, and Prior (2013). [...] **Multimodal pedagogy goes beyond language to promote alternative ways of reading, interpreting and text composing. (p. 587).** Stenglin and Iedema (2001) and Royce (2002) highlight the need for TESOL professionals to help their students read visuals and put forward some teaching activities to

facilitate the process. **Hampel and Hauck (2006) examine the concept of multiliteracy and its implications for language teaching and learning in CMC environments.**

De Paepe, L., Chang, Z., & Koen, D. (2018). Development and implementation of online Dutch L2 courses in adult education: educators' and providers' perceptions of constraints and critical success factors. *Innovation in Language Learning and Teaching*, 12(1), 1-15.

Online learning also demands many new skills and an understanding of the online learning pedagogy from the teachers [...] and the skill to design activities that 'make efficient use of multiple modalities to ensure that learners stretch, change, adapt and modify all elements available' (Hampel and Hauck 2006, 465).

Doctoral theses

De los Arcos, B. (2010). *Emotion in Online Distance Language Learning: Learners' Appraisal of Regret and Pride in Synchronous Audiographic Conferencing* (Doctoral Thesis, The Open University).

Hampel and Hauck (2006) and Hampel (2007) look at multimodality in the context of language teaching and learning not from the perspective of analyzing interaction but to explore the demands that a multimodal environment puts on its users. [...] Apart from familiarizing themselves with the technology, they need to learn to represent meaning in more than one mode at a time, understand each mode and how to use different modes constructively, while remaining aware of intercultural values and the affective demands of new media (Hampel & Hauck, 2006) [...]

Hampel and Hauck (2006) and Hampel (2007) agree that to be competent users of a multimodal environment [...] learners need to be supported by task designers and tutors [...] promoting tutor training to relinquish that very same control and realize the democratic disposition of the medium, both Hampel and Hauck (2006) and Hampel (2007) point to Hampel and Stickler's (2005) study on tutor skills. [...]

Task designers mean to hand control over to the learners (Hampel, 2006; Hampel & Hauck 2006; Hampel, 2007). [...] new literacies requires that language learners become familiar with the electronic medium (Hampel, 2007), aware, among other aspects, of its affective demands (Hampel & Hauck, 2006).

Álvarez Valencia, J.A. (2014). *Language, Learning, and Identity in Social Networking Sites for Language Learning: The Case of Busuu* (Doctoral thesis, The University of Arizona).

In the specific area of CALL/CMC there is already research that hints at the potential of multimodality in fostering language learning. Most of this research comes from the implementation of Lyceum, a synchronous audio-graphic (multimodal) environment at the Open University. **Broadly speaking, this research supports the idea that multimodal communication plays a positive role in CMC-based language teaching and learning** (see Hampel & Baber, 2003; **Hampel & Hauck, 2006**; Chanier & Vetter, 2006; Lamy & Flewitt, 2011; Lamy, 2012a, b; Regine & Ursula, 2012).

6. Hauck, M. (2007). Critical Success Factors in a TRIDEM Exchange. *ReCALL*, 19(2), 202–223.

Audras, I. & Chanier, T. (2008). Observation de la Construction d'une Compétence Interculturelle dans des Groupes Exolingues en Ligne. *ALSIC*, 11(1), 175-204.

Pour un point de vue **sur l'influence du niveau de compétence communicative dans des environnements multimodaux dans l'expérience Tridem, le lecteur pourra se reporter à Hauck (2007).**”

Möllering, M., & Ritter, M. (2008). “To niche or not to niche” oder: zum Stellenwert digitaler Medien im fremdsprachlichen Klassenzimmer. In A. Müller-Hartmann & M. Schocker-v. Dittfurth (Eds.), *Aufgabenorientiertes Lernen und Lehren mit Medien: Ansätze, Erfahrungen, Perspektiven in der Fremdsprachendidaktik*(pp. 85-97). Bern: Peter Lang.

Hauck [...] schlägt eine Art Risikoabschätzung (risk assessment) vor, in der die genannten Faktoren jeweils in Bezug auf ein spezifisches Projekt als mehr oder minder relevant gewichtet werden (2007: 218) [...] It also raises the question whether ‘success’ or ‘failure’ continue to be operable concepts in the context of online language learning in general in telecollaboration in particular. Should they not rather be replaced by ‘relative awareness gain’ with regard to both intercultural differences and ‘cultural characteristics’ of the learning environment and its use? (Hauck 2007: 221).

Lee, L. (2009). Promoting Intercultural Exchanges with Blogs and Podcasting: A Study of Spanish–American Telecollaboration. *Computer Assisted Language Learning*, 22(5), 425-443.

Computer-mediated communication (CMC) has advanced rapidly from first generation tools (e-mail, chat, discussion board) to the so-called Web 2.0 generation vehicles (wiki, blog, podcasting). **L2 research on CMC has shown that learners benefit from online exchanges** through negotiation of meaning and form (e.g. Lee, 2006; Tudini, 2007), as well as **develop their intercultural communication competence (ICC) through telecollaboration** (e.g. Belz, 2003; **Hauck, 2007**; O’Dowd & Ritter, 2006). [...] the existing research is valuable to our understanding of CMC in L2 learning.

O’Dowd, R., & Ware, P. (2009). Critical Issues in Telecollaborative Task Design. *Computer Assisted Language Learning*, 22(2), 173-188.

Over the past two decades foreign language educators have been using networked technologies to bring their learners into contact with learning partners in other parts of the globe for the purpose of engaging them in

authentic communicative activity in the foreign language (Eck, Legenhausen & Wolff, 1995; Kern, Ware & Warschauer, 2004). **The learning outcomes of these telecollaborative exchanges have varied greatly and have demonstrated how online intercultural collaboration can contribute to the development of areas as diverse as learner autonomy [...] linguistic accuracy and fluency [...] intercultural awareness [...] online intercultural communication skills [...] and electronic literacy (Hauck, 2007).**

Örnberg Berglund, T. (2009). Multimodal Student Interaction Online: An Ecological Perspective. *ReCALL*, 21(2), 186-205.

It is only in recent years that synchronous audio interaction between students has become a more common component of language learning at a distance. [...] **However, providing tools for synchronous interaction does not automatically result in an efficient and constructive interaction setting, as many different factors may affect the interaction taking place** (cf. O'Dowd & Ritter, 2006; **Hauck, 2007**; Hauck & Youngs, 2008).

Roggenkamp, D. (2009). *Applying computer supported collaborative learning principles to telecollaboration*. Prepared for LLMC Conference, 2009, National Foreign Language Resource Center, University of Hawaii at Manoa.

Web-based language learning environments that seem to have the most in common with CSCL are generally referred to as being telecollaborative. **Telecollaboration programs include planned sequences of bilingual group projects, usually combining culture learning with language learning.** (Bauer, de Benedette, Furstenberg, Levet, & Waryn, 2006; Belz, 2004; **Hauck, 2007**) [...] **An additional consideration is the multi-modal, polycontextual nature of CMC in telecollaboration as has been reported by Belz (2004), Hauck (2007), Saarenkunnas, Kuure, & Taalas (2003), and Thorne (2003).**

Helm, F., & S. Guth (2010). The multifarious goals of Telecollaboration 2.0: Theoretical and Practical Implications. In F. Helm & S. Guth (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 69-106). Bern: Peter Lang.

Hauck (2007 and in this volume) has highlighted the importance of the impact of varying levels of participants' multimodal communicative competence both on learners' experience and interaction and on their intercultural communicative competence.

Lewis, T., Chanier, T. & Youngs, B. (2011). Multilateral Online Exchanges for Language and Culture Learning. *Language Learning & Technology*, 15(1), 3-9.

In the case of four of this special issue's articles, multilateral exchanges bring together groups of participants from two different institutions and countries. **In recent years efforts have been made to expand the bilateral format to accommodate a multiplicity of partners and a more pluralistic approach to intercultural learning (see Hauck, 2007; Hauck & Lewis, 2007; Hauck & Youngs, 2008).**

O'Dowd, R. (2011). Online Foreign Language Interaction: Moving from the Periphery to the Core of Foreign Language Education. *Language Teaching*, 44(3), 368-380.

Recent years have seen a third 'generation' or model of telecollaborative exchanges emerging, which reflects in many ways a more flexible and adaptable interpretation of how online intercultural interaction and exchange can take place in foreign language learning contexts [...] Learners may also be engaged, not in bilateral exchanges, but in **more complex multilateral group setups which involve, for example, language learners from three countries (TRIDEM exchanges; Hauck 2007).**

Yang, Y.F. (2011). Learner Interpretations of Shared Space in Multilateral English Blogging. *Language Learning & Technology*, 15(1), 122-146.

Studies in digitally mediated communication have explored how language learners co-construct and mediate with each other in telecollaboration or online exchange projects. **On what common ground and conditions they can work together successfully is of concern in these studies** (Basharina, 2007, 2009; Belz, 2002; Hauck, 2007; Lee, 2008; O'Dowd, 2005; 2006; Ware, 2005; Ware & Kramersch, 2005; Ware & O'Dowd, 2008).

Helm, F. (2013). A Dialogic Model for Telecollaboration. *Bellaterra Journal of Teaching and Learning Language and Literature*, 6(2), 28-48.

Exchanges may be multilateral, involving more than two groups in any one exchange (Müller-Hartmann, 2006; Hauck, 2007; Hauck & Lewis, 2007).

Thomas, M. (2014). Researching Machinima in Project-Based Language Learning: Learner-Generated Content in the CAMELOT Project. In E. Dixon, & M. Thomas (Eds.), *Researching Language Learner Interactions Online: From Social Media to MOOCs* (pp. 283-302). Texas, USA: Calico Monograph Series (13).

While it has been found that the teacher's involvement in online interactions can greatly influence group dynamics (Hauck, 2007), there is a lack of consensus on the level of instructor intervention needed to facilitate student participation and promote deeper learning in asynchronous discussions.

Kleban, M., & Bueno-Alastuey, C. (2015). Creating Pedagogical Knowledge Through Electronic Materials in a Telecollaboration Project for Pre-Service Teacher Trainees. In A. Gimeno, M. Levy, F. Blin & D. Barr (Eds.), *WorldCALL: Sustainability and Computer-Assisted Language Learning*. London, UK: Bloomsbury Publishing.

