Online Intercultural Exchange

This volume provides a state-of-the-art overview of Online Intercultural Exchange (OIE) in university education and demonstrates how educators can use OIE to address current challenges in university contexts such as internationalisation, virtual mobility and intercultural foreign language education. Since the 1990s, educators have been using virtual interaction to bring their classes into contact with geographically distant partner classes to create opportunities for authentic communication, meaningful collaboration and first-hand experience of working and learning with partners from other cultural backgrounds. Online exchange projects of this nature can contribute to the development of learner autonomy, linguistic accuracy, intercultural awareness, intercultural skills and electronic literacies.

OIE now has reached a stage where it is moving beyond individual classroom initiatives and is assuming a role as a major tool for internationalization, intercultural development and virtual mobility in universities around the globe. This volume reports qualitative and quantitative findings on the impact of OIE on universities in Europe and elsewhere and offers comprehensive guidance on using OIE at both pedagogical and technological levels. It provides theoretically informed accounts of OIEs relevant to researchers in computer-assisted language learning (CALL), computer-mediated communication or virtual education. Finally, contributors offer a collection of practitioner-authored and practically oriented case studies for the benefit of teachers of foreign languages or in other subject areas who wish to engage in developing the digital literacy and intercultural competences of their learners.

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Tim Lewis has taught languages and cultures since 1980 in London, Sheffield, and elsewhere. He is currently director of postgraduate studies in the Centre for Research in Education and Educational Technology at the Open University. Key publications include Autonomous Language Learning in Tandem (2002) and Language Learning Strategies in Independent Settings (2008).
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Online Intercultural Exchange
Policy, Pedagogy, Practice

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Foreword

The Virtual Internationalization Turn in Language Study

Online intercultural exchange (OIE hereafter, alternatively labeled virtual exchange, telecollaboration and e-tandem learning) involves instructionally mediated processes such as collaborative tasks, collective inquiry, and opportunities for social interaction between internationally distributed partner classes. OIE has been tremendously powerful in transforming participating language learners’ experiences from a predominate focus on ‘language’ and toward processes that makes salient the need to develop the linguistic, intercultural, and interactional capacity for creating and maintaining social relationships of significance (see in this volume Lewis & O’Dowd; Guth; Helm; Tudini). In this sense, I and the authors represented in this volume (many of whom I have had the honor of collaborating with through various projects) see OIE as a form of language-mediated social action that brings the complex reality of communicating across cultural and linguistic (as well as social class, gender and religious or spiritual) borders into direct experience. For foreign language students removed from everyday uses of their language of study, the power of OIE is that language comes alive as a resource for doing things. Subsequent to this realization, explicit instruction regarding linguistic form, pragmatic norms and genre precision can strengthen the capacity and desire for communicative action.

This volume advocates for and pedagogically outlines OIE as a form of ‘virtual internationalization,’ a term that describes the use of OIE to bring together internationally dispersed classes to carry out academic cooperation for mutual benefit (De Wit; Wilson; Byram; this volume). A reorientation of language education to include the development of intercultural communicative competence is central to what internationalization actually means in terms of cultivating a broad-based and flexible disposition that prepares students for a wide array of challenges and complexities. The oft-stated themes of internationally oriented education form a productive unity with OIE as method-and-process. Goals of OIE-mediated virtual internationalization include global citizenship (which I here non-bindingly define as a heightened capacity for interconnectedness and empathy that supersedes parochial nation state identifications), the ability to participate and responsibly contribute to decision making in intercultural professional and social contexts, factual and conceptual knowledge of diverse world languages and cultures and a critical understanding of histories of
foreword

colonialism and imperialism as they relate to contemporary areas of cultural, political and religious friction. Whereas not all of these themes will be present in all OIE projects, a strength of this volume is its breadth and sophistication in terms of addressing discrete, task-based language learning pedagogies whilst keeping in view a critically framed holistic perspective of human development (Mueller-Hartmann & Kurek; Dooly; this volume). Also addressed are necessary institutional concerns such as ‘soft certification’ (Hauck & Mackinnon; this volume) and useful descriptions of tested OIE models and approaches (MacKinnon; Leone & Telles; Furstenberg; Rubin; this volume) that pave the way for what I hope will be the logical next step forward in the evolution and amelioration of language education, namely scaling up OIE to become a routine and expected activity in world languages education.

In summation, the rationale for the systemic implementation of virtual internationalization through OIE is multifold: Firstly, it is increasingly the case that contemporary academic networks, professional activity and career viability are progressively becoming international and intercultural in scope. Therefore, including opportunities for international engagement as part of university-level coursework increases the ecological validity of students’ campus-based learning as it relates to post-university life and thus better prepares them for full participation in future civic and work contexts. Secondly, many universities have a stated long-standing commitment to internationalization, thus including virtual international experience as part of routine coursework would serve to increase student (and faculty) opportunities for intercultural exchange and the transnational sharing of ideas. Thirdly, for students who may have practical or financial constraints that might otherwise preclude international travel or study, virtual internationalization would provide them with direct exposure to other cultures, perspectives, values and ideologies through engagement with speakers of languages they wish to learn, an experience that might otherwise not be available or financially possible. In this sense, virtual internationalization through OIE supports a social justice agenda of inclusion and participation for otherwise marginalised or excluded populations.

Given its lengthy history, substantial and encouraging research base and the relative ease of access to and usability of contemporary communication media, it is surprising that OIE does not play a more central role in instructed language education curricula. In a recent article, O’Dowd (2011, p. 368) explores reasons for why OIE remains a ‘peripheral “add-on” activity in most foreign language classrooms,’ noting that ‘normalization’ of OIE as an integrated and high-frequency pedagogical activity remains a distant reality at most universities. Based on a survey of 73 university-level foreign language instructors working in Europe, all of whom had carried out OIEs, numerous mitigating conditions were expressed, such as lack of sufficient pedagogical training that would assist with the complexities of OIE planning and execution, the difficulty of finding partner classes and aligning curricula, and the variability and not fully controllable nature of OIE (in comparison to a closed classroom and syllabus) amongst others. These enumerated impediments are yet another
indication of the need for, and value of, this strong collection of chapter and authors who represent the apex of the OIE expert community.

To conclude, research has demonstrated that participants in OIE activities undergo substantial shifts in cultural openness (Bruneau & Saxe, 2012), become more adept at intercultural communication with international collaborators (O'Dowd, 2006), gain experience with diverse and globally distributed worldviews (Helm, Guth, & Farrah, 2012) and build academic and interpersonal relationships of significance that can extend beyond the immediacy of the OIE activities themselves (Thorne, 2003). Accepting that I am perennially the optimist, OIE is poised to spark a transformational synergy within university education, one in which linguistic accuracy and discourse competence remain important but in the superordinate context of cultivating empathy and the ability to achieve interactionally emergent understanding in a linguistically and culturally super diverse and interdependent world.

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*October 30, 2015*

**REFERENCES**


Acknowledgements

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We particularly would like to acknowledge the contribution of our colleague Sake Jager, who played an important role in the evolution of this initiative but was unable to contribute to this actual publication due to ill health.

Finally, we would also like to acknowledge the funding received from the European Commission’s Lifelong Learning Programme for the INTENT project: Integrating Telecollaborative Networks into Foreign Language Higher Education (517622-LLP-1–2011–1-ES-ERASMUS-ESMO). This project was the catalyst for much of the research and collaboration presented in this volume. However, the views reflected in this volume are the authors’ alone and the commission cannot be held responsible for any use which may be made of the information contained therein. Our thanks also go to Susanne Winchester for compiling an index to this volume.
2 Online Intercultural Exchange and Foreign Language Learning
A Systematic Review

Tim Lewis and Robert O’Dowd

OIE has been employed as a pedagogical tool in foreign language education for almost 25 years. Whereas the first reports of OIE were primarily practitioner accounts of specific telecollaborative initiatives (Warschauer, 1995), these were soon accompanied by more generic studies of the affordances of particular online tools (e.g., email) or typologies of virtual collaborative projects (Eck, Legenhausen and Wolff, 1995; Fischer, 1998; Tella, 1992). Since then, there has been a proliferation of research publications which have explored the potential benefits of telecollaboration for different aspects of foreign language learning. Such studies deal with four broad topic areas: the role of online exchanges in developing second language proficiency; their capacity for fostering intercultural communicative competence; the relationship between online exchanges and learner autonomy; and more recently the part such exchanges can play in strengthening digital literacies.

In recent years, telecollaboration has begun to move away from being a specialised activity carried out exclusively by experienced CALL practitioners and has begun to enter the mainstream of foreign language education. This is, perhaps, partly due to the publication of influential publications on culture in foreign language education such as Corbett (2010) and Liddicoat and Scarino (2013), which have identified telecollaboration as an essential tool for the development of intercultural awareness, whereas others (Mehisto, Marsh, and Frigols, 2008) also have recommended its application in content and language integrated learning (CLIL) contexts. In university education, some isolated European policy documents have also identified the value of telecollaboration. For example, a recent European Commission Green Paper on promoting the learning mobility of young people acknowledges telecollaboration’s role as a tool for preparing for physical mobility and as a viable alternative for those students and young people who are unable to engage in traditional mobility programmes (Commission of the European Communities, 2009, p. 18).