Hauck (2007) reported that students enhanced their general ICT skills as a result of using the digital tools necessary for participating in a telecollaborative exchange [...] telecollaboration projects (Hauck 2007, 2013) have analysed the effect of collaborative practices on some areas related to techno-pedagogical knowledge (awareness of available technologies and their affordances, etc.).

McKinnon, S., Smith, A. M.J., & Thomson, J. (2015). A Window to the World: Using Technology to Internationalise Entrepreneurship Education. *Journal of Perspectives in Applied Academic Practice*, 3(3), 15-23.

It must be remembered that COIL is a learning journey for everybody involved. **Hauck (2007, p. 220) emphasises that “areas of conflict and misunderstanding can be turned into key moments of cultural learning for both tutors and learners [...]**

As **Hauck (2007)** points out it is not always easy to achieve agreement on teaching and learning styles amongst colleagues in one institution and one country. If the team members come from two very different cultures, have never met face to face and rely on online exchanges alone “dissonances in interpretation of student behaviour and tutor interventions” can occur (**Hauck, 2007**, p. 218). [...]

Assessing the overall success of the pilot is complex. **Hauck (2007, p.221) challenges the idea of using concepts such as ‘success’ or ‘failure’ and suggests replacing them with ‘relative awareness gain’.**

Çiftçi, E. Y. (2016). A Review of Research on Intercultural Learning through Computer-Based Digital Technologies. *Educational Technology & Society*, 19(2), 313–327.

[...] designing a basic online intercultural or cross-cultural telecollaborative environment might not be enough by itself to promote intercultural learning; therefore, **the current literature has revealed that there was and will be a need for training participants for technology-based competences or for the required tools before any online exchange**

takes place (Chun, 2011; Hauck, 2007; Lee & Markey, 2014) [...] there is also a strong need for everyone involved to have good communication skills in order to handle potential misunderstandings or breakdowns (Elola & Oskoz, 2008; Furcsa, 2009; Hauck, 2007; Lee, 2011). [...] It therefore seems that the backbone of successful online intercultural interactions is a meticulous design (Hauck, 2007).

Ensor, S., Kleban, M., & Rodrigues, C. (2017). Telecollaboration: foreign language teachers (re)defining their role. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 20, n.p.

More recently telecollaboration has been related to the development of awareness of pedagogical knowledge (eg Dooly & Sadler, 2013; Guth & Helm, 2012), and "multimodal communicative competence" (Hauck, 2007), or multiliteracies (Hauck, 2010; Guth & Helm, 2012) which has led to the concept of "telecollaboration 2.0" (Guth & Helm, 2010; O'Dowd, 2010). ... Multimodal communicative competences (Hauck, 2007) or multiliteracies refer to a set of abilities related to communicating in the globalized, culturally and linguistically diverse world by means of multimedia communication tools available through the internet (New London Group, 2000).

Lin, W-C., Shie, J-S., & Holmes, P. (2017). Enhancing intercultural communicative competence through online foreign language exchange: Taiwanese students' experiences. *Asian Journal of Applied Linguistic*, 4(1), 73-88.

Computer-mediated communication (CMC), computer-assisted language learning (CALL) and foreign language uses of telecollaboration (interaction mediated by internet communication tools) have become important pedagogical tools that integrate information technology into language learning (Fotos & Browne, 2004; Ware & O'Dowd, 2008). [...] **In recent years, efforts have also been made to engage language learners in either traditional binary schema of bilateral telecollaborative exchanges (O'Dowd, 2005; Yang, 2011) or multilateral approach to intercultural learning (Hauck, 2007; Hauck & Youngs, 2008) whereby meaning negotiation processes are made available and investigated.**

Huang, L. (2018). Intercultural Education on the Theme of the Belt and Road Initiative: A Multimodality Oriented Pedagogical Design. In Y. Cheng, L. Song & L. Huang (Eds.) *The Belt & Road Initiative In The Global Arena: Chinese and European Perspectives* (pp. 35-54). Basingstoke: Palgrave Macmillan.

MA and doctoral theses

De los Arcos, B. (2010). *Emotion in Online Distance Language Learning: Learners' Appraisal of Regret and Pride in Synchronous Audiographic Conferencing* (Doctoral Thesis, The Open University).

Researchers collected quantitative and qualitative data to **investigate the extent to which... multimodal environments influenced task design and learner interaction, and consider some of the factors that contribute to the success or failure of telecollaboration projects (Hauck, 2007; Hauck & Youngs, 2008)**. Among the latter, **Hauck (2007) focuses on discrepancies in the linguistic competence of participants, the disparity in their awareness of the different affordances of the electronic tools, affective variables [...] and their gain in cultural knowledge.**

Guarda, M. (2013). *Negotiating a Transcultural Place in an English as a Lingua Franca Telecollaboration Exchange: A Mixed Methods Approach to the Analysis of Intercultural Communicative Competence and Third Space in an Online Community of Practice* (Doctoral thesis, Università degli Studi di Padova).

Among the group of bilingual exchanges, **an interesting form of telecollaborative partnerships is the one which involves more than two cultures** in practices that Helm and Guth call "multilateral" (2010: 15): **an example for this is the Tridem project described in Hauck (2007)** and Hauck and Lewis (2007), in which French learners from the UK and the USA interacted with French native speakers to complete a series of collaborative tasks which involved the use of both languages and the exploration of a variety of cultures.

Pol, L. (2013). *Telecollaboration in Secondary Education: An Added Value?* (Master thesis, Faculty of Humanities, Utrecht University).

Another study compared the use of synchronous and asynchronous communication and aimed to **determine how these tools affected “learner experience and interaction and [...] the development of ICC” (Hauck, 2007, p. 205).**

Feitosa de Carvalho, E. (2015). *Bringing Awareness About Differences Between Teacher-Partners While Designing and Implementing Telecollaborations* (MA Thesis, Utrecht University).

It may be seen as an opportunity for learners to practice “intercultural communication,” which is very important in the development of intercultural communication skills (Byram, 1997; Belz, 2002; 2005; **Hauck, 2007**; O’Dowd, 2013). [...]

Depending on the amount of effort dedicated by learners to the tasks, previous ICT knowledge and some ICT training during “pre-exchange briefings,” **TC may help in the development of ICT skills (Hauck, 2007).**

The development of learner autonomy is one of the goals of telecollaborative tasks (O’Rourke, 2005; Belz, 2005; Hauck, 2007; O’Dowd & Ware, 2009).

7. Hauck, M., & Youngs, B. (2008). Telecollaboration in multimodal environments: The impact on Task Design and Learner Interactions. *Computer Assisted Language Learning*, 21(2), 87-124.

Deutschmann, M., & Panichi, L. (2009). Talking into empty space? Signalling involvement in a virtual language classroom in Second Life, *Language Awareness*, 18(3-4), 310-328.

While many argue that one of the main challenges when teaching language in online contexts is addressing oral/aural communicative skills (cf. Hampel, 2003), **authors also point to the limited number of studies exploring the possibilities/limitations of audio synchronous tools** (Hampel, 2003; **Hauck & Youngs, 2008**; Jauregi & Banados, 2008).[...] **the nature of learner participation and how the affordances of the environment influence participation become central concerns to online educators** [...].

Lee, L. (2009) Promoting Intercultural Exchanges with Blogs and Podcasting: A Study of Spanish-American Telecollaboration, *Computer Assisted Language Learning*, 22(5), 425-443.

To date, cross-cultural exchanges using various CMC tools within a wide range of learning contexts have been carried out. [...] Research findings have shown that learners not only gain linguistic benefits (Belz, 2003; Dussias, 2006), but also increase their cross-cultural communication and awareness (e.g. Belz, 2007; O'Dowd & Ritter, 2006). However, **only limited research has been conducted using Web 2.0 tools for telecollaboration** (Ducate & Lomicka, 2005; **Hauck & Youngs, 2008**).

Örnberg Berglund, T. (2009). Multimodal Student Interaction Online: An Ecological Perspective. *ReCALL*, 21(2), 186-205.

Previous research on language learning in multimodal online environments has often been concerned with audio-visual tools (an extensive review is available in Hauck & Youngs, 2008).

Wang, F. (2012). Using Second Life to assist EFL Teaching: we do not have to sign in to the program, *TechTrends*, 56(4), 15-18.

The purpose of this study was to forward the idea that the use of SL for language teaching and learning does not have to be constrained by SL's limitations. **As researchers pointed out, a successful learning activity does not depend on technology** (Colpaert, 2006), **but on its design** (Hampel, 2006; **Hauck & Youngs, 2008**; Zhao, 2003).

González-Lloret, M., & Ortega, L. (2014). Towards technology-mediated TBLT. In M. González-Lloret, & L. Ortega (Eds.), *Technology-mediated TBLT: Researching Technology and Tasks*. Amsterdam, The Netherlands: John Benjamins Publishing Company.

In addition, **two task-related issues have received considerable attention by the CALL research community**. One is the obvious roles that tasks play in synchronous and asynchronous human interactions orchestrated via computers for purposes of language learning [...] **The other is the importance of task design in successful telecollaborations in the service of intercultural learning** (Dooley 2011; **Hauck & Youngs 2008**; Lamy & Goodfellow 2010; O'Dowd & Ware 2009).

Kurek, M. (2015). Designing Tasks for Complex Virtual Learning Environments. *Bellaterra Journal of Teaching & Learning Language & Literature*, 8(2), 13-32.

As Hauck and Youngs (2008) have it, **the modes that tools offer are specific to a particular environment and “their affordances determine how such applications can be used”** (Hauck & Youngs, 2008, p. 7). They continue that **“individual affordances create distinct learning environments allowing for different levels of interaction”** (ibid., p. 20).

Fuchs, C. (2016). “Are you able to access this website at all?” – team negotiations and macro-level challenges in telecollaboration. *Computer Assisted Language Learning*, 29(7), 1152-1168.

This case study [...] has as its premise that engaging student teachers (STs) in telecollaborative praxis can contribute to their understanding of the complexity arising from such contexts. **At the same time, the project provided participants with a pipeline for exploring and experimenting with technology and collaborative task design, which can in turn help support their digital literacy** (e.g. Guth & Helm, 2010; **Hauck & Youngs, 2008**; see also Thomas & Reinders, 2010).

Guo, S., & Möllering, M. (2016). The implementation of task-based teaching in an online Chinese class through web conferencing, *System* 62, 26-38.