However, as telecollaboration begins to enter the mainstream, it is inevitable that educators and decision makers who are unfamiliar with this approach to language learning will be interested in learning more about
the specific contributions that this relatively new approach offers. It does, after all, differ greatly from traditional foreign language learning activity and its structure and modus operandi can, perhaps, be more difficult to conceptualise than other approaches to technology-based learning. With this in mind, we believe it is time to carry out a review of the literature on the contribution of telecollaboration to foreign language acquisition to date. In particular, we believe that it is necessary to ask the question: ‘In what ways does OIE contribute to the goals of foreign language learning in university education?’

We are, of course, not the first to enquire about the overall contribution of OIE to foreign language education. In 2000, Kern asked whether students engaged in telecollaborative exchanges actually gained a higher level of intercultural understanding (2000, p. 255). Three years later, Thorne extended Kern’s query, asking what evidence there was in such learners of language development in the form of linguistic and pragmatic performance (2003, p. 39). In 2008, Schwienhorst argued that with appropriate pedagogy, online exchange in immersive environments favoured the development of learner autonomy (2008, pp. 166–168), and in 2012, Fuchs, Hauck and Müller-Hartmann suggested that the development of autonomy in such exchanges was linked closely to gains in e-literacy (2012, p. 95). In the event, the last of these claims could not withstand prolonged scrutiny. We identified only three publications which dealt with the role of online exchanges in developing digital literacies. Whilst a potentially interesting topic for future empirical research, the current evidence base for such claims is insufficiently broad or substantial. The publications in question are identified in the Systematic Descriptive Map later in this chapter to enable readers to form their own judgement. However, our ensuing discussion will focus solely on establishing the extent to which online exchange can be seen to promote (a) second language development, (b) intercultural communicative competence and (c) learner autonomy by carrying out a systematic review of empirical research findings in university class-to-class telecollaborative initiatives.

CARRYING OUT THE SYSTEMATIC REVIEW

A systematic review is a common method in applied linguistics which is used to achieve the broadest possible coverage of empirical research evidence about a given area (Macaro, Handley, and Walter, 2013)—in this case language learning in university telecollaborative exchanges. To achieve this, we followed the EPPI reviewing system (EPPI-Centre March, 2007) for systematic reviews which proposes, firstly, a descriptive map (or overview) to categorise studies, followed by an in-depth review of a subset of studies selected according to specified criteria.
The descriptive map (also referred to as a ‘keyword map’) provides an overall description of the studies under review. The value of a systematic descriptive map is that, by simply describing, rather than attempting in-depth scrutiny and synthesis, it can address a broad expanse of research, charting both the work that has been done and the gaps in the field, thus identifying future directions and priorities (see EPPI, 2007, p. 12).

After creating the systematic descriptive map, we present a list of conclusions and comments on what the table reveals in terms of types of studies which have been carried out, areas requiring further research and preferred methodological approaches to investigating telecollaborative exchange at university level. We then move on to an in-depth review where we summarise and evaluate the learning outcomes reported in a representative sample of studies.

The Creation of a Systematic Descriptive Map

To create a descriptive map of publications on the learning outcomes of telecollaboration in university education, it was necessary to draw up a list of four inclusion criteria. These are listed below. Their breadth and our focus on outcomes differentiates our work from other recent attempts at synthesis, such as Carney (2006), which deals with telecollaborative projects relating to a single country (Japan), or Chapter 7 of Liddicoat and Scarino (2013), which explores the role of technologies (rather than pedagogies) in intercultural language teaching and learning, leading to predictably negative conclusions.

Consequently, to be included in the review, studies needed to meet the following criteria:

(a) Report on telecollaborative exchange between classes of university language learners in different geographical locations or from different cultural backgrounds
(b) Be based on primary, empirical research
(c) Report students’ learning outcomes related to the areas of autonomy, linguistic development, intercultural competence and digital literacies
(d) Be peer reviewed

Based on these criteria, it was necessary to discard various high-quality publications on other forms of telecollaboration such as Tudini (2010) and Hanna and de Nooy (2009), who had connected their students to native speakers who were not engaged in formal study, and also others which had studied the online interactions of different groups of language learners but which were either based on secondary school interaction (Tella, 2001) or included groups of university students from the same languacultural group
It is not our intention to dismiss or take away from the value of these forms of telecollaboration. However, we believe that class-to-class OIE at university level brings with it a particular set of affordances and challenges which merit being reviewed in isolation from other forms of telecollaborative activity. The decision also was taken to exclude overview and thematic articles (e.g., Belz, 2007) as well as those articulating a theoretical position in relation to telecollaboration (e.g., Blin, 2004), however persuasive. In doing so, we doubtless forwent some fascinating insights. However, our goal lay elsewhere. We were seeking to establish what systematically conducted research (whether qualitative or quantitative) could tell us about the main outcomes claimed for OIE.

Initially, a total of 76 articles and book publications were identified and added to the provisional descriptive map by both authors. When the process was complete, closer scrutiny of the publications’ contents had enabled us to reduce this number to 54 by excluding those studies which did not involve university-university interaction or which failed to present clear empirical findings.

The Search Strategy

Databases used for searching for publication on telecollaborative research included Education Resources Information Center and Language and Linguistics Behavior Abstracts. The keywords ‘telecollaboration’ and ‘online intercultural exchange’ ‘e-tandem’ and ‘virtual exchange’ were all used to identify publications which may have used these different terms to describe their telecollaborative research.

To increase reliability, selective manual searching was carried out additionally on the websites of Cambridge Journals and on widely used journals for telecollaborative research including the CALL Journal, ReCALL, Language Learning and Technology and CALICO Journal as well as on the bibliographies of significant overview publications on telecollaboration (Guth and Helm, 2010; O’Dowd, 2012, 2013).

EMPIRICAL RESEARCH FINDINGS IN UNIVERSITY TELECOLLABORATIVE INITIATIVES

The following systematic descriptive map presents the studies identified for the first part of this systematic review. The table outlines bibliographical details of the publications, the countries involved in the online exchange, the number of students involved in the collection of data, the research focus of the study and the research methodology used to obtain data. In accordance with standard bibliographical practice, the table is organised alphabetically.
by first author. This enables the grouping of works by productive authors in the field. The basic types of learning outcomes identified in the studies were foreign language linguistic development, aspects of intercultural cultural competence (ICC), learner autonomy and digital literacies. (It is important to point out that the number of students involved in the reported exchanges does not necessarily coincide with the numbers involved in the data analysis. For example, from two classes involved in an exchange, perhaps the data from only two or three partnerships actually may have been used in the analysis.)

TRENDS AND THEMES DERIVED FROM THE SYSTEMATIC DESCRIPTIVE MAP

After a slow start, the last two decades have witnessed a steady stream of journal publications exploring different aspects of learning through OIE. From 1990 to 1999 only three studies appear in the descriptive map. From 2000 to 2009 the number grows to 36. In the five years from 2010 to 2015, 15 studies are captured in our sample.

Today’s language educators and their learners have vastly more opportunities to engage in online learning than did their predecessors even from a decade ago. In a world of LMOOCs (language massive open online courses), m-learning and social media for language learning, OIE faces stiff competition. The continued engagement of teachers and learners with OIE suggests that as a technology-enhanced approach to learning languages and cultures, it may offer advantages that others do not.

The majority of online exchanges listed in the table involved German-American class partnerships (17 exchanges). These were followed at a distance by Spanish-American (6) and French-American (5) partnerships. There were also cases of German-Irish exchanges (4 studies) and multinational partnerships (4 studies). The remaining partnerships spanned a wide range of nationalities but involved predominantly European countries.

In recent years a significant upsurge of interest in OIE has been evident in China, Japan, South Korea and Taiwan. The number of publications in our sample by authors from these countries is disappointingly small. If the current exercise were to be repeated five years from now, it is all but certain that scholars from Asia would be more fully represented.