Empirical evidence has supported the Interaction Hypothesis in the context of face-to-face TBLT teaching practice (Ellis, Tanaka, & Yamazaki, 1994; Gass & Varonis, 1985; Long, 1983, 1985). **Recently, there are increasing calls to investigate TBLT in multimodal online learning environments (Hauck & Youngs, 2008; Stockwell, 2010).**

O'Dowd, R. (2016). Emerging Trends and New Directions in Telecollaborative Learning. *CALICO Journal*, 33(3), 291-310.

Kern (2014) warns that “what one sees on the computer screen is a highly mediated, filtered, and designed version of the world” (p. 341), and he argues that telecollaborative learning needs to draw learners’ attention to how the online medium influences how communication takes place and brings with it its own ideas about what communication actually is. These are very useful propositions for the design of future online exchanges, as they urge practitioners to raise students’ awareness explicitly to the assumptions and genres which they bring to online interaction, and they also serve to draw attention to the impact of the computer medium on our communicative activity. **Studies on the impact of videoconferencing and multimodal communication are very present in the recent literature (Barron & Black, 2015; Hauck & Youngs, 2008).**

Del Rosal, K., Conry, J., & Wu, Sumei. (2017). Exploring the fluid online identities of language teachers and adolescent language learners, *Computer Assisted Language Learning*, 30(5), 390-408.

Task design is fundamental for both learning and the operation of a telecollaboration. Hauck and Youngs (2008) found that the type of technology used in a telecollaboration and the design of collaborative tasks influenced participants’ perceptions about their level of connection [...]. Our study builds on the literature by highlighting that beyond the technology and the type of tasks (Hauck & Youngs, 2008), the content of tasks (e.g. topics of students’ interests or their culture) is an important element in the development of a connection between online partners.

Renner, J. (2017). Negotiation of meaning and language-related episodes in synchronous, audio-based Chinese-German eTandem. *CercleS*, 7(1), 137-159.

The studies by Akiyama (2014), Hauck and Youngs (2008), Wang (2013), and Wigham and Chanier (2015) serve as a foundation for the following case study insofar as their main concern is the interplay between different modalities, such as audio-chat and text-chat, for negotiations and feedback.

Luo, H, & Yang, C. (2018): Twenty years of telecollaborative practice: implications for teaching Chinese as a foreign language. *Computer Assisted Language Learning*. *Computer Assisted Language Learning*, 31(1-2), 1-16.

An increasing body of research has shown that tasks play an important role in determining the learning outcomes of telecollaboration (Guth & Helm, 2011; **Hauck & Youngs, 2008**; Müller-Hartmann, 2000; O'Dowd & Ware, 2009). [...] **Asynchronous text-based communication has a few benefits for language learning, [...] creating 'more scope for developing closer relationships with their learning partners' (Hauck & Youngs, 2008, p. 103). [...] Videoconferencing allows learners to see and talk to their partners in real time, quickly clarify doubts and details, engage in more 'life-like' interaction (Hauck & Youngs, 2008; O'Dowd, 2007b; O'Dowd & Eberbach, 2004) [...]**

The norm of telecollaboration nowadays tends to use a combination of different online tools, especially tools that students are usually familiar with (Dooly, 2007). This is **because different tools offer different advantages (Hauck & Youngs, 2008).**

Cohen, C., & Wigham, C. (in press). A comparative study of lexical word search in an audioconferencing and a videoconferencing condition. *Computer Assisted Language Learning*.

More recent studies have investigated the contributions of the webcam in videoconferencing environments and the ways in which the interlocutor's image, that gives access to communicative resources including gestures, facial expressions, body movements and gaze, may contribute to more active communication and better mutual understanding. Such studies **have explored analysis units including** social presence [...], lexical explanations [...], word search [...], teacher semio-pedagogical competence [...] and **task design (e.g., Hauck & Youngs, 2008).**

MA and doctoral theses

Pol, L. (2013). Telecollaboration in Secondary Education: An Added Value? (Master thesis, Faculty of Humanities, Utrecht University).

Providing students with the opportunity to improve their IC (Liaw, 2006 and **Hauck & Youngs, 2008**), and not only facilitating, but aiming to ensure the development of students' ICC (Carney, 2008 and Lee, 2007) **and** through this, **their independence (Fuchs, Hauck & Müller-Hartmann, 2012) can be reasons for setting up an exchange.**

Wunder, I. (2017). The influence of cultural background on teaching and learning in synchronous online sessions (Doctoral thesis, Department of Educational Research, Lancaster University).

[T]his study adds to the existing and **growing body of research which has its origin in telecollaboration** (Hampel & Hauck, 2006; Hampel & Stickler, 2005; **Hauck & Youngs, 2008**) and has now moved beyond the boundaries of online language learning and teaching (Moore & Simon, 2015), as it concerns how teachers experience cultural practices in virtual classrooms. [...]
The need for and the affordances of teacher training have been researched intensively in the field of CALL and **it can be argued that the actual topic of foreign language teaching is one layer of mediation put on top of technology-mediated learning** (see Hampel, 2005; Hauck, 2010; **Hauck and Youngs, 2008**).

8. Hauck, M., & Hampel, R. (2008). Strategies for Online Environments. In S. Hurd & T. Lewis (Eds.), *Language Learning Strategies in Independent Settings* (pp. 283-302). Bristol: Multilingual Matters.

Meskill, C., & Sadykova, G. (2011). Introducing EFL faculty to online instructional conversations. *ReCALL*, 23(3), 200-217.

Such observations confirm the current distance education literature that underscores the interactive and personal aspects of online learning (Dringus, 1999; King, 2002), aspects that have been echoed strongly in research specific to language education (Hauck & Hampel, 2008; Meskill & Anthony, 2007).

Lai, C., & Morrison, B. (2013). Towards an Agenda for Learner Preparation in Technology-Enhanced Language Learning Environments. *CALICO Journal*, 30(2), 154-162.

Thus, fostering the prerequisite attitudes, knowledge and skills becomes crucial if we want to engage language learners in active and effective use of technology-mediated language learning environments (Cohen & White, 2008; Hauck & Hampel, 2008; Hubbard & Romeo, 2012; Levy, 2009).

Ranalli, J. (2014). Technology-Mediated L2 Strategy in Instruction and its Potential to Enhance Evaluation and Research. *International Journal of Computer-Assisted Language Learning and Teaching*, 4(4), 44-59.

Regardless, language learning is migrating increasingly into technology-based environments These innovations hold much promise but also bring with them challenges, including the potential for cognitive overload and **the related need for training to facilitate learners' effective use of them. CALL researchers have called for instruction to help learners make more strategic and self-directed use of such resources (Hauck & Hampel, 2008; Hubbard, 2004, 2013; Winke & Goertler, 2008).**

Doctoral theses

Ranalli, J. (2012). *The VTT Project: A web-based platform for strategy instruction and research into self-regulated learning of L2 vocabulary* (Doctoral Thesis, Iowa State University).

This paper has proposed principles for the design of online L2 strategy instruction, based on the concepts of cognitive load, complex cognitive skill, and multimedia learning. **These principles could prove useful in addressing recently discussed needs to help learners make more**

strategic and self-directed use of CALL resources (Hauck, 2005; Hauck & Hampel, 2008; Winke & Goertler, 2008), particularly in contexts where processing demands are likely to be high.

Gang, L. (2017). *Estratégias Utilizadas por Aprendentes de Português Língua Estrangeira: Estudantes Universitários Falantes de Língua Materna Chinesa* (Doctoral Thesis, Universidade de Lisboa).

A importância das LLS na aprendizagem online é também assinalada por Hauck e Hampel (2008). As autoras consideram que tal se deve ao facto de a interação realizar-se em situações menos familiares ou em circunstâncias que são frequentemente usadas para fins comunicativos e que não são propriamente criadas para o ensino de LE. ... As autoras sublinham que ainda se sabe muito pouco sobre a forma como os aprendentes empregam as LLS e desenvolvem a competência estratégica quando estudam online. ... Recorde-se que a introdução das novas tecnologias no ensino de LE implica não só oportunidades, mas também desafios (Hubbard, 2004; Chapelle, 2008; Hauck & Hampel, 2008; Niño, 2009; van Compernelle & Williams, 2009; Benson, 2011; R. L. Oxford & Lin, 2011).

9. Hauck, M. (2010a). **Telecollaboration: At the interface between Multimodal and Intercultural Communicative Competence**. In S. Guth & F. Helm (Eds.), *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the 21st Century* (pp. 219-244). Bern: Peter Lang.

Jauregui, K. (2011). La negociación de procesos de escritura a través de la videocomunicación. *Quaderns de Filologia. Estudis lingüístics*, Vol. XVI, 81-103.

Las nuevas tecnologías En los últimos años, gracias al desarrollo de los medios tecnológicos, se ha empezado a utilizar la retroalimentación en línea como alternativa a la comunicación cara a cara. **Diversos estudios han mostrado que la comunicación multimodal (Hauck, 2010) que se genera en entornos tecnológicos (wikis: Elola y Oskoz, 2010; foros de discusión: Ware y O'Dowd, 2008), donde confluyen el lenguaje escrito, oral y electrónico, favorece no sólo la colaboración, una mayor participación y la motivación del estudiante, sino que también contribuye al análisis crítico de elementos lingüísticos y tipográficos presentes en el texto y a la sensibilización de que uno escribe para determinados lectores (sensibilización de audiencia).**

Hampel, R., & De los Arcos, B. (2013). Interacting at a distance: a critical review of the role of ICT in developing the learner–context interface in a university language programme. *Innovation in Language Learning and Teaching*, 7(2), 158–178.

In a telecollaborative project with a similar setup, **Hauck (2010a) explored notions of multimodal and intercultural communicative competence. The study suggests that raising awareness regarding both the media used and the intercultural experience helps learners to take greater control of their learning context and to collaborate more successfully.** In the context of the same project, Hauck (2010b) explored how telecollaborative tasks can be set up to develop learners' multimodal competence.

O'Dowd, R. (2013). Telecollaboration and CALL. In M. Thomas, H. Reinders & M. Warschauer (Eds.), *Contemporary Computer Assisted Language Learning* (pp. 123 –

139). London/New York: Bloomsbury.

In light of the priorities that she saw emerging in 2006, this chapter concludes with a look at the issues that occupy DCALL researchers today. To that effect, a corpus of research and theses from the UK Open University published in 2010 and 2011 or in press at the time of writing was examined. 54 studies were found to belong to DCALL, covering the following topics (in descending order of number of publications): multimodality (8); knowing more about learners, their characteristics and contexts (8); online teaching and teacher training (7); autonomy (4); motivation (4); emotions and anxiety (4); intercultural issues (4); mobile learning (4); task design (3); beginners (3); the speaking skill (1); collaboration (1); feedback (1); assessment (1); and Open Educational Resources for teachers (1). The top seven items on the list may be seen as priority activities for DCALL, as follows.

The first one is multimodality a field which has become important to DCALL in

Spijkerbosch, P. (2013). CMC in a Japanese educational context. *Studies in Language and Literature*, 33(1), 140-162.

Hauck (2010) outlines what she describes as the 'interdependence of multimodal and intercultural communicative competencies'. Using Internet-based telephony to collaborate interculturally requires intercultural communicative skills as well as technological skills. They are dependent on each other, and checking and scaffolding learner knowledge of them needs to be considered fundamental if they are to be effectively used pedagogically.

Dunne, B.G. (2014). Reflecting on the Japan-Chile Task-Based Telecollaboration Project for Beginner-Level Learners. *TESL Canada Journal*, 31(8), 175-186.

The current research landscape predominantly focuses on either the development of intercultural (communicative) competence (ICC; e.g., Belz, 2007; Byram, 1997; Hauck, 2010; Jauregi & Banados, 2010; Müller-Hartmann, 2006; Rathje, 2007; Ware, 2005) or the advantages of the multimodal use of combined technologies, (e.g., Hampel, 2006; Hauck, 2010; Stockwell, 2010).

Lindner, R., & Méndez Garcia, M (2014). The Autobiography of Intercultural Encounters through Visual Media: exploring images of others in telecollaboration. *Language, Culture and Curriculum*, 27(3), 226-243.

Drawing on insights from a telecollaboration project, **Hauck (2010) suggests that multimodal communicative competence – ‘i.e. the ability to understand the combined potential of various modes of meaning making’ (Royce, 2002, p. 226), including written and spoken language and visual resources – is directly linked to the ability to analyse the cultural make-up of a learning environment and the acquisition of intercultural competence (as defined by Byram’s ‘savoirs’). This is a challenging mix, which, as Hauck points out, needs to be taken into account both in learner and tutor training for telecollaboration and in the design of telecollaboration tasks.** This last point brings the discussion to the rationale behind the present study, in which the AIEVM was used both as the central task and as the tool of analysis in an online exchange aimed at facilitating multiliteracies development with particular focus on the intersection between intercultural learning and visual media literacy.

Grau, M., & Legutke, M. (2015). Linking Language Learning Inside and Outside the Classroom – Perspectives from Teacher Education. In D. Nunan & J.C. Richards (Eds.), *Language Learning Beyond the Classroom* (pp. 263-272). Abingdon: Routledge.

discourse-related issues. Since computer-mediated communication projects have attracted considerable research activity over the last decade, it is worth noting that the significance of a well-organised project framework is emerging clearly from the growing research literature in this field. Even though virtual encounters using

Frutos, M.J.R. (2016). Multimodale Interaktion in einer zweisprachigen Community. In C. Baechler, E.M. Eckkammer, J. Müller-Lancé, & V. Thaler (Eds.), *Medienlinguistik 3.0 – Formen und Wirkung von Textsorten im Zeitalter des Social Web* (pp. 329-346). Mannheim: Frank & Timme.

Hauck (2010: 243) unterscheidet bei *Modi* zwischen dem gesprochenen Modus, dem geschriebenen Modus, dem Bild-Modus und dem Gebärden-Modus:

- spoken mode (code – including languages and language varieties, vo-

Cappellini, M. (2017). La télécollaboration vue par la communication exolingue—Pour un enrichissement mutuel de deux traditions de recherche. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 20, n.p.

Sur le versant socioculturel, cela se traduit dans une volonté de trouver les caractéristiques des interactions en fonction de la multimodalité des environnements ou de la littératie numérique des interlocuteurs (Guth & Helm, 2010 ; pour un regard plus large, voir Kern, 2015). **Cela amène à identifier certaines spécificités des interactions télécollaboratives et à la définition d'une compétence multimodale (Hauck, 2010; Dooly & Hauck, 2012) [...]**

La notion d'affordance, parfois combinée avec des notions issues de la sémiotique sociale (Dooly & Hauck, 2012; Cappellini, 2014a ; Guichon, 2015), a une certaine puissance méthodologique **puisqu'elle fournit une entrée à la fois sur le rapport dialectique entre un locuteur et son environnement et sur la construction transmodale du sens (Baldry & Thibault, 2006; Hauck, 2010) [...]**

La première observation est que, **conformément à d'autres études dans la littérature (par exemple, Hauck, 2010), la co-construction du sens et des séquences latérales se fait effectivement par une orchestration des modes, autrement dit de manière transmodale.**"

González-Lloret, M. (2017). Technology for Task-based Language Teaching. In A. Chapelle and S. Sauro (Eds.), *Handbook of Technology and Second Language Teaching and Learning* (pp. 234-247). New Jersey: John Wiley & Sons.

This adds value to technology-mediated TBLT since students would be developing their digital, multimodal, and informational literacies (Warschauer, 2007) at the same time that they are developing their language competence; two essential life skills for the citizens of tomorrow. **This requires teachers to be knowledgeable in the use of multiple technologies as well as experienced in the development of tasks (Hauck 2010).**

Combe, C. (2017). Télécollaboration informelle 2.0 : le vlogue d'un américain en français sur YouTube. *Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication*, 20, n.p.

En effet, les apprenants se doivent de posséder des compétences particulières [...] **Hauck (2010) souligne également que développer des compétences multimodales** – au sens où Kress en 2003 l'entendait, **c'est-à-dire savoir exprimer des idées au travers de modes aussi différents que les mots, les images fixes ou mobiles ou les modèles 3D – sont nécessaires à l'apprenant 2.0.**

Al Khateeb, A. (2018). Assessing English Teachers as a Foreign Language (EFL) Telecollaborative Competence: A Case Study from Saudi Arabia, *English Language Teaching*, 11(4), 55-69.

In addition, task design has been influenced by the advancements in computer, media and other technologies. **Hauck (2010) confirms that telecollaborative tasks involve ‘the development of language proficiency, intercultural communicative competence and new media literacies.’**

MA and doctoral theses

Malinowski, D. (2011). *Where is the Foreign? An Inquiry into Person, Place, and the Possibility of Dialogue in an Online French Language Class* (Doctoral Thesis, University of California, Berkeley).

Building upon these and other studies of the possibilities and obstacles telecollaborative exchanges present to the goal of “understanding the other side” (O’Dowd, 2003; see also Byram, 1997), more recent studies [...] and explore the relationship between intercultural and multimodal competence (Hauck, 2010).

Guarda, M. (2013). *Negotiating a transcultural place in an English as a lingua franca telecollaboration exchange: a mixed methods approach to the analysis of intercultural communicative competence and third space in an online Community of Practice* (Doctoral Thesis, University of Padova).

Thanks to the inexpensive and quick way of communicating that they offer (Crystal 2006: 266), **the computer and above all the Internet have profoundly changed the way language learners come into contact and interact with learning partners worldwide in a way that seems to foster their communicative and intercultural competence (Liaw 2006) as well as their new online literacies (Guth and Helm 2010; Hauck 2010).** As a consequence of this renewed awareness, a growing number of studies on

telecollaboration in foreign language settings have been produced and shared within the community of researchers and practitioners.

Panichi, L. (2014). *Participation in language learning in virtual worlds. An exploratory case-study of a Business English course* (Doctoral Thesis, University of Hull)

It is with the use of audio-graphic conferencing platforms in particular, however, that the initial discussion of multimodality in CMCL has been framed (Ciekanski and Chanier, 2008; Hampel, 2003; 2006; Hampel et al., 2005; Hampel and Hauck, 2004; 2006; **Hauck, 2010**; Lamy, 2004; Lamy and Hampel, 2007; Wang, 2004).”

Wang-Szilas, J. (2016). *Les enjeux de l'intégration de l'e-Tandem en didactique des langues-cultures étrangères : interactions entre apprenants et dynamique institutionnelle dans un dispositif universitaire sino-francophone* (Doctoral Thesis, Université Sorbonne Paris Cité)

Hauck résume trois défis pour les interlocuteurs engagés dans une communication dite télécollaborative : « engaging with meaning making via multiple modes in a new, online culture while depending on limited written and/or oral proficiency in another language » (Hauck, 2010 : 227). Ces trois défis, à savoir construire le sens à travers des modalités/modes de communication diverses, avec des compétences langagières limitées en L2 et dans une culture en ligne nous permettent de réfléchir à la construction des tâches.

Wunder, I. (2017). *The influence of cultural background on teaching and learning in synchronous online sessions* (Doctoral Thesis, Lancaster University).

Hauck's findings that “the learner's multimodal communicative competence, awareness of the cultural characteristics of the learning environment, i.e. the cultural dependency of tools, communicative norms and personal styles (Thorne 2003), and gain in intercultural competence as understood by Byram (1997)” (2010, p. 8) are interrelated can be used to educate teachers about their students but also to reflect about their own teaching in virtual classrooms. Gaining multimodal competence as suggested by Hampel and Hauck (2006) should therefore be implemented into teacher training, because only if teachers own these competences themselves, can they support their students appropriately with the aim of constructivist learning in virtual classrooms.

10. Hauck, M. (2010b). The enactment of task design in Telecollaboration 2.0. In M. Thomas & H. Reinders (Eds.), *Task-based language learning and teaching with technology* (pp. 197-217). London: Continuum.

Banegas, D.L. (2013). ELT through Videoconferencing in Primary Schools in Uruguay: First Steps. *Innovation in Language Learning and Teaching*, 7(2), 179-188.

By means of webinars and face-to-face discussions, RTs had the opportunity to discuss lesson plans and the rationale behind lesson planning (Banfi and Rettaroli 2012) with the lesson plan writers. **This was prompted by the need to discuss the relationship between Task-Based Learning, teacher development and technology (Hauck 2010; Raith and Hegelheimer 2010)** in this particular context.

González-Lloret, M., & Ortega, L. (2014). Towards technology-mediated TBLT An introduction. In M. González-Lloret & L. Ortega (Eds.), *Technology-mediated TBLT : researching technology and tasks* (pp. 1-22). Amsterdam: John Benjamins Publishing Company.