Our sample captures a snapshot in time. What follows is an attempt to identify some key patterns evident in the works we have been able to survey. The first part of what follows will address technology use, whereas the second charts the learning outcomes claimed for OIE. Themes and trends summarised here will be dealt with more expansively in the discussion section of the chapter.
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Bibliographical Details</th>
<th>CMC Tools Used in the Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
<td>Type of Learning Outcomes Reported (ICC, Foreign Language, Autonomy, Digital Literacies)</td>
<td>Research Methodology Used in the Study</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>GB, United States, France, Switzerland</td>
<td>Unclear</td>
<td>ICC (Byram’s model)</td>
<td>Transcript analysis, learner document analysis, interviews</td>
<td></td>
</tr>
<tr>
<td>Japan, Mexico, Russia</td>
<td>JP: n = 52, MX: n = 37, RU: n = 46</td>
<td>ICC (cross-cultural contradictions)</td>
<td>Questionnaires, transcript analysis, interviews, learner document analysis</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>DE: n = 2, US: n = 2</td>
<td>ICC (expr. of affect)</td>
<td>Transcript analysis (thematic and quantitative)</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>US: n = 16, DE: n = 20</td>
<td>FL/ICC (socio-institutional differences)</td>
<td>Participant obs., interviews, transcript analysis, learner document analysis</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>Unclear</td>
<td>FL—(German da-compounds)</td>
<td>Transcript analysis</td>
<td></td>
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<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Bibliographical Details</th>
<th>CMC Tools Used in the Exchange</th>
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</thead>
<tbody>
<tr>
<td>Belz, J. A.</td>
<td>2005</td>
<td>Intercultural questioning, discovery and tension in Internet-mediated language learning partnerships</td>
<td><em>Language and Intercultural Communication, 5</em>(1), 3–39.</td>
<td>Email, synchronous chat</td>
</tr>
<tr>
<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
<td>Type of Learning Outcomes Reported (ICC, Foreign Language, Autonomy, Digital Literacies)</td>
<td>Research Methodology Used in the Study</td>
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<tr>
<td>Germany, United States</td>
<td>DE: n = 20, US: n = 16 (focus on 2 German learners of English and their US interlocutor)</td>
<td>ICC—(intercultural questioning)</td>
<td>Transcript analysis (quantitative)</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>US: n = 16, DE: n = 23</td>
<td>FL (pragmatic competence)</td>
<td>Transcript analysis (quantitative)</td>
<td></td>
</tr>
<tr>
<td>Germany and United States, France and United States</td>
<td>US: n = 2</td>
<td>FL (T/V distinction)</td>
<td>Transcript analysis, interviews, questionnaires</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>DE: n = 16 US: n = 14</td>
<td>FL (T/V distinction)</td>
<td>Microgenetic analysis</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>US: n = 1</td>
<td>FL (play)</td>
<td>Transcript analysis, learner document analysis, interview</td>
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<th>Year</th>
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<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
<td>Type of Learning Outcomes Reported (ICC, Foreign Language, Autonomy, Digital Literacies)</td>
<td>Research Methodology Used in the Study</td>
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<tr>
<td>United States</td>
<td>Heritage speakers of Spanish: n = 11 and students of Spanish: n = 11</td>
<td>FL (negotiation of meaning)</td>
<td>Transcript analysis (quantitative)</td>
<td></td>
</tr>
<tr>
<td>Japan, Australia</td>
<td>JP: n = 21, AU: n = 21</td>
<td>FL (peer corrective feedback)</td>
<td>Transcript analysis (quantitative and qualitative).</td>
<td></td>
</tr>
<tr>
<td>Germany, United States</td>
<td>DE: n = 23, US: n = 23</td>
<td>ICC (discourse features of)</td>
<td>Transcript analysis (quantitative)</td>
<td></td>
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<tr>
<td>Germany, United States</td>
<td>US: n = 9</td>
<td>FL (pragmatic competence— register)</td>
<td>Microgenetic analysis</td>
<td></td>
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<tr>
<td>Spain, GB</td>
<td>ES: n = 10, GB: n = 10</td>
<td>FL (peer corrective feedback)</td>
<td>Transcript analysis (quantitative and qualitative)</td>
<td></td>
</tr>
<tr>
<td>Spain, United States</td>
<td>ES: n = 7, US: n = 13</td>
<td>ICC (identity in third space)</td>
<td>Transcript and image analysis (qualitative)</td>
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<th>Year</th>
<th>Title</th>
<th>Bibliographical Details</th>
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<tbody>
<tr>
<td>Dussias, P.</td>
<td>2006</td>
<td>Morphological development in Spanish-American telecollaboration</td>
<td>In J. Belz and S. Thorne (Eds.), <em>Internet-mediated intercultural foreign language education</em> (pp. 121–146). Boston: Heinle and Heinle.</td>
<td>Email, synchronous chat tool</td>
</tr>
<tr>
<td>Éneau, J., and Develotte, C.</td>
<td>2012</td>
<td>Working together online to enhance learner autonomy: Analysis of learners’ perceptions of their online learning experience</td>
<td><em>ReCALL</em>, 24(1), 3–19</td>
<td>LMS (Dokeos)</td>
</tr>
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<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
<td>Type of Learning Outcomes Reported (ICC, Foreign Language, Autonomy, Digital Literacies)</td>
<td>Research Methodology Used in the Study</td>
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<tr>
<td>Spain, United States</td>
<td>n = 8</td>
<td>FL (linguistic gains)</td>
<td>Experimental study</td>
<td></td>
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<tr>
<td>France</td>
<td>FR: n = 27</td>
<td>Autonomy (collaboration and reflection)</td>
<td>Learner document analysis</td>
<td></td>
</tr>
<tr>
<td>United States and Germany, Poland, \n</td>
<td>Project totals: Cycle 1 n = 78; \n</td>
<td>Cycle 2: n = 101 (for case study-\n</td>
<td>based findings and discussion, \n</td>
<td>n = 8; Cycle 1, n = 4; Cycle 2, \n</td>
</tr>
<tr>
<td>United States, France</td>
<td>US: n = 67, FR: n = 79</td>
<td>ICC (cross-cultural comparison)</td>
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<td>Australia, Spain</td>
<td>AU: n = 46, ES: n = 41</td>
<td>FL (peer corrective feedback)</td>
<td>Transcript analysis (quantitative and qualitative), questionnaire</td>
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<tr>
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<th>CMC Tools Used in the Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guth, S., and Helm, F.</td>
<td>2012</td>
<td>Developing multiliteracies in ELT through telecollaboration</td>
<td><em>ELT Journal</em>, 6(1). doi: 10.1093/elt/ccr027</td>
<td>Audio and videoconferencing (Skype), wiki</td>
</tr>
<tr>
<td>Hauck, M.</td>
<td>2010</td>
<td>Telecollaboration: At the interface between multimodal and intercultural communicative competence</td>
<td>In S. Guth and F. Helm (Eds.), <em>Telecollaboration 2.0: Language and intercultural learning in the 21st century</em> (pp. 219–248). Bern: Peter Lang.</td>
<td>Virtual learning environment (Moodle), asynchronous forums, blogs, wikis</td>
</tr>
<tr>
<td>Itakura, H.</td>
<td>2004</td>
<td>Changing cultural stereotypes through e-mail assisted foreign language learning</td>
<td><em>System</em>, 32, 37–51.</td>
<td>Email</td>
</tr>
<tr>
<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
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<td>ResearchMethodology Used in the Study</td>
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<tr>
<td>Italy, Germany</td>
<td>Unclear</td>
<td>Digital literacies (cultural, critical and operational)</td>
<td>Transcript analysis, interviews, learner document analysis</td>
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<tr>
<td>United States: n = 27, Germany: n = 17, Poland: n = 14, GB: n = 8, Total: 66</td>
<td>n = 6 (from 4 groups)</td>
<td>Digital literacies—(multimodal awareness)</td>
<td>Transcript analysis</td>
<td></td>
</tr>
<tr>
<td>Hong Kong, Japan</td>
<td>HK: n = 30, JP: n = 4</td>
<td>ICC (cultural stereotypes)</td>
<td>Transcript analysis, learner document analysis, interviews</td>
<td></td>
</tr>
<tr>
<td>Mexico and United States (Mexican teacher trainees learning at a US distance university)</td>
<td>Participants: n = 40, interview cohort: n = 20</td>
<td>Autonomy (individually defined)</td>
<td>Transcript analysis (qualitative), interviews</td>
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<tr>
<td>France, United States</td>
<td>Unclear</td>
<td>ICC (technological mediation)</td>
<td>Interviews</td>
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<tbody>
<tr>
<td>Kötter, M.</td>
<td>2002</td>
<td>Tandem learning on the Internet: Learner interactions in virtual online environments (MOOs)</td>
<td>Frankfurt am Main: Peter Lang.</td>
<td>MOO (in-house, purpose-built, object-oriented synchronous chat environment: MOOsig-gang)</td>
</tr>
<tr>
<td>Kramsch, C., and Thorne, S.</td>
<td>2002</td>
<td>Foreign language learning as global communicative practice</td>
<td>In D. Block and D. Cameron (Eds.), Globalization and language teaching (pp.83–100). London: Routledge.</td>
<td>MOO, email</td>
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<th>Countries Where Classes Were Located</th>
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<th>Research Methodology Used in the Study</th>
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<tr>
<td>Germany, United States</td>
<td>DE: n = 14, US: n = 15</td>
<td>FL (bilateral language learning)</td>
<td>Transcript analysis, questionnaire, observation</td>
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<tr>
<td>Germany, United States</td>
<td>DE: n = 13, US: n = 12</td>
<td>FL (negotiation of meaning)</td>
<td>Questionnaire, transcript analysis</td>
</tr>
<tr>
<td>France, United States</td>
<td>1) n = 3, US/FR pairs; 2) US: n = 2, FR: n = 3</td>
<td>ICC (cross-cultural misunderstanding)</td>
<td>Transcript analysis</td>
</tr>
<tr>
<td>United States</td>
<td>Heritage speakers of Spanish in the US: n = 13, students of Spanish: n = 13</td>
<td>FL (error correction and feedback)</td>
<td>Transcript analysis (qualitative)</td>
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<tr>
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<td>Research Methodology Used in the Study</td>
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<tr>
<td>United States, Spain</td>
<td>US: n = 10, ES: n = 23</td>
<td>ICC (topics and tasks)</td>
<td>Transcript analysis, questionnaire</td>
<td></td>
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<tr>
<td>Taiwan, United States</td>
<td>TW: n = 33, US: 33</td>
<td>ICC (discourse, lexis, Byram’s model)</td>
<td>Transcript analysis (quantitative and qualitative).</td>
<td></td>
</tr>
<tr>
<td>Ireland, Germany</td>
<td>DE: n = 24, IE: n = 24</td>
<td>FL (register, error correction)</td>
<td>Transcript analysis, questionnaire</td>
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</tr>
<tr>
<td>United States, Mexico</td>
<td>US: n = 26, MX: n = 26</td>
<td>ICC (decentring, other-orientation)</td>
<td>Transcript analysis (qualitative), questionnaire, interviews, learner document analysis</td>
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<tr>
<td>Chile, United States</td>
<td>US: n = 9, CL: n = 30</td>
<td>ICC (discourse, pragmatics)</td>
<td>Transcript analysis</td>
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<tbody>
<tr>
<td>O’Dowd, R.</td>
<td>2006</td>
<td>The use of videoconferencing and e-mail as mediators of intercultural student ethnography</td>
<td>In J. A. Belz and S. L. Thorne (Eds.), <em>Internet-mediated intercultural foreign language education</em> (pp. 86–119). Boston: Heinle and Heinle.</td>
<td>Videoconferencing, email</td>
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<tr>
<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
<td>Type of Learning Outcomes Reported (ICC, Foreign Language, Autonomy, Digital Literacies)</td>
<td>Research Methodology Used in the Study</td>
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<tr>
<td>Spain, GB</td>
<td>ES: n = 5, GB: n = 5</td>
<td>ICC (Byram’s model)</td>
<td>Participant observation, transcript analysis, questionnaires, interviews, researcher document analysis, peer-group feedback</td>
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<tr>
<td>Germany, United States</td>
<td>DE: n = 25, US: n = 21</td>
<td>ICC (ethnographic discovery)</td>
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<tr>
<td>Germany, Ireland</td>
<td>IE: n = 26, DE: n = 32</td>
<td>FL (negotiation of meaning)</td>
<td>Transcript analysis</td>
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<tr>
<td>Japan, Australia</td>
<td>AU: n = 12, JP: n = 18</td>
<td>ICC (identity, nationality, foreignness)</td>
<td>Corpus analysis (qualitative), interviews</td>
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<tr>
<td>Sweden, United States</td>
<td>SE: n = 23, US: n = 9</td>
<td>FL (peer corrective feedback)</td>
<td>Transcript analysis, pre- and post-tests</td>
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<tr>
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<tbody>
<tr>
<td>Schenker, T.</td>
<td>2012</td>
<td>Intercultural competence and cultural learning through telecollaboration</td>
<td>CALICO Journal, 29(3), 449–470.</td>
<td>Email</td>
</tr>
<tr>
<td>Schneider, J., and von der Emde, S.</td>
<td>2006</td>
<td>Conflicts in cyberspace: from communication breakdown to intercultural dialogue in online collaborations</td>
<td>In J. A. Belz and S. L. Thorne (Eds.), Internet-mediated intercultural foreign language education (pp. 178–206). Boston: Heinle and Heinle.</td>
<td>MOO, asynchronous forums</td>
</tr>
<tr>
<td>Schwienhorst, K.</td>
<td>2008</td>
<td>Learner autonomy and CALL environments</td>
<td>New York: Routledge/Taylor and Francis.</td>
<td>MOO</td>
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<tr>
<td>Countries Where Classes Were Located</td>
<td>Number of students used in data analysis</td>
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<tr>
<td>Germany, United States</td>
<td>DE: n = 16, US: n = 16</td>
<td>ICC (decentring, other-orientation)</td>
<td>Transcript analysis, pre- and post- questionnaires</td>
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<td>Germany, United States</td>
<td>DE: n = 2, US: n = 2</td>
<td>ICC (Bakhtinian dialogic model)</td>
<td>Transcript analysis</td>
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<tr>
<td>Ireland, Germany</td>
<td>DE: n = 22, IE: n = 29</td>
<td>FL (repair strategies)</td>
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<td>Ireland, Germany</td>
<td>IE: n = 22, DE: n = 29</td>
<td>Autonomy (reflection, interaction, experimentation)</td>
<td>Transcript analysis, learner document analysis, questionnaire, interviews</td>
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<td>GB, DE, PL, IT</td>
<td>Total unclear</td>
<td>ICC (perspective transformation)</td>
<td>Questionnaire, interviews</td>
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<td>Case study 1: United States and France, Case study 2 and 3: United States and France</td>
<td>Undefined number of students in each case study</td>
<td>FL (T/V use)</td>
<td>Multiple case studies, transcript analysis</td>
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<tbody>
<tr>
<td>Toyoda, E.</td>
<td>2001</td>
<td>Exercise of learner autonomy in project-oriented CALL</td>
<td>CALL-EJ Online 2(2), n.p.</td>
<td>Asynchronous discussion forums, email</td>
</tr>
<tr>
<td>Vinagre, M.</td>
<td>2005</td>
<td>Fostering language learning via e-mail: An English-Spanish exchange</td>
<td>Computer Assisted Language Learning, 18(5), 369–388.</td>
<td>Email</td>
</tr>
<tr>
<td>Ware, P.</td>
<td>2005</td>
<td>Missed communication in online communication: Tensions in fostering successful online interactions</td>
<td>Language Learning and Technology, 9(2), 64–89. Retrieved from <a href="http://llt.msu.edu/vol9num2/default.html">http://llt.msu.edu/vol9num2/default.html</a></td>
<td>Asynchronous discussion forum</td>
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<tr>
<td>Australia, Indonesia, China, Japan</td>
<td>Cohort studied: n = 55</td>
<td>Autonomy (project completion)</td>
<td>Questionnaire, interviews, teacher and researcher document analysis</td>
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<td>Australia, Italy</td>
<td>AU: n = 9, IT: 49</td>
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<td>Spain, United States</td>
<td>ES: n = 32, US: n = 32</td>
<td>FL (characteristics of success)</td>
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<tr>
<td>Spain, Germany</td>
<td>ES: n = 5, DE: n = 5</td>
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<tr>
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<td>ICC (attitudes, beliefs, expectations)</td>
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<tr>
<td>Spain, United States Phase 1) US: n = 4, ES: n = 22; Phase 2) ES: n = 36, US: n = 36</td>
<td>FL (language-related episodes)</td>
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<tr>
<td>Germany, United States US: n = 9, DE: n = 12; research focusses on 1 US/DE pair</td>
<td>ICC (cultural misunderstanding)</td>
<td>Transcript analysis (qualitative)</td>
<td></td>
<td></td>
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<tr>
<td>United States, Mexico US: n = 23, MX: n = 23</td>
<td>ICC (awareness of current events)</td>
<td>Experimental study, post-questionnaire</td>
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Technologies