Studies of CMC tasks are concerned not just with language learning, but also with the acquisition of intercultural competence (Belz & Thorne 2006; Hauck 2010; Thorne 2008; Ware & O'Dowd 2008). In this line of research, we are seeing a shift in the investigation of TBLT and technology from purely cognitive studies to those with a sociocultural and intercultural focus, as well as a focus on the development of digital literacies.

Kurek, M. (2015). Designing Tasks for Complex Virtual Learning Environments. *Bellaterra Journal of Teaching & Learning Language & Literature*, 8(2), 13-32.

[T]echnology mediation has [...] given rise to a wide range of new types of multimodal interaction, be it with content or with other learners. Therefore Hauck (2010) argues that the activities designed for online contexts should first make appropriate use of multiple modalities and, then, also promote learners' digital literacy (see also Hampel, 2006; Levy & Stockwell, 2006). As Hauck's arguments go "varying affordances require varying e-literacy skills (ibid., p. 204).

Ittzes Abrams, Z. (2016). Possibilities and challenges of learning German in a multimodal environment: a case study. *ReCALL*, 28(3), 343-363.

Despite a growing body of research on task-based language learning (TBLT) [...] there is **still little information available regarding the pedagogical design behind tasks and how they are implemented** (Samuda & Bygate,

2008). **Scholars in computer-mediated second language (L2) learning have called for research to fill in this gap by reflecting critically on task design and the subsequent implementation process** (Fuchs, Hauck & Müller-Hartmann, 2012; Hampel, 2010; Hampel & Hauck, 2006; Hampel & Plaines, 2013; **Hauck, 2010**). ... Given that this is a case study with a small cohort of participants, the findings are not to be generalized. Instead, **the data serve to highlight the possibility of research on TBLT in computer-mediated environments** (Ellis, 2003; González-Lloret & Ortega, 2014; Hampel, 2010; Hampel & Hauck, 2006; **Hauck, 2010**; Samuda & Bygate, 2008) **and on multimodality** (Jewitt, 2014; Kress & van Leeuwen, 2001) **to inform L2 pedagogy**.

Kurek, M., & Müller-Hartmann, A. (2017). Task design for telecollaborative exchanges: In search of new criteria. *System*, 64, 7-20.

The role of tasks and, with that, task design has also always been an important issue when designing telecollaborative learning environments (Hampel, 2010; **Hauck, 2010**; Müller-Hartmann, 2000; O'Dowd & Ware, 2009; Rosell-Aguilar, 2005; Thomas & Reinders, 2010). ... **Hauck makes the same claims as to training online tutors “in the design of activities that make appropriate use of multiple modalities” (Hauck, 2010, p. 206), due to the fact that new concepts of telecollaboration** (telecollaboration 2.0, see Helm & Guth, 2010) **comprise “the development of language proficiency, intercultural communicative competence and new media literacies” (Hauck, 2010, p. 200). [...]**

The task-as-workplan is not a blueprint for action, as tasks will be reconstructed by teachers and students when put to use, but they provide a frame and, with that, potential for language learning. **This process of task implementation and the changes that ensue to the original task(s) have been well documented in telecollaborative research** (e.g. Dooly, 2011; **Hauck, 2010**).

Doctoral thesis

van de Zwaard, R. (2017). Patterns of (negotiated) interaction during telecollaboration between native and advanced non-native speakers (Doctoral Thesis, University of Amsterdam)

Using digital technology and testing the effectiveness of digital communication within task-based L2-learning have only recently attracted widespread academic attention (e.g. **Hauck, 2010**; Peterson, 2010; Thomas, 2015; Thomas & Reinders, 2010).

11. Fuchs, C., Hauck, M., & Müller-Hartmann, A. (2012). Promoting learner autonomy through multiliteracy skills development in cross-institutional exchanges. *Language Learning & Technology*, 16(3), 82–102.

Cutrim Schmid, E., & Hegelheimer, V. (2014). Collaborative Research Projects in the Technology-Enhanced Language Classroom: Pre-service and In-service Teachers Exchange Knowledge about Technology. *ReCALL*, 26(3), 315-332.

Fuchs, Hauck and Mueller-Hartmann (2012) reported on two empirical case studies following a task-based telecollaborative learning format, in which they investigated the competencies (future) language teachers require in order to develop first their own and then their learners' autonomy in online and blended settings. In their paper, they discuss the benefits of two specific approaches in CALL teacher education – experiential modeling (Hoven, 2006) and exploratory practice (Allwright & Hanks, 2009) – in supporting the development of such competencies.

Murray, G. (2014). Autonomy in Language Learning as a Social Construct. In: G. Murray (Ed.) *Social Dimensions of Autonomy in Language Learning* (pp. 233-249). London: Palgrave Macmillan, London.

Fuchs et al. (2012) describe a telecollaboration project whereby language learners, student teachers and tutors became more aware of modes and meaning-making online and multiliteracy skills development based on hands-on analysis of web resources and social networking tools (2012: 82). One starting point for raising awareness is the material resources that learners already have access to: the use of dictionaries or internet sources, for example, to help them deal with tasks.

White, C. (2014). The Distance Learning of Foreign Languages: A Research Agenda. *Language Teaching*, 47(4), 538-553.

A hallmark of DLL is the absence of direct teacher mediation of learning activities, ... learners must ... develop the ability to manage their own learning, and to match their needs with the target language sources available in the context. **It is this feature which has made DLL such an interesting site for research into learner autonomy** (Murphy 2008; Murphy & Hurd 2011; White 2011; **Fuchs, Hauck & Müller-Hartmann 2012**; Furnborough 2012). A key question is whether and **how students adapt over time to the affordances in those student-led settings, as part of their developing individual and collaborative autonomy.**

Williams, L., Abraham, L.B., & Bostelmann, E.D. (2014). A Discourse-Based Approach to CALL Training and Professional Development. *Foreign Language Annals*, 47(4), 614-629.

Fuchs, Hauck, and Müller-Hartmann (2012), for example, found that participants in a task-based telecollaborative project developed an awareness of the constraints and affordances of Web 2.0 tools, which in turn allowed them to design effective tasks for intercultural learning. ... the findings from these studies provide important guidance for training future teachers across the secondary and postsecondary levels to use and evaluate the use of Computer-Assisted Language Learning (CALL) tools.

Turula, A., & Raith, T. (2015). Telecollaboration insights: Learning from exchanges that fail. *The EUROCALL Review*, 23(2), 19–37.

To mention just a few, they include: Ware and Kramersch (2005), Darhower (2007), Fratter and Helm (2010), Guth and Helm (2010), Chun (2011), Dooly (2011), Guth and Helm (2012), **Fuchs et al. (2012)**, Dooly and Sadler (2015). **These books, chapters and papers are stories of effective design of the exchanges overall as well as descriptions of tasks that have been proved successful.** Reading about them is educational in a number of ways: as a point of departure for reflection on such practices; as **a source of pedagogical models of telecollaboration**, from the very idea and exemplary procedures to task design.”

Hoffstaedter, P., & Kohn, K. (2015). Telecollaboration for Intercultural Foreign Language Conversations in Secondary School Contexts: Task Design and Pedagogic Implementation. TILA Research Results on Telecollaboration. Available at:
www.sprachlernmedien.de/wp-content/uploads/2016/07/Hoffstaedter-Kohn-2015_TILA-research-study-TC-task-design-ped-implem.pdf

A multimodal approach [...] can also be successfully deployed for enabling pupils to explore and practise the full range of oral and written modes of communication under different technological conditions and to develop the required digital literacy skills (Fuchs, Hauck, & Müller-Hartmann, 2012).

Vinagre, M. (2015). Training Teachers for Virtual Collaboration: A Case Study. *British Journal of Educational Technology*, 47(4), 787-802.

The integration of virtual collaborative (telecollaborative) exchanges in the foreign language classroom has become increasingly popular in the last 20 years. The implementation of these exchanges worldwide entails engaging students in international communication and collaboration with partners of different cultures and in distant locations with the aim of developing both language skills and intercultural competence (Belz, 2004). Research has also shown the potential of this activity for developing learner autonomy (Fuchs, Hauck & Müller-Hartmann, 2012), pragmatic aspects through social relationships (Kingtoner, 2000; Vinagre, 2008) and multiple literacies (Guth & Helm, 2011).

Csida, S., & Mewald, C. (2016). Primar WebQuest in Foreign Language Education. *International Journal for Lesson and Learning Studies*, 5(1), 45-59.

Most recently, the concept of multiliteracy (Cope and Kalantzis, 2000) suggests that global participation requires and enables learners to engage in multifaceted discourse. **Taking into consideration that this multifaceted discourse confronts learners with “a host of new challenges as they have to deal with the multimodal nature” of the linguistic universe (Fuchs et al., 2012, p. 83) has to be acknowledged in modern FL education. Fuchs et al. also suggest that Web 2.0 tools and environments are considered an increasingly popular and effective means to simultaneously increase the learners’ systematic development of multiliteracy and autonomy.**

Dugartsyrenova, V.A., & Sardegna, V.G (2016). Developing oral proficiency with VoiceThread: Learners’ strategic uses and views. *ReCALL*, 29(1), 59-79.

Furthermore, **scholars have argued that, in addition to fostering multimodal communicative competence and promoting new forms of social engagement (Fuchs, Hauck & Müller-Hartmann, 2012), VT increases learners’ engagement with the content itself because it appeals to multiple learning modalities and allows information to be presented in digestible bits (Archambault & Carlson, 2011).**

Reinders, H., & White, C. (2016). 20 YEARS OF AUTONOMY AND TECHNOLOGY: HOW FAR HAVE WE COME AND WHERE TO NEXT? *Language Learning & Technology*, 20(2), 143-154.

Fuchs, Hauck, and Müller-Hartmann (2012), for example, describe two task-based telecollaborative projects involving four countries. Participants in the first case study were teacher trainees (in Germany and the USA), and learners of German (in Poland and the UK), while the second case study involved a mix of pre-service and in-service teachers in the four countries. In these settings, **autonomy was defined as entailing “the informed use of a range of interacting resources in context” (p. 82), and the aim was to promote autonomy through the development of multimodal communicative competence and multiliteracy.**

Tanghe, S., & Park, G. (2016). "Build[ing] something which alone we could not have done": International collaborative teaching and learning in language teacher education. *System*, 57,1-13.

[T]elecollaboration projects in language and language education classrooms have been found to be valuable in promoting student autonomy, developing multiliteracy skills, gaining multimodal communicative competence, and familiarizing teachers with technology use in the classroom (Fuchs, Hauck, & Müller-Hartmann, 2012).

Parmaxi, A., & Zaphiris, P. (2017). Web 2.0 in Computer-Assisted Language Learning: a research synthesis and implications for instructional design and educational practice. *Interactive Learning Environments*, 25(6), 704-716.

By combining Web 2.0 tools and/or other types of technologies, researchers attempt to optimize the affordances of these tools. Amongst the benefits that were reported from our corpus are ... and **development of learner autonomy and e-literacy, when working in tools such as forums, wikis, and social bookmarking sites for language learning and teaching purposes (Fuchs et al., 2012).**

Bueno-Alastuey, M.C., Villarreal, I., & Esteban, S.G. (2018). Can telecollaboration contribute to the TPACK development of pre-service teachers? *Technology, Pedagogy and Education*, 27(3), 1-15.

MA and doctoral theses

Lane, M. (2013). *An Instructional Module Template for Orientation to the Situated Practice of Oral Communication Online in the Community College* (MA Thesis, Gonzaga University)

Instructor awareness of the "constraints and possibilities in terms of online modes and meaning making can potentially increase learner autonomy" (Fuchs, Hauck, & Mueller-Hartmann, 2012, p. 84).

Pol, L. (2013). *Telecollaboration in Secondary Education: An Added Value?* (Doctoral Thesis, Utrecht University).

Providing students with the opportunity to improve their IC (Liaw, 2006 and Hauck & Youngs, 2008), and not only facilitating, but aiming to ensure the development of students' ICC (Carney, 2008 and Lee, 2007) **and through this, their independence (Fuchs, Hauck & Müller-Hartmann, 2012) can be reasons for setting up an exchange."**

Fincham, N. X. (2015). *Metacognitive Knowledge Development and Language Learning in the Context of Web-based Distance Language Learning: A Multiple-Case Study of Adult EFL Learners in China* (Doctoral Thesis, Michigan State University).

Central to this concept of multimodality is that technology-mediated environments offer the possibility to combine a variety of different modes in the making of texts, and the variety of web based or digital tools allow us to combine these modes easily for meaning-making (**Fuchs et al., 2012**). **Learners, then, need to be able to effectively use and coordinate different modes, such as online speech, online writing, audio, video, and image, to make sense of available information, to complete learning tasks, to plan their learning routine, and to develop their target language competence.**

Viafara Gonzalez, J.J. (2015). *Self-perceived (non) Nativeness and Colombian Prospective English Teachers in Telecollaboration* (Doctoral Thesis, The University of Arizona)

In addition, the broad emphasis on "foreign language education" suggests that in conjunction with the development of intercultural and language abilities (Belz, 2003; Belz & Kinginger, 2002; O'Dowd & Ware, 2009; Ware & Kramersch, 2005), **ICFLE can support students' advancement in areas including multiliteracies and critical perspectives** (Guth & Helm, 2012; **Fuchs, Hauck & Müller-Hartmann, 2012**; Train, 2005).

Yilan, S. M. (2017). *'Take your Time' to 'Find yourself!': An Exploration of Scaffolded Autonomous Elearning Environments amongst International Students in a UK University* (Doctoral Thesis, University of Southampton).

A number of studies have looked at the relationship between digital literacy and learner autonomy. For example, **Fuchs, Hauck and Müller-Hartmann (2012) investigated 'the interrelationship between multimodal communicative competence, multiliteracy skills and autonomy' (p.83).** Two case studies with 'a task-based telecollaborative learning format' were carried out to examine whether learner autonomy was promoted by means of the awareness developed through web resources and

social networking sites (ibid., p.82). [...] **Tasks should provide learners with skills to work online through online resources; as the next step, tasks should enable them to be aware of the tools' affordances; and as the ultimate step, the users of the tools should be able to create and innovate tasks, in this case, to support learners' autonomous learning.** [...] Digital literacy emerges as a crucial issue to consider [...] **how students' digital literacy is interrelated with their autonomous learning and tools' scaffolding, as stated in the study of Fuchs et al. (2012).**

12. Kurek, M., & Hauck, M. (2014). Closing the “digital divide” – a framework for multiliteracy training. In J. Pettes Guikema & L. Williams (Eds.), *Digital Literacies in Foreign and Second Language Education: Research, perspectives, and best practice* (pp. 119-140). CALICO Monograph Series (12). San Marcos, TX: CALICO.

Godwin-Jones, R. (2015). Contributing, Creating, Curating: Digital Literacies for Language Learners. *Language Learning & Technology* 19(3), 8–20.

Kurek and Hauck (2014) advocate the use of a three-tiered framework for training students to enable them to "move along a continuum from informed reception of technology mediated input through thoughtful participation in opinion-generating activities and up to creative contribution of multimodal output" (p. 120). The process parallels that of language development from observation through imitation to full participation. Along the way, they cite the need for instructional scaffolding so that students be able to adapt skills to an educational environment: “Many young learners have embraced what has been termed online “participatory cultures” (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006) and know how to build their online presence through social networking sites, avatars, audio/video casts, mash-ups, and/or by taking part in online gaming. Yet, harnessing the full potential of digital offerings requires strategic action guided by a personally unique blend of competences on a technical, cognitive, social, communicative, and even personality level. Therefore, it seems highly unlikely that multiliteracy skills for more formal educational purposes such as language acquisition can be obtained by learners through informal and uninformed technology practices” (p. 123). [...] **Kurek and Hauck (2014) point to the fact that many of the contributions to social networking sites can be categorized as "social grooming", with writing that is shallow and inconsequential.**

Ittzes Abrams, Z. (2016). Possibilities and challenges of learning German in a multimodal environment: a case study. *ReCALL*, 28(3), 343-363.

Nonetheless, learners in this study seemed to benefit from the multimodal resources of a German TV-show and its related websites by completing tasks designed to explore different layers of meaning (e.g. textual, auditory, symbolic). These tasks also provided sufficient interpretive scaffolding that these beginner L2 learners were able to decipher language as socially situated action (Jewitt, 2014). **This awareness is crucial in a world that expects individuals “to operate within increasingly multilingual, multicultural, multimodal, multigenre, and multiuser contexts” (Kurek & Hauck, 2014: 123).**

Rodrigues, P., & Bidarra, J. (2016). Transmedia Storytelling as an Educational Strategy: A Prototype for Learning English as a Second Language. *International Journal of Creative Interfaces and Computer Graphics*, 7(2), 56-67.

By exploring the different aspects provided in the storyworld, **students are able to move from informed reception of input to responsive participation in opinion-generating activities and creative contribution of multimodal outputs.** Kurek and Hauck (2014, p. 120) argue “**language learners who can comfortably alternate in their roles as semiotic responders and semiotic initiators will reflect the success of training that takes account of multimodality as a core element of digital literacy skills.** [...]”

To avoid the cognitive overload inherent to the exposure to multimodal inputs, the contents are presented through a strong storyline with clearly defined points. ... By the same token, **Kurek and Hauck (2014, p. 122) highlight the importance of careful scaffolding and modeling to reduce the cognitive load – “dealing with vast amounts of multimodal information may exceed learner's available cognitive capacity, leading to cognitive overload and, consequently, superficial interaction with the input in question ... it is even more complex in case of exposure to multimodal content in languages other than one's L1” (Kurek & Hauck, 2014, p. 127).**

Drawing from the multiliteracy training approach proposed by Kurek and Hauck (2014, p. 119), the students' interactions were scaffolded around the following parameters: reception, participation, and contribution. **This method “attempts to address learner literacy needs on various levels.** Similarly, to what is happening in a language classroom, **the learner is guided from observation of the desired acts, through their interpretation to the final performance, with the teacher gradually withdrawing support” (Kurek & Hauck, 2014, p. 126).** ... **Learners are expected not only to interpret the meaning conveyed through input but also to articulate their own opinions by deliberately choosing and imitating a particular convention or type of discourse” (Kurek & Hauck, 2014, p. 129).**

Elola, I., & Oskoz, A. (2017). Writing with 21st century social tools in the L2 classroom: New literacies, genres, and writing practices. *Journal of Second Language Writing*, 36, 52-60.

In addition, as **Kurek and Hauck (2014) pointed out, our understanding of digital genres has shifted:** from a focus on the individual approach to writing, we now see a focus on the social; from a simple understanding of what constitutes a text (i.e., writing), we now have a more complex understanding of what a text might be—one that is not limited to the writing mode. We can now select from a combination of writing, aural, and visual modes; for example, the written word can be complemented by visual representations (e.g., images, video clips); it can shift from conveying

meaning in a single mode to bringing in layers of meaning from multiple modes; it can also accommodate multiple authorship with ease when more than one writer works on a document, such as in a wiki. **These changes not only imply a broadening of the way we think about how a text is constructed, but also show us how a genre itself can be constructed and reconstructed and also how our notions of authorship may change.**"

Zheng, B., & Warschauer, M. (2017). Epilogue: Second language writing in the age of computer-mediated communication. *Journal of Second Language Writing*, 36, 61-67.

Compared to traditional classroom writing that is typically individual, text-based, and written for the teacher, **technology enhanced writing tends to be more collaborative and interactive, multimodal, and written for a wider audience** (Godwin-Jones, 2015; Kurek & Hauck, 2014)."

Doctoral thesis

Rodriguez, J. (2018). Exploring Digital Out-of-School Identity Construction And Multiliteracy Practices Of Two Teenagers: A European Case Study (EdD Thesis, University College London).

Kurek & Hauck (2014, p.122) acknowledge that after The New London Group published their milestone manifesto A Pedagogy of multiliteracies, the shift from print to screen has been unfolding with accelerating speed and with a profound impact on how we think, make meaning, communicate, create social bonds, and learn. The massive scale of these changes has affected individual cognition, sociocultural practices and interpersonal relations and has been widely discussed in the literature (Carr, 2011; COpe & Kalantzis, 200; Knobel & Lankshear, 2007; Pegrum 2010; Rheinhardt & Thorne, 2011; Selber 2004). This is another reason why this study may be also of interest to those who relate to teenagers in different ways, such as parents, teachers, education policy makers, curriculum designers, materials developers, or even teenagers themselves, in order to find ways to support and guide their digital literacy practices outside and inside school by having a more precise picture of what teenagers do. In sum, young people's creation of content for online sharing amounts to more than simply producing and distributing their texts; in one sense, they are forcing to push the boundaries of classroom practice and research.