The Persistence of Asynchronous Text

The main communication tools employed by students in our sample were email (mentioned in 21 studies), synchronous chat (17) and asynchronous forums (14). Other tools which were used regularly included blogs (8), wikis (5) and virtual learning platforms (6). This means that, in terms of technology use, asynchronous, text-based communication has remained a staple of OIE from the 1990s to the present day, whether in the form of email or online discussion forums. Although five publications reported on the exclusive use of synchronous chat, in roughly half our sample, online exchanges were based on a combination of synchronous and asynchronous communication. These appear to be rather conservative choices. The precise reasons for them are unknown, but reasonable speculation is possible. From a pedagogic perspective, whereas synchronous chat offers spontaneous, ‘live’ interaction, asynchronous text-based communication presents language learners with readier opportunities for post-interaction review and reflection. For busy practitioner researchers, voice- and video-based interactions, although easy enough to record, are time-consuming to transcribe and analyse. The latter require multimodal transcription and analysis, which is highly complex.

Videoconferencing

Despite anecdotal evidence of the increasingly frequent use of voice over Internet protocol (VOIP) telephony and desktop videoconferencing for OIEs, relatively little research into the use of these technologies is captured in our sample. The full popularity of the medium is almost certainly not fully represented here. Whereas some examples of the collection and post-class exploitation of videoconference recordings are present (Kern, 2014; O’Dowd, 2006), a number of articles on the topic fall outside the scope of the present review because they are not published in English (e.g., Dejean-Thircuri and Mangenot, 2011). Synchronous video communication tools such as Skype or Adobe Connect were used in only six of the studies we reviewed. In a thoughtful article, Kern (2014) warns that the attractions and benefits of desktop videoconferencing are offset by the fact that what appears real and authentic about such communication is in fact heavily mediated by a technology which is ideologically driven. He therefore advocates a relational pedagogy, based on retrospective reflection on online interactions, as a means of heightening learners’ critical and contextual awareness of their online communicative behaviour. An equally cautionary perspective is articulated in Malinowski and Kramsch (2014).

Web 2.0

For a decade now, Web 2.0 has offered affordances for collaboration and for the creation of user-generated content. In our sample, the wiki, which is designed for collaboration, is the most favoured Web 2.0 tool. However, in the
studies we have reviewed, there is invariably more focus on the process of collaboration than on the artefacts that were created. Is something being missed?

**Virtual Worlds**

Immersive environments have been used for OIEs since the 1990s. Four publications in our sample deal with the use of MOOs, which were, for a time, championed for tandem learning (see Kötter, 2002, 2003; Schwienhorst, 2002, 2008). A number of MOOs (le MOOfrançais, MOOsiggang and shcMOOze) were developed for educational purposes, in particular for language learning and intercultural communication. The best known was Diversity University, established by Lonnie Turbee, of Syracuse University. Its domain name was allowed to expire on 26 October 2006. MOOs were heavily text based, which may have limited their popularity.

Amongst the successors of MOOs are the massive multiplayer online games (MMOs) that furnish virtual reality gaming environments. Some of these, such as World of Warcraft are frequented by language learners (Thorne, 2010). Because the use of them for second language learning tends to be informal, they are not captured in our sample. The best-known virtual reality environment is Linden Labs’ Second Life. Despite recent enthusiastic advocacy of Second Life for online intercultural exchange (Sadler, 2012), only one study in our sample charts its use to build an online community of trainee teachers (Dooly, 2011).