13. Hauck, M., & Kurek, M. (2017). Digital Literacies in Teacher Preparation. In: S. Thorne & S. May (Eds.), *Language, Education and Technology. Encyclopedia of Language and Education, Third Revised Edition* (pp. 1-13). Heidelberg: Springer.

No citations recorded as of yet. G. Kurek and I get regular requests for copies via researchgate.net. We have also been cited in abstracts submitted to the XVIIIth International CALL Research Conference at UC Berkeley (CAL), 7-9 July 2017.

14. Hauck, M. & Warnecke, S. (2012). Materials design in CALL: social presence in online environments. In: M. Thomas, H. Reinders, H. & M. Warschauer (Eds.), *Contemporary Computer-Assisted Language Learning* (pp. 95-115). London: Bloomsbury.

Satar, H., & Akcan, S. (2014). Pre-Service Language Teachers' Reflections on the Implementation of a Blended-Learning Environment. *Turkish Online Journal of Qualitative Enquiry*, 5(3), 42-61.

An online social presence training developed by Hauck and Warnecke (2012) was introduced to the face-to-face practicum course [...] **The results** obtained from an analysis of the participants' journal and forum entries indicated that **social presence training enhanced their awareness towards the active use of the online platform** [...] The discussion emphasizes **the significance of the interrelationship between task design and the maintenance of participation in a blended-learning environment.**

Sun, S.Y.H. (2017). Design for CALL—possible synergies between CALL and design for learning. *Computer Assisted Language Learning*, 30(3), 575-599.

Col was also questioned by CALL researchers, e.g. Hauck and Warnecke (2012), for its isolating and hierarchical views of the social and cognitive dimensions in computer-mediated collaborative language learning. As a result, SP was moved right into the centre of the language learning and teaching process, and placed at the centre of material and task design. This led to the proposal by Thomas et al. (2012) of adding a fourth phase – Social CALL – to Bax's (2003) three phases. That was a significant shift from the learning-via-transmission mode of pedagogy towards social technologies, underpinned by developments in portable digital devices, as well as by constructivist principles promoting participative and collaborative learning. Social CALL has been influential and '[...] the process is now allied with the need to make learners active agents and users of the target language. Replacing the purely form-focused pedagogies of the past,

language learning is now focused more on communicative ability' (Thomas et al., 2012, p. 7).

Vinagre, M. (2017). Developing teachers' telecollaborative competences in online experiential learning. *System*, 64, 34-45.

An increasing number of studies have focused on how teachers can be trained to acquire and develop telecollaborative competences. [...] **Other studies** (Guichon, 2009; **Hauck & Warnecke, 2012**) mention the importance of 'exploratory' teaching practice and the need for 'experiential modeling' in teacher education (Fuchs et al., 2012). **The principles underlying these new models of teacher education are based on socio-constructivist approaches to learning which emphasize the importance of social interaction for the construction of shared knowledge. These approaches require teachers' active participation, interaction and reflection, and technologies are considered to be mediating tools.** Their main aim is to encourage participants' understanding of the pedagogical value of online collaborative experiences and motivate them to transfer this knowledge into the classroom.

Doctoral theses

Morales, S.M. (2015). *How in-service language teachers become effective users of CALL for online teaching and learning: a case study of their development process in a transformative online teacher training and development course* (Doctoral thesis, Newcastle University).

In relation to data analysis, **Content Analysis has been a widely used technique in the exploration of online learning environments** (Garrison and Cleveland-Innes, 2005; **Hauck and Warnecke, 2012**). [...] Hauck and Warnecke (2012) also conducted an exploratory investigation for six weeks to explore the impact that materials for training online tutors for English for Academic Purposes (EAP) had on social presence in an online training course. [...] In general, Content Analysis has been used to examine online discussions in formal academic contexts to report on behavioural aspects and changes in online learners. **This is because it provides tools to find, infer and understand interactions in mainly asynchronous online contexts** (Pawan et al, 2003; **Hauck and Warnecke, 2012**). [...] In the case study of this thesis, it is also possible to **agree with Hauck and Warnecke (2012) that experiential learning supported the teachers' development, due to the fact that they were exposed to authentic materials and reflected on their use for online teaching.**

Vázquez-Calvo, Boris, (2016). *Digital language learning from a multilingual perspective: the use of online language resources in the one-to-one classroom* (Doctoral Thesis, Universitat Pompeu Fabra)

También destacan **los estudios que ofrecen sugerencias sobre el diseño de materiales, cuya principal crítica es la ausencia de variables socioculturales como relaciones de poder, agentividad, identidad, posibilidades de los dispositivos y herramientas y géneros discursivos en línea**, entre otros, cuya presencia es escasa en los planteamientos de diseño (Hauck & Warnecke, 2012, p. 107).

15. Hauck, M., Galley, R. & Warnecke, S. (2016). Researching participatory literacy and positioning in online learning communities. In: F. Farr & L. Murray (Eds.), *The Routledge Handbook of Language Learning and Technology. Routledge Handbooks in Applied Linguistics* (pp. 71-87). London: Routledge.

Helm, F. (2018). Emerging Identities in Virtual Exchange. research-publishing.net.

Available at:

<https://research-publishing.net/book?10.14705/rpnet.2018.25.9782490057191>

A more recent framework has been developed for the analysis of the emergence of online communities, which includes identity as a category, the Community Indicators framework (Hauck, Galley, & Warnecke, 2016). Within this framework, establishing limits, boundaries, purposes, and expectations is a component of the group identity, as are shared vocabulary, group self-awareness, and identification of existing knowledge and experience patterns. [...] In the model of virtual exchange explored in this study, it was facilitators that supported participants in creating this kind of space, leading them through the group process so **they established a collective identity that could be likened to a community of inquiry (Hauck, Galley, & Warnecke, 2016).**

Doctoral thesis

Helm, F. (2016). *'I'm not disagreeing. I am just curious': Exploring identities through multimodal interaction in virtual exchange* (Doctoral Thesis, Universitat Autònoma de Barcelona).

As research into communities of practice (Wenger 1998) has found, social participation means being active participants in the practices of social communities and constructing identities, (actual or imagined) in relationship to these communities. **Positionality in online groups or communities has been explored through the Community of Inquiry framework (Garrison, Anderson & Archer, 2000) and more recently the Community Indicators Framework (CIF) (Galley, Conole & Panagiota, 2011; Hauck, Galley & Warnecke 2016).** ... The expression of multiple points of view, but also the contradiction and challenging of these views can lead to the creation of new knowledge and can index the development of a cohesive and creative community (Hauck, Galley & Warnecke, 2016). ... **A more recent framework has been developed for the analysis of the emergence of online communities which includes identity as a category, and that is the Community Indicators Framework (Galley, Hauck & Warnecke, 2016).** Within this framework establishing limits, boundaries, purposes and expectations is a component of the group identity, as are shared vocabulary, group self-awareness and identification of existing knowledge and experience

patterns. [...] **Analysing these three sessions in their entirety and in chronological order also allowed for an understanding of the “storyline” that developed through the exchange (Hauck, Galley & Warnecke, 2016),** which analysis of individual turns or even exchanges cannot transmit. [...] All of these uses of text chat are categories in **the Revised Community Indicators Framework (Hauck, Galley & Warnecke, 2016)** which reflect online social presence (SP) [...] However, these disalignments do not lead to breakdowns in communication but further engagement in the interaction and could be seen as **indexing the ‘creative agency’ of the group (Hauck, Galley & Warnecke, 2016)** which can constructively engage with difference and diverse viewpoints [...] In the previous section we have seen the creative agency of the group **(one of the four Community Indicators in Hauck, Warnecke & Galley’s (2016) framework discussed in the theoretical framework)** as they constructively engaged in dialogue seeking to understand the narratives and diverse opinions of others as well as the underlying emotions and experiences which shape these [...] **As Hauck, Galley & Warnecke (2016) affirm, it is through the expression of multiple points of view, but also the contradiction and challenging of these views that creation of new knowledge can take place.** This in depth discussion also indexes the development of a cohesive and creative community (ibid).

16. Hauck, M., & Satar, M. (2018). Learning and teaching languages in technology-mediated contexts: The relevance of social presence, co-presence, participatory literacy and multimodal competence. In: R. Kern & C. Develotte (Eds.), *Online Multimodal Communication and Intercultural Encounters: Theoretical and Educational Perspectives* (pp. 133-157). London: Routledge.

This chapter has not yet been cited.

Appendix 2: References from Professor Jozef Colpaert, Professor Robert Blake, Professor Andreas Müller-Hartmann and Professor Nicolas Guichon

Professor Jozef Colpaert



Universiteit Antwerpen

Antwerpen, 24 February 2014

To whom it may concern:

I have come to know Mirjam in 2004 as a presenter at the 11th CALL Conference *CALL & Research Methodologies* organised by DIDASCALIA, my former CALL centre at the University of Antwerp, now merged into the LINGUAPOLIS Language Institute.

Since then Mirjam has been a regular presenter at this event and has made an important contribution to the field of CALL with her investigations into the impact of mediation and the relevance of multimodal communicative competence in online language learning and teaching contexts. As a result I have invited her to serve on the editorial board of the *CALL Journal*. She has contributed significantly to the quality and the success of our journal, and to the CALL field in general. Her input to the journal largely exceeds what can be expected from a scholar in terms of academic performance (a.o. 12 reviews in 2012-2103). Mirjam's professionalism as a CALL researcher and practitioner is also reflected in her input into our joint work as external evaluators to the EU-LLP funded NIFLAR (Networked Interaction in Foreign Language Acquisition and Research) project (2009 to 2011) and the current TILA (Telecollaboration for Intercultural Language Acquisition) project (2013-2015), also funded by the EU-LLP.

Based on my successful working relationship with Mirjam I nominated her as member of the Executive Board (2010-2013) of CALICO, the leading US organization in the CALL field, and later I recommended her as Program Co-Chair of the theme-based sub-conference Technology Enhanced Language Learning (TELL) of the International Conference on Computers in Education (ICCE) 2013 in Singapore, a meta-conference with seven coherently interrelated sub-conferences for the dissemination and sharing of ideas for research in the field of Technology Enhanced Learning. As a result of her contribution to the success of the sub-conference the Program Committee Co-Chairs for ICCE 2014 have invited her back as a Program Committee (PC) Member.