**Learning Aims and Outcomes**

**Online Exchange and Second Language Learning**

From its inception, one of the primary aims of online exchange has been second language learning. Second language acquisition through OIE has been researched from interactionist as well as sociocultural perspectives. Studies of linguistic development use primarily quantitative data—especially those based on interactionist approaches and the negotiation of meaning. Data typically consists of counts of the occurrence of syntactic, morphological and lexical features in online interaction discourse. Meanwhile, studies looking at the development of aspects of intercultural competence tend to use qualitative data and employ a mixture of ethnographic and discourse analytic methods.

Given that second language learning is a key driver, ‘traditional’ bilateral exchanges continue to be the dominant model of exchange—at least in studies where second language learning is a primary focus of study. Only 6 of the 54 studies reviewed here used a lingua franca. Only 2 reported on multilateral exchanges. The remaining 45 studies were bilingual or bicultural in nature.

Studies in linguistic development focus principally on three main areas of research. They identify the value of telecollaborative interaction with peers for (a) negotiation of meaning (e.g., Blake and Zyzik, 2003); (b) peer corrective feedback (e.g., Diez-Bedmar and Pérez-Paredes, 2012) and (c) pragmatic competence development (e.g., Belz and Kinginger, 2003).
From Cultural Misunderstanding to Intercultural Pragmatics

Acquainting second language learners with the L2 culture was initially a secondary aim of online exchange but rapidly assumed primary importance for many telecollaborators. Initial assumptions about the efficacy of intercultural contact online were over-optimistic and naive. As a consequence, early researchers into online exchange were disconcerted by the frequency of communication breakdown between participants. Cultural misunderstanding, miscommunication and conflict appear early in the literature. A succession of publications (Basharina, 2007; Belz, 2002; Kinginger, Gourvès-Hayward and Simpson, 1999; Kramsch and Thorne, 2002; Ware, 2005; Ware and Kramsch, 2005) explore the reasons for this, which range from socio-institutional factors to broader cultural differences, especially in relation to discourse norms.

To account for the intercultural difficulties encountered by participants in online exchanges and gauge the extent to which these were capable of being surmounted, practitioner researchers made frequent use of offline models of ICC to evaluate intercultural learning in online environments. The most popular was Byram’s (1997) five savoirs model (see Audras and Chanier, 2008; Hauck, 2010; Liaw, and Bunn-Le Master, 2008; O’Dowd, 2003). Other models used have been those of Bennett (Dooly, 2011; Stickler and Emke, 2011) and a Bakhtinian dialogic model (Schneider and Van der Emde, 2006). The extent to which offline models are appropriate to online intercultural interactions remains uncertain, but—to the best of our knowledge—no model of intercultural competence specific to online encounters has yet been devised.

Perhaps for this reason approaches to intercultural learning in telecollaborative exchanges target a broad range of learning outcomes. Some conceptualise intercultural learning in cognitive terms, others prioritise decentring and critical reflection, whereas yet others aim at discovery. Desired learning outcomes are correspondingly varied, ranging from the exchange of cultural information (Zeiss and Isabelli-Garcia, 2005) through the study of the construct of ‘foreignness’ (Pasfield-Neofitou, 2011), the relativising of one’s own culture (Meagher and Castagnos, 1996; Schenker, 2012) and the deconstruction of stereotypes (Itakura, 2004) to the cultivation of an ethnographic stance (O’Dowd, 2006).

Cultural and socio-institutional differences undeniably continue to pose problems in OIEs. But they are, in one sense, merely facts of life to be surmounted or circumvented rather than bewailed. Likewise, the communication failures which some depicted as betraying the weakness of OIE in fact led to the realisation of one of its key strengths. In the long term, more productive than identifying cultural differences has been the recognition that communication breakdown in OIEs has both linguistic and cultural dimensions and that the two are intertwined inextricably. This awareness has led to a third major thread in the literature on the intercultural dimension of online exchanges which addresses the discursive and pragmatic features of intercultural communication. The discourse of online intercultural exchange is explored in Belz (2003), Chun (2011), Dooly (2011), Menard-Warwick (2009) and Liaw and Bunn-Le Master (2010). Intercultural pragmatic competence is the focus of Belz and Vyatkina (2005) and Thorne (2003).
Amongst studies of the linguistic aspects of communication breakdown in OIE, two broad approaches are discernible. One is located at the macro level of genre. Kramsch and Thorne (2002) conclude that German and American students espouse fundamentally different concepts of communication, one based on a discourse of truth, the other, a postmodern one based on a discourse of trust (pp.98–99). A similar diagnosis is to be found in Ware and Kramsch (2005), where communication breakdown is attributed to uncertainty and confusion about discourse genre (p.199). Useful as it is to alert second language learners to the issue, the pedagogic challenges of teaching the effective use of genre to L2 learners remain considerable.

In the work of Julie Belz and collaborators, one finds instead a painstaking micro-level analysis of the specific linguistic features which cumulatively embody these generic differences. Belz (2002) focusses on attitudinal appraisal (the relative frequency of positive and negative judgments) and epistemic modality (the use of intensifiers or mitigation strategies to ‘harden’ or ‘soften’ value judgments). Belz and Vyatkina (2005) report on an intervention study exploring whether the appropriate use of culturally specific linguistic features such as modal particles (ja, mal, denn and doch) can be taught to American learners of German engaged in OIE. Rather than on genre, Belz’s focus is on pragmatics. Significantly, her work offers the prospect of teachable ‘bottom-up’ remedies to languacultural difference.

A focus on the linguistic features of culturally specific discourses in OIE is continued in publications such as Menard-Warwick (2009) and Liaw and Bunn-Le Master (2010). This work underlines the value and potential centrality of OIE to learners of second languages and cultures. It does so by giving scrutiny to intercultural interactions that are linguistically realised. Equipping learners with the pragmatic resources needed to communicate effectively across cultures is to offer tangible and specific opportunities for learning that is simultaneously linguistic and intercultural. The importance of approaching intercultural communication through language use is warranted by Liddicoat (2014), who asserts that ‘language itself can be the focus of intercultural learning related to mediation . . . [P]ragmatics especially has particular relevance for interculturally oriented language teaching as it represents a fundamental point of interaction between language and culture’ (p. 276). If there were no other justification for engaging in OIE, the opportunities it affords for developing intercultural pragmatic competence would suffice.

**Learner Autonomy and Digital Literacy**

There is some evidence that working together in online environments can help learners to become more autonomous (Schwienhorst, 2008). Definitions of learner autonomy remain highly variable and to some extent problematical in articles seeking to relate autonomy to OIE: Kessler and Bikowski (2010) define learner autonomy as ‘whatever an autonomous person thinks it is’ (p. 42), whereas Fuchs, Hauck, and Müller-Hartmann (2012) seek to characterise it as ‘the informed use of a range of interacting resources in context’ (p. 82). This effectively equates learner autonomy with digital literacy, which is justifiable only
in a highly specific set of circumstances. There is currently a lack of empirical studies to support the claim that digital literacies are an inevitable benefit of OIE. Only three studies were identified which actually operationalised the concept.

DISCUSSION

In this section of the review, we discuss approximately 30 studies which represent salient exemplars of the treatment of particular topics and themes associated with those learning outcomes of OIE for which a substantial number of empirically based claims have been made. Our purpose here is to explore recurrent trends and commonalities emerging from our reading of the articles we have reviewed. However, some articles stand out as addressing particular issues in strikingly individual ways. They will be treated in somewhat greater depth if we feel that their significance warrants it.

Studies in Linguistic Development

Those studies which focus on students’ linguistic development in telecollaborative exchange dealt with the following dominant themes:

The Importance of Offline Reflection and Study

As some researchers of telecollaborative interaction have observed, although students are exposed to a great deal of L1 input in their OIEs, this does not necessarily lead to second language development (Belz and Vyatkina, 2005, 2008). With this in mind, to support ‘noticing’ (Schmidt, 1993) and a more effective focus on form, online intercultural interaction has regularly been downloaded and recorded for later study and exploitation in classroom contexts. This practice has been particularly common in the case of text-based interaction, but it also applies to videoconference interaction, which can be recorded and multimodally transcribed (although the process for this is more complex). Toyoda and Harrison (2002) support this approach, arguing that studying chat logs can help students learn to analyse difficult grammatical and syntactical features of the target language, develop communication strategies for coping with the short reaction time of synchronous discussion and reflect on how particular words can trigger cultural misunderstandings.

With this in mind, in telecollaborative studies looking at students’ linguistic development, authors regularly recommend combining students’ online interaction with either reflective reviews of transcripts or recordings of the online interactions. Belz refers to this as ‘the alternation of Internet-mediated intercultural sessions with face-to-face intracultural sessions’ (2006, p. 214). Relating to videoconference-based interactions, Kern (2014) refers to using ‘la salle de rétrospection’ in his online exchanges where French and American student partners were given tasks requiring them to review recordings of their telecollaborative videoconferences. Other examples of this can be found in the work of Cunningham and Vyatkina (2012), who describe ‘pedagogic
interventions’ where the teachers transcribed and coded relevant extracts of politeness markers from students’ telecollaborative videoconferences and reviewed these transcripts with their students with the help of pragmatic awareness questionnaires. However, undoubtedly the most extensive work in this area comes from the work of Belz and colleagues (Belz, 2004, 2005; Belz and Vyatkina, 2005), who have provided an extensive collection of studies where the linguistic development of students of German in the United States was supported through the use of pedagogical interventions based on data from a corpus of telecollaborative interactions. This contrastive corpus of learner and expert speakers of German was collected from a series of German-American telecollaborative exchanges over a two-year period and contained data taken from both email and chat-based interactions. In Belz and Vyatkina (2005), the authors identified the underuse of modal particles in the American students’ interventions in German in the opening parts of their exchanges and therefore carried out a pedagogical intervention using linguistic data culled from the exchange to draw the American students’ awareness to differences in their performance and their native-speaking partners’ use of this linguistic feature.

Other educators have tried to combine online interaction with offline focus on form in other ways. Bower and Kawaguchi (2011), for example, required their Australian and Japanese students to send their partners, via email, language corrections taken from the transcripts of their synchronous online interactions, whereas Vinagre and Muñoz (2011) asked their students to keep a language learning diary in which they could record information about new vocabulary they had encountered and also to carry out error recycling exercises. The precise means used to promote the noticing of salient linguistic features (including errors) is less important than the process it triggers, which is one of active reflection, leading to second language development.

**Peer Feedback, Task Design and Focus on Form**

An important question related to language learning in telecollaborative exchange is why this type of language learning activity is likely to have a significant impact on learners’ linguistic development. In response to this question, many authors have suggested that the fact that they are interacting and receiving feedback from peers (as opposed to teachers) may lead learners to pay greater attention to linguistic form, accuracy and appropriateness. Ware and O’Dowd (2008) reported that their Spanish students found that the corrections which they received from their American peers made a greater impact on their learning than traditional teacher-based feedback and that the corrections were experienced in a more personalised and unthreatening way. Other researchers have found that peer-based feedback is particularly valuable when it comes to helping learners develop aspects of pragmatic competence such as appropriate use of T/V forms in languages such as French and German. One of the case studies presented by Thorne (2003), for example, illustrates considerable gains in T/V usage in French by one American student, and the author argues that the role of peer interaction is key to this success ‘because students are engaging
in age-peer contact under less controlled conditions that would normally be
the case in intra-class small group or class discussion’ (2003, p. 50). Similarly,
Belz and Kinginger (2003), based on their research studies into T/V develop-
ment in both learners of German and French, suggest that the learning context
of peer-based telecollaboration can stimulate the appropriate use of pragmatic
aspects of language in a way which would be very difficult to reproduce in the
traditional language classroom.

There is apparent consensus amongst researchers of linguistic development
in telecollaborative contexts that sufficient opportunities for focus on form,
negotiation of meaning and corrective feedback do not occur naturally in online
exchange and need to be promoted through careful task design and training of
the learners to work as linguistic guides and tutors for their partners.

The importance of the choice of task to support focus on form and language-
related episodes (LREs) is highlighted by Bower and Kawaguchi (2011), who
conclude that carefully structured activities such as jigsaw tasks are likely to
foster more negotiation than free conversation or discussion (p. 60). In her
study of the impact of corrective feedback on L2 grammar development, Sauro
went a step further to get her students to focus on specific forms in their online
interactions with their partners by requiring them to incorporate words and
phrases from a bank of lexical items into their written assignments (2009,
p. 114–115).

Apart from the careful design of tasks, other techniques have been used
to encourage a focus on form in telecollaborative interaction. Some stud-
ies, for example, report giving students explicit instructions and training for
providing linguistic feedback to their telecollaborative partners. Vinagre and
Muñoz provided their German and Spanish e-tandem students with ‘specific
guidelines with regard to error correction which included an error classifica-
tion table’ (2011, p. 75). Similarly, Ware and O’Dowd (2008) carried out a
study comparing the level of peer feedback provided by students who had
been requested and trained to provide feedback to their partners on linguistic
form (‘e-tutors’) to that of students who hadn’t (‘e-partners’). These authors
found a much higher percentage of LREs occurred in the e-tutoring condition.
They also reported that students who had received explicit feedback from their
partners responded very positively to this aspect of the exchange and that the
corrections they received from their online partners, although personalised and
unthreatening, made a greater impact on their learning than normal classroom
feedback (see p. 53).

However, despite students’ positive reactions to receiving feedback on their
use of the L2 in their online interactions, numerous studies also have identi-
fied the reluctance of students to assume the role of linguistic tutor (Bower
and Kawaguchi, 2011; Ware and O’Dowd, 2008). Some authors, such as
Díez-Bedmar and Pérez-Paredes, report that even when students were required
to provide linguistic feedback, ‘participants failed to comply with instructions’

Various reasons have been proposed for this unwillingness to provide cor-
rective feedback or engage in the negotiation of meaning in telecollaborative
OIE and Foreign Language Learning

exchange. The most commonly cited explanation is a clash between the educators’ pedagogic aims for the exchange (e.g., linguistic development through peer feedback or negotiation of meaning) and the students’ perception of the exchange as a communicative activity and an exercise of cross-cultural friendship making (Schwienhorst, 2000). It is only when students are clear that the function of a particular telecollaborative task is to provide feedback on their partners’ language that this will take place on a regular basis. Díez-Bedmar and Pérez-Paredes (2012) found in their wiki-based task, where students clearly understood that their function was to provide linguistic feedback on their international partners’ drafts of tourist brochures, that the amount of LREs increased significantly in comparison to other tasks which had more communicative goals.

A second explanation for students’ reluctance to provide feedback is proposed by Ware and O’Dowd (2008), who suggest that culturally divergent perspectives on what was appropriate online behaviour had influenced students’ attitudes to providing and receiving explicit linguistic feedback from their partners. They found that, in contrast to the Spanish students who had expected to receive feedback on their use of English from their partners, American students often were uncomfortable about providing this. The authors suggested that this was due to the widely held view amongst American students that online interaction took place in ‘informal spaces for sharing ideas, and most evaluative feedback remains the role of the course instructor, so the US students’ concerns centred mainly on fears of transforming their online conversations into less informal sessions’ (p. 52).

Whereas many authors highlight the need to train their students to be productive telecollaborative partners in a linguistic sense, other studies report relatively high levels of focus on form. Koetter (2003) notes that ‘many students were keen to provide their partners with authentic input in their respective L2 and to model the use of their L1 for their partners’ (2003, p.154); in addition Tudini (2003) found that negotiation sequences in synchronous, text-based Italian online interaction occurred in more than 9 percent of total turns and that language learners received both implicit and explicit feedback on their language from their partners. Whereas it is not clear in these two particular studies whether students were encouraged explicitly to focus on form, the general trend in the literature would appear to suggest that when tasks are carefully designed to require linguistic accuracy and when students are aware of their role as language expert or tutor, then telecollaboration has strong potential as a tool for linguistic development.

Online Exchange and Intercultural Communicative Competence

This section of the review now moves on to answer the question: ‘In what ways does online intercultural exchange support the development of intercultural communicative competence?’

Contrary to some assumptions (Liddicoat and Scarino, 2013, p. 111), not since the earliest days of online exchange have its organisers assumed that simply bringing members of different cultures into social contact online would
result in effective intercultural learning. In fact, telecollaborators have pursued a number of approaches to developing intercultural competences, either by seeking to adapt offline models and methodologies or, more recently, by recognizing that the technologically mediated nature of the experience meant that online intercultural encounters were qualitatively different from what might occur within the compass of, say, a study abroad programme. This involves the recognition that online environments have cultures of their own and that the frequenters of these may feel a stronger affiliation to their virtual worlds than to their offline cultures of origin. In this section we shall explore three different ways of conceptualizing the development of ICC online. The first is an ethnographic approach which equates effective learning with informing oneself as fully as possible about another culture whilst suspending judgment. The second takes a relational view, in which ‘decentring’ (i.e., relativising one’s own culturally determined attitudes and behaviours) is as important as acquiring the knowledge, attitudes and skills needed to interact effectively with members of another culture. The third envisages online learners not as quasi-representatives of two separate cultures but as denizens of a single hybrid ‘contact zone’ (Pratt, 1991) or ‘third space’ (Bhabha, 1994; Kramsch, 1998) where the potential for conflict is rivalled by that for creativity and where the close sharing of tasks, goals and aspirations, often in immersive environments (e.g., MOOs, virtual worlds and games) drives behavioural change and may lead ultimately to transculturation (Ortiz, 1995). We shall discuss examples of each of these three different approaches, which to some extent mark the stages of an—as yet unfinished—journey.

**Ethnography**

O’Dowd (2006) reports on a telecollaborative project inspired by the work carried out at Ealing College, GB, in the 1990s (see Roberts, Byram, Barro, and Jordan, 2001 and Roberts, 2002), in which advanced students of English at the University of Essen were trained in ethnographic interviewing for an eight-week exchange with counterparts at the Ohio State University at Columbus. Participants in the exchange used a combination of integrated services for digital network (ISDN)-based group videoconferencing and email. O’Dowd’s focus is to a large degree on the roles played by synchronous and asynchronous tools in serving the development of ICC.

Conveniently for us, O’Dowd himself asks the question ‘in what ways does ethnography contribute to developing ICC?’ (2006, p. 89). He concludes either that it is only partially successful in doing so or that his German learners have been unable, in the time available, to become fully fledged ethnographers. Although the data shows ‘ample examples of the German students using the techniques of ethnographic interviewing in their online interaction’ (p. 108), O’Dowd concedes that it was extremely difficult to develop deep-seated ethnographic understanding in his German students ‘in the short time-span of the current online exchange’ (p. 108). Consequently, ‘many students found themselves drawn into discussions on which culture was “better”’ (p. 108). Ultimately O’ Dowd judges that ‘[i]n their final essays and on the feedback forms,
they often judge or criticise the target culture instead of trying to understand and describe it from the native’s point of view’ (p. 108).