Today, almost a decade after we first met, Mirjam is known as a highly committed CALL researcher who enjoys pushing the boundaries of our field and whose expertise in collaborating and sharing scholarly work across time zones is recognised in Europe and beyond.

Sincerely,

Prof. dr. Jozef Colpaert
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DEPARTMENT OF SPANISH & PORTUGUESE

ONE SHIELDS AVENUE

Professor Andreas Müller-Hartmann



Fakultät für Kulturwissenschaften

In the INTENT project the team and myself have been able to profit from her persistence in pushing and developing new ideas, such as the e-portfolio (see <http://www.collaboration.eu/eportfolio/>), and her ability to help organize and see through long-term development processes such as the complex INTENT website.



Lyon, February 26th 2014

Nicolas Guichon
Professor in the Linguistics department
Université Lumière Lyon 2

STATEMENT IN SUPPORT OF MIRJAM HAUCK

I have known Mirjam Hauck since my first participation at a EUROCALL conference in 2007. We served together on the executive board of this European association, set up a European SIG on teacher education, organized a conference together in Lyon in June 2010, and co-edited a special issue for the *ReCALL* journal (Cambridge University Press) on teacher education.

These professional opportunities have provided me with insight into Mirjam Hauck's many qualities: her ability to move projects forward with enthusiasm and hard work, her reliability and rigour with regard to deadlines and collaboration, her capacity to identify new fields of investigation and new researchers, which testify to her flair for research.

Mirjam has certainly reached a point in her career where she has become an undisputed international reference in the field of Computer assisted language learning for her work on distance learning, multimodality and teacher education. I am therefore delighted to support her application.

Professor Nicolas Guichon
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Appendix 3: References from H el ene Pulker and Dr. Sylvia Warnecke

H el ene Pulker



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27 February 2014

To whom it may concern

Testimonial for Mirjam Hauck

Mirjam has been my line manager since 2009. She has played a significant role in my academic professional development in both teaching and research. Since I joined the Central Academic



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Testimonial for Mirjam Hauck in relation to:

Expressions of Interest for Deputy Associate Dean (Research & Scholarship)

During my collaborative research and scholarship work in the field of computer-assisted language teaching and learning with Mirjam Hauck I experienced first-hand that she is exceptionally successful at establishing effective working relationships in the research and scholarship context. Mirjam has a comprehensive up-to-date knowledge of developments in the field, she has established an extensive network with colleagues on a national as well as an international level and she is highly respected by the communities of scholars she is a part of. This is due to the fact that Mirjam is a visionary and highly capable of communicating her vision to others, and also to put it into practice and to motivate others to join her in this endeavour. At the same time, she is able to take into consideration the pragmatics of work contexts and how these would have to be used/changed to allow for her and her teams' ideas to be realised. Her decisions in practical as well as academic terms are well thought through, taking into consideration different groups and stake holders. In addition, Mirjam is a great team player, as a member as well as a team leader. Her openness and enthusiasm over and above her willingness to address 'uncomfortable matters' professionally help teams develop, achieve and adhere to deadlines. She communicates her appreciation of good work and thus drives the progress of individuals and projects. At the same time she is able to critique work objectively and to make constructive suggestions for improvement. Over and above this, Mirjam's unconventional approach to her research and scholarship work is refreshing and inspirational for many colleagues she engages with.

In our collaboration I personally experienced Mirjam's exceptional skills in fostering the research and scholarship careers of others since she listens to suggestions, readily shares her expertise, involves others in discussions and teaches others through active engagement. She was very supportive in helping me develop my own research profile when we planned and ran scholarship projects, wrote peer reviewed articles and book chapters as well as presented together at conferences. Another aspect of the support she gave me and which can help fostering careers of others lies in Mirjam's expertise in writing funding bids, gathering and analysing data sets, developing research from practice-based projects and networking in international contexts. What supported me most were her openness to new ideas, her willingness to hand over responsibility to others and her determination to allow scope for the professional development of others. She is a great example of someone who is constantly learning and able to be able to carry out her work successfully.

A handwritten signature in black ink that reads 'Sylvia Warnecke'.

Appendix 4: Reference from Jon Rubin



Jon Rubin
Sun 09/09/2018 21:52
To: Mirjam.Hauck

👤 Reply all | ▾

Inbox

You replied on 10/09/2018 06:51.

During her tenure as Professional Development Lead for the SUNY COIL Center, Mirjam Hauck was a transformative presence in our office and across the emerging field of virtual exchange. She drew on her experience in teacher education based on her comprehensive research in the field, guiding and supporting SUNY faculty in designing, setting up, implementing and evaluating hundreds of COIL-enhanced virtual exchange courses. These included joint online courses between multiple SUNY campuses and partners in Mexico, Turkey, Vietnam and in many other countries. Her research-based, highly-skilled approach to facilitation was of profound help to me while I was director

Appendix 5: References from Dr. Carolin Fuchs, Dr. Shannon Sauro, and Ton Koenraad

Dr. Carolin Fuchs



February 26, 2018

To Whom It May Concern:

I am writing this letter testifying to the impact of the (Integrating Telecollaborative Networks into Foreign Language Higher Education) INTENT project and the UNICollaboration platform (<https://uni-collaboration.eu>).

The organization I am writing from is City University of Hong Kong, and I have previously worked with Mirjam Hauck.

Currently, at City University in Hong Kong, I am teaching MA/BA level core courses, and I have received two internal grants (Teaching Development Grant, start-up) to do telecollaborations in two core courses for the BA and MA program (the first telecollaborations at CityU). My original BA project with the University of Auckland/New Zealand fell through due to lack of enrolment in Auckland; however, I was able to still do the telecollaboration project with another institution thanks to Mirjam Hauck, who connected me to a professor in Syracuse, New York.

Previously, at Teachers College, Columbia University, I was training TESOL/TEFL teachers for eight years. Trainee teachers need to be introduced to Telecollaboration and Virtual Exchange themselves first, that is experience the use of appropriate digital-pedagogical skills before they can apply them in their own telecollaborative exchanges with their students. The framework for task design to this effect co-developed by Mirjam Hauck has helped me to develop tasks and task sequences for teacher training to this effect.

Moreover, I have introduced Telecollaboration/Virtual Exchanges in three iterations of an online course for in-service K-12 teachers at the University of Colorado at Boulder in since 2016. In this course, teachers research the implementation of Telecollaboration and

In sum, over the past 20 years, language students and teacher trainees were able to benefit from virtual exchanges based on telecollaborations with institutions such as the following: Boğaziçi University (Turkey); Lyttelton Manor High School (Pretoria, South Africa); Cyprus; ESF Syracuse (New York); Chongqing University of Posts & Telecommunication Chongqing, China (CQUPT); National Chung-Cheng University (NCCU), Taiwan; University of Luxembourg; Wyższa Szkoła Lingwistyczna, Częstochowa, Poland; The Open University in the UK; Pädagogische Hochschule Heidelberg; Justus-Liebig Universität Gießen; Sprachen- und Dolmetscherinstitut München; The Pennsylvania State University; Middlebury Institute of International Studies at Monterey, California; Teachers College (Tokyo campus).

Should you have any further questions, please feel free to contact me at cfuchs@cityu.edu.hk.

Sincerely,



Dr. Carolin Fuchs
Assistant Professor, Department of English
Room M8092
Run Run Shaw Creative Media Centre
City University of Hong Kong
83, Tat Chee Avenue, Kowloon
Hong Kong

Dr. Shannon Sauro



Dear Colleagues:

I am writing this letter to testify to the beneficial impact that the (Integrating Telecollaborative Networks into Foreign Language Higher Education) INTENT project and the UNICollaboration platform (<https://unicollaboration.eu>) has had on teaching with and researching on telecollaboration and virtual exchange at my institution, Malmö University in Sweden. I work in the programs for pre-service primary and secondary school English teachers.

During the past several years, I have worked with INTENT project member, Mirjam Haack whose work on social presence and assessing virtual exchange have informed my teaching and practice. In addition, Mirjam's recent presentations at local and international conferences (October and November 2016, August 2017) on critical perspectives on teaching and learning with technology and critical digital literacies has informed my implementation and my own research. These critical perspectives have informed the design of tasks I have used as well as

February 12, 2018

The number of bachelor thesis on telecollaboration based on INTENT materials, publications, and UNICollaboration resources: 2


"If I can capture the students in this way, no matter what subject, then it is worth all the effort!" Using Telecollaboration for English Language Development and Intercultural Competence in Swedish K-3 settings: Johansson & Reimer (2017)

Bachelor Thesis in Progress: Expected Spring 2018. Students currently collecting data during study abroad in New Zealand on intercultural learning via a telecollaboration at the primary school level between a class in New Zealand and two classes in Sweden. Both students recently participated in the telecollaboration during the first half of Fall 2017.

Sincerely yours,

Shannon Sauro, Ph.D.
Associate Professor
Department of Culture, Languages, and Media
Malmö University, Sweden
(+46) 0725068708
shannon.sauro@mau.se

Ton Koenraad



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March 24, 2018

To whom it concerns,

This letter is to testify to the impact of a number of Mirjam Hauck's activities (academic publications, project participations and evaluations and personal conversations) have had on the development of my interest in and academic work related to a variety of relevant themes for my role as language teacher educator and ICT coordinator at the language department of the Faculty of Education at Hogeschool Utrecht University of Utrecht of Applied Sciences (1995-2011).

To review her influence in this respect and put the relevance of the EU project INTENT (Integrating Telecollaborative Networks into Foreign Language Higher Education) and the UniCollaboration platform into perspective, I need to go back in time to the end of the previous century when I got interested in the potential of internet for educational

To conclude, to this present day, for my work as course director of TELLConsult Training's annual offer of ErasmusPlus courses, a selection of visuals for presenting her research results used at international conferences and also the collection of tasks designs and training resources available at the UniCollaboration website are part of the reference materials and included in our related CPD course activities for in-service language teachers and educators from a range of EU countries.

Sincerely yours,
Ton Koenraad, MA, MEd
TELLConsult, Netherlands
ton.koenraad@tellconsult.eu



TELLConsult Technology
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www.tellconsult.eu

References

Hauck, Mirjam. (2007). Critical success factors in a TRIDEM exchange. *ReCALL*, 19(2) (pp. 202-223)
Hauck, M. (2010). Telecollaboration: At the interface between Multimodal and Intercultural Communicative Competence) in: Guth, S. and Helm, F. eds. *Telecollaboration 2.0: Language, Literacies and Intercultural Learning in the*