O’Dowd ascribes the partial failure of this initiative to two reasons. Firstly, a telecollaborative exchange is by definition a reciprocal interaction in which participants do not merely observe and ask questions but also are required to express their own opinions. By contrast, ethnographic interviewing requires an asymmetrical approach in which the researcher’s role is indeed to participate but not actually to become either a protagonist or antagonist (p. 113). Secondly, O’Dowd ascribes the difficulties encountered to the ‘more direct, more explicit, more self-referenced and more content-oriented’ pragmatic strategies which, according to House (2000, p. 162), characterise German discourse norms.

Ultimately O’Dowd (a) concedes that ‘it can be quite difficult for teachers to develop in learners a critical cultural awareness during the necessarily short duration of a telecollaborative exchange’ (p. 115), (b) laments that his German group was relatively unsuccessful in developing ‘the ability to take the others’ perspective and see things through their eyes’ (p. 116) and (c) suggests that ‘explicit guidance and further training in ethnography’ are likely to help develop [the] attitude of openness to alternative perspectives on one’s own and the target culture’ (p. 116). The short duration of most telecollaborative exchanges and the continued resistance of many HEIs to incorporating them into the mainstream curriculum may mean that implementing an ethnographic inquiry model—however great its potential—is likely to remain challenging. To the best of our knowledge, this remains a bold, but isolated, attempt to do so. An attempt at replication nonetheless would be welcome.

**Relational Approaches to Intercultural Communicative Competence Development**

The practicalities of online exchange have meant that exchanges based on comparison and analysis have been attempted much more frequently than online ethnographic inquiry. The best known of these is the Cultura project (Furstenberg, Levet, English, and Maillet, 2001). However, only a relatively small number of such endeavours have been subjected to empirical evaluative research. This frequently involves the use of existing frameworks as a yardstick. Frameworks used include Byram’s (1997) Intercultural Communicative Competence Model, Chen and Starosta’s (2000) Intercultural Sensitivity Scale, or for adult learners, King and Baxter-Magolda’s (2005) Intercultural Maturity Model. For applications of the last two of these in online exchanges, see Jin and Erben (2007) and Stickler and Emke (2011). Despite recent caveats (Helm and Guth, 2010), Byram’s model of Intercultural Communicative Competence has established itself as dominant in both offline and online intercultural learning. In the case of online exchange, it has served as a point of reference to Audras and Chanier (2008), Belz (2003), O’Dowd (2006), Menard-Warwick (2009) and Stickler and Emke (2011). Schenker (2012) finds no evidence for the acquisition of Byram’s competences by her learners. A brief account of Byram’s model follows as a prelude to discussion of studies that have employed it.
According to Byram, ICC comprises five components for which he employs the word *savoirs*, a French term which goes some way to capturing the different entities involved: knowledge, attitudes, skills and awareness. If there is an entry point to intercultural learning, for Byram it lies in *savoir être*, an attitude which involves relativising one’s cultural self and valuing others. This is often characterised as curiosity and openness towards other cultures. Some commentators refer to this as ‘decentring.’ Secondly, the term *savoirs* itself refers to sociocultural knowledge about the behaviour of self and others. *savoir comprendre* is defined by Byram as the skills of interpreting and relating (e.g., texts but also events and behaviours), whereas *savoir apprendrefaire* designates the skills of discovery and interaction, which involve an ability to acquire and operationalise new knowledge of cultural practices. This includes the acquisition of intercultural pragmatic strategies. If Byram’s model has an apex, it is represented by *savoir s’engager*: critical cultural awareness, which he equates with political education. This, for Byram, is where intercultural learning culminates (1997, pp. 34–38).

Using Byram’s model, Audras and Chanier (2008) report on a 10-week, three-way Tridem exchange between adult learners in France and the GB and undergraduates in the United States, which was based on analysing and comparing culturally loaded concepts such as freedom, identity and diversity. Using qualitative analysis of the transcripts of both audiographic conferences and wiki postings, they offer convincing evidence that participants in telecollaboration are capable of demonstrating all five of Byram’s *savoirs*, concluding that the range of competences on display depends on (a) participants’ prior experience and (b) their degree of participation in the exchange (p. 190).

Cross-referencing transcript data against information from a pre-project questionnaire, Audras and Chanier (2008) conclude that participants with no previous experience of intercultural encounters tend to display the more basic competences such as *savoirs* (knowledge of self and others) and *savoir-être* (the ability to relativise self and value others). More experienced participants demonstrated not only *savoirs* (knowledge) but also *savoir-comprendre* (skills of interpreting and relating) and *savoir apprendrefaire* (skills of discovery and interaction) (p. 191). *savoir s’engager*: critical cultural awareness was demonstrated only by participants who—on the whole—were already expert (p. 190).

Thus, of 18 active participants whose contributions were subjected to analysis, five demonstrated all five of Byram’s *savoirs*, either in their wiki postings or in audiographic conferences. Four of these participants identified themselves as experienced in intercultural encounters. One was a novice. Three out of 18 demonstrated four of Byram’s *savoirs* (the missing competence being *savoir s’engager*: critical cultural awareness). Of these, two reported that they were new to intercultural learning (p. 191).

Menard-Warwick (2009) reinforces Audras and Chanier’s findings, reporting on a project linking American and Chilean students, which appears to have combined information exchange and comparison and analysis. She too analyses a series of extracts from the chat transcripts of her students, demonstrating the presence and linguistic realisation of: (a) an intercultural attitude (*savoir être*),
(b) intercultural knowledge (*savoirs*), (c) a capacity for intercultural interpretation (*savoir comprendre*), (d) for intercultural discovery (*savoir apprendre*) as well as (e) critical cultural awareness (*savoir s’engager*) (pp. 109–114). This suggests that in appropriate circumstances, OIEs based on comparison and analysis have the capacity to develop the ICC of learners, as specified in one of the most widely accepted current models of ICC.

**Working Together in the ‘Contact Zone’**

From the outset, joint project work has been used, with varying success, by organisers of online exchanges, in an attempt to develop intercultural competences at a practical, behavioural level. The joint tasks involved have varied in complexity, whilst over the years, the collaborative tools available have evolved significantly. Toyoda (2001) describes a web page creation project involving Australian, Indonesian, Chinese and Japanese students, which used a bulletin board and email. Belz’s (2003) German and American learners also undertook joint website design and development using a learning management system (‘First Class’). Such initiatives have been particularly favoured by teacher educators, whose aim has been to train their charges to develop online learning activities for their future students. An illustration of this is provided by Fuchs, Hauck, and Müller-Hartmann (2012), whose students used Moodle-based discussion forums, a wiki, and social bookmarking sites to evaluate online learning tools and design sample learning activities making use of them. The Web 2.0 environments now employed in such projects are inherently collaborative and increasingly immersive. This raises the question of whether working together in virtual reality might constitute an entirely different kind of experience, which would be not so much intercultural as a- or post-cultural.

Dooly (2011) deals with just such a year-long telecollaborative exchange amongst trainee teachers at the Universitat Autònoma de Barcelona and students in an MA TESOL course at the University of Illinois at Urbana-Champaign. The exchange in question was devoted to the design of ‘teaching units’ in English (UAB) and other languages (UIUC), for primary and/or secondary education. Participants employed several tools and environments, including online discussion forums, Skype, Moodle, VoiceThread and Second Life. The text of the article suggests that participants also used Zoho and other forms of email. Citing in particular the reservations of Helm and Guth (2010), Dooly questions the relevance of conventional models of ICC to the kinds of virtual environments inhabited by her learners. She raises the question of whether they might instead be operating in a kind of ‘third space,’ using a concept originated in postcolonial theory by Bhabha (1994) and applied to the learning of languages and cultures by Kramsch (1998).

Dooly cites transcript evidence which clearly suggests that when working together in immersive environments, participants tend to construct identities for themselves as ‘teachers in an online virtual community’ rather than primarily in terms of their offline cultural affiliations. If participants do refer to cultural difference, it tends to be in relation to their students rather...
than themselves. Whereas one of the tropes of early studies of OIE was the frequency of cultural misunderstanding, which all too often resulted in the breakdown of communication (Belz, 2003; Kramsch and Thorne, 2002; Ware, 2005), Dooley (2011) claims to observe no evidence of this in her data (pp. 326–327).

Further, if disappointment is expressed by participants about their partners, it is based on ‘personal (or working group) expectations of the other’ (p. 327). Dooley concedes that there is a general disappointment at the online behaviour of some of the members of the virtual community of teachers’ (her emphasis, p. 328), but this apparently does not take the form of a blame game between groups of participants defined by institutional provenance or cultural affiliation. Whether what Dooley observes actually constitutes a ‘new third space culture,’ as she is tempted to speculate, is open to question. But it does appear that any misunderstandings or failings that do occur are not attributed automatically to extraneous cultural factors (see p. 331). This suggests that it is perfectly possible to construct virtual communities in which online identities and allegiances outweigh existing cultural adherences.

The studies scrutinised here offer empirical evidence—largely in the form of qualitatively analysed transcript data—that, whereas ethnographic approaches to intercultural learning may be difficult to operationalise telecollaboratively, online exchanges involving comparison and analysis activities are capable of supporting the development of ICC. Dooley’s (2011) account of the use of a virtual environment to support the development of a communal online identity, rather than ICC as classically defined, is intriguing. As far we are aware, it is the only study to make this claim. Accordingly it has been treated in extenso. However, it requires replication to enable one to be confident of citing it as evidence of the ways in which collaborative exchanges might be able to support the construction of online third cultures.

Learner Autonomy and Online Intercultural Exchange

This section of the review aims to answer the question: ‘Can and does participation in an online exchange foster the development of learner autonomy?’ Despite frequent claims, actual studies of learner autonomy in OIE are limited in number. Only a few are empirical. These include Fuchs, Hauck, and Müller-Hartmann (2012); Kaur, Singh and Amin Embi (2007); Schwienhorst (2008) and Toyoda (2001). Some rely on small or selective evidence samples. The most extensive empirical contribution to the systematic study of the relationship between learner autonomy and computer-mediated communication (CMC) is Schwienhorst (2008).

Learner Autonomy and the Digital Revolution

The digital revolution has transformed the nature both of language learning and of learner autonomy. The global shift to online learning makes it impossible any longer to conceive of learners as unconnected individuals whose sole concern is ‘to take charge of one’s own learning’ (Holec, 1981, p. 3). Toyoda,
reporting on a project-based online exchange, clearly addresses the social
dimension of online learner autonomy and recognises the role of technology in
enabling hitherto unavailable forms of social learning. Accordingly she defines
learner autonomy as ‘an ability and a willingness to learn both independently
and in cooperation with others as a responsible learner’ (2001, p. 2).

Schwienhorst too identifies collaborative social interaction as one of three
constituents of learner autonomy in online environments:

Learners need to become communicators and collaborators with other
learners, teachers and native speakers when they are learning a second
language. They need to understand that actively seeking opportunities for
 collaboration and interaction will not only help them as language users,
but also as language learners who progress through meaningful contact
with more knowledgeable learning partners. This capacity and goal can
thus be summarised as interaction.

(2008, p. 9)

Finally, Éneau and Develotte (2012), studying the self-analyses of adult dis-
tance learners in an online masters’ course, emphasise ‘the importance of the
role that peers play . . . in the construction of . . . autonomy’ (p. 2) and con-
clude that ‘in online distance learning, individual and group autonomy develop
together’ (p. 14). In short, in online exchanges, it is clear that ‘the ability to
take charge of one’s own learning’ (Holec, 1981, p. 3) is linked indissolubly
to a capacity for social and cognitive interaction.

Learner Autonomy in Online Environments

One of the abiding questions about learner autonomy and online environments
is whether the ability to use technology successfully for online learning is a
cause or a consequence of learner autonomy.

Toyoda (2001), whose findings are based on 55 student interviews, takes
the view that information technology literacy is a prerequisite of learner auton-
omy, suggesting that there is a correlation between information technology
literacy levels and favourable perceptions of technology and development as an
autonomous online learner (p.1). In fact, she concludes that ‘three conditions
(are) necessary for successful autonomous learning: 1) accessible and reliable
technology, 2) sufficient computer literacy in students, and 3) good communi-
cation with and support from peers.’

Kötter (2002), giving an account of an early e-tandem exchange, fudges
the question of causality, suggesting at one point that learner autonomy is a
prerequisite for a successful online exchange (‘tandem learners must . . . com-
mmand at least a minimum level of autonomy’ (p. 39) but elsewhere suggesting
that it is an outcome of such an exchange (‘participants in a tandem exchange
develop their capacity for autonomy’ [p.36]).

Writing in a context informed by the Hong Kong Curriculum Development
Council, Kaur, Singh and Amin Embi (2007) are unequivocal in viewing infor-
mation technology literacy as a component of online learner autonomy:
Learning how to learn means to build up learners’ ‘capabilities to learn independently (e.g. creative and critical thinking, mastering of Information Technology, Communication), to become self-reflective on how to learn and to be able to use different ways of learning . . . ’ (Curriculum Development Council, 2000, p. 3). All these skills have been identified as components of autonomy. One tool that has been closely linked with aiding the development of learner autonomy is CMC.

The most extensive account of the role of online exchange in supporting the development of learner autonomy is offered by Schwienhorst (2008), reporting on a German-Irish, MOO-based e-tandem project. Schwienhorst does not view digital literacy as an aspect of learner autonomy, but he does argue that immersive environments can provide propitious settings for the development of learner autonomy and identifies eight conditions for this. In particular, he argues, when used for online exchange, virtual reality environments:

- Allow for greater self-awareness and encourage learners to experiment with different roles through the use of virtual representations, thereby reducing the affective filter
- May go beyond face-to-face communication in the way they can enhance linguistic and cognitive awareness of the learning process, especially through the medium of writing
- Support interaction by locating participants in a shared environment, thus allowing for a common linguistic reference point
- Enhance conversation management and group work by allowing for collaboration in a variety of rapidly changing group work scenarios
- Are based on spatial metaphors which offer a more natural way of organizing information resources than an interface that relies solely on the use of buttons and/or menu bars
- Enable learners to collaborate on resources in real time
- Encourage and enable learners to participate actively in the creation and organization of their learning environment
- Provide an ideal support for the teacher as facilitator, counsellor, and resource; in addition, they provide the teacher with a large number of research tools (p. 59).

Schwienhorst sees online learner autonomy as manifested in a readiness to engage in experiment. In a MOO context he equates this with creating objects, manipulating online and offline identities, using indexical language and expressing a sense of being in control. He offers extensive transcript evidence of all four behaviours (pp. 124–133) in support of his claim that online exchanges in virtual environments offer particular scope for the development of learner autonomy.

Fuchs, Hauck and Müller-Hartmann (2012), recounting the use of an online exchange for the purpose of teacher development, seek to explore the
relationship between multimodal competence and learner autonomy in an OIE. They define ‘learner autonomy,’ following Palfreyman (2006) as ‘the informed use of a range of interacting resources in context’ (p. 82). The online exchange they report on was sizeable and complex, bringing together 179 trainee teachers and foreign language learners from the GB, the United States, Poland, and Germany in two project cycles. Participants were asked to evaluate educational websites, identify appropriate online tools and design tasks to develop ‘multiliteracy,’ which the authors equate with learner autonomy (p. 82). One ‘cross-institutional group’ (of four people) from each project cycle is subjected to closer scrutiny. In group discussions, participants express their awareness of the scope learners will have in working with websites ‘for controlling the pace and the direction’ of their learning, for being ‘autonomous in choosing and checking content’ and for choosing whether to ‘work on their own or in pairs’ (p. 90). They also see Web 2.0 tools such as wikis as ‘democratic’ spaces for ‘collaborative work,’ where ‘the teacher needs to give it over fully—not have control’ (p. 93). However, whereas participants’ discussions express awareness of the potential of the web to support learner autonomy, they do not demonstrate its actual development.

Though strong arguments are made by Schwienhorst and—to a lesser extent—Fuchs, Hauck and Müller-Hartmann, for the potential of online environments for the development of learner autonomy, evidence of such development remains in short supply. Kötter (2002) does not make autonomy the focus of his research but makes assumptions about it. Kaur, Singh and Amin Embi (2007) report on failure: They conclude that their students did not feel that they were capable of managing their own learning and that they were not particularly reflective (p.108). Fuchs, Hauck and Müller-Hartmann (2012) suggest only the potential of the web for learners to develop and exercise autonomy. They use a highly circumscribed definition of autonomy and analyse only a small sample of evidence. Éneau and Develotte (2012) collect the reflections of their online learners on the nature of autonomy rather than evidence of its actual occurrence. However, Toyoda (2001) and Schwienhorst (2008) do both offer evidence that learners demonstrate autonomy in the process of (and as a result of) online exchanges, whether this is simply in the form of successful task completion (as in Toyoda’s case) or by means of specified behaviours (as identified by Schwienhorst).

CONCLUSION

The purpose of this chapter was to present a systematic review of empirical research findings related to the development of aspects of language learning in university class-to-class telecollaborative initiatives. The study initially identified 54 publications for the review and then studied approximately 30 of these as the basis for an in-depth discussion of findings.

In general, the systematic review reveals a steady growth of research into OIE. It also betrays the predominance of studies based on interaction between
‘Western’ classrooms based in North America and Europe. The field undoubtedly would benefit from more research into exchanges between the West and the Arab world or Asian countries. A great deal also would be gained by increased research into synchronous, video-based interaction between students, especially as the growth in availability of desktop videoconferencing tools such as Skype mean that they are increasingly likely to become one of the default platforms for future online exchanges.

The research methodologies and paradigms used in the studies we have reviewed vary to such an extent that it is difficult to reach entirely definitive conclusions or always to trace specific causalities. Nonetheless, in our view, positive evidence exists in the literature to suggest that telecollaborative exchanges support second language development, particularly when tasks are carefully designed to encourage focus on form and when online exchange is combined with offline reflection and study. The literature also contains evidence, in the form of corpus data, that online exchanges can contribute to intercultural learning, as measured by established models of ICC. There is also an initial indication—which requires replication—that immersive environments may act as ‘third spaces’ for a technologically mediated variant of intercultural learning. The role of online exchange in generating gains in learner autonomy has received less attention. This is in any case a topic that is dogged by definitional disparities and disputes about causation. In spite of this, a small number of authors have produced evidence that telecollaborative exchanges can foster the development of learner autonomy and that immersive environments may offer particularly favourable conditions for this.

As always, the effectiveness of telecollaboration will depend on a host of factors both inherent and contextual (task design, student motivation, access to technology etc.), but we trust that the many research findings which have been reported in this study will serve as launch pads for further studies which will seek to confirm, correct or expand our current state of knowledge.

REFERENCES

(Includes works cited in this chapter but not listed in the Thematic Map)


