EMERGING TECHNOLOGIES



Building the porous classroom: An expanded model for blended language learning

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Introduction

If ever there was an appropriate time to reassess models of instructional delivery for language learning, that time is now. Our changed contexts of teaching and learning provide a golden opportunity to explore new and revised approaches (Egbert, 2020; Oskoz & Smith, 2020). As we all know, a series of events and developments in 2020 have profoundly disrupted the normal course of everyday life. The coronavirus pandemic has led to a public health crisis, countless grieving families, and to a social order and private lives turned upside down. Many have lost their livelihoods, as businesses and governments struggle to cope with radically altered economies. The pandemic has not affected everyone uniformly, exposing sharp socioeconomic differences in access to health services/childcare and in working conditions/employment opportunities. Added to that are developments in the US, with repercussions worldwide, which have exposed in dramatic fashion the unequal social and political status of black and brown populations. These developments have resulted in upheavals in education. Teachers at all levels have suddenly found themselves thrust into teaching online. Colleagues with no past interest or experience in integrating technology meaningfully into their classes have been tasked with redesigning their courses for synchronous or asynchronous remote delivery, many with no idea what those terms mean and no clue how to go about that transformation. At the same time, students and instructors are citizens, living in the real world, and hardly able to shut off from the classroom (nor should they) what is happening in homes/hospitals and on the streets.

It looks increasingly likely that the widespread switch to distance learning is not a one-time occurrence but rather the new normal, especially in higher education. In the US, the rising cost of a university degree and the declining financial support from state governments have, even before the pandemic, led to severe cost cutting, resulting in program elimination, fewer full-time faculty, and increased interest in online courses. Distance learning was already being embraced, not out of pedagogical considerations, but in the belief that it can reduce instructional costs (Anderson, 2018). Now that universities have been forced into the current situation of offering a substantial number, if not all, courses online, that shift will inevitably continue, with different mixes of online and face-to-face instruction at different kinds of institutions. Once administrators, instructors, students, and especially parents, have experienced the convenience, the reduced costs of housing/commuting, and the reality that online instruction can be effective, that model will remain, regardless of public health developments.

For second language educators, there are obvious issues at the micro level of implementation of remote instructional delivery that need to be considered. In synchronous mode, for example, how do we best configure Zoom breakout rooms for small group work? In asynchronous mode, how can we effectively provide practice in speaking? There are many more practical and pedagogical issues to explore, including which learning materials are best suited to online learning. At the same time, we need to consider factors at the meso and macro levels as well. Are totally online courses viable at all levels of proficiency? To what extent and in which contexts is it important to incorporate face-to-face meetings? If so, what is the right balance? Beyond questions of the approaches and mechanisms best suited for optimal language learning, there are social concerns we need to incorporate into language instruction, however it is delivered. While

recent events have brought into sharp relief issues of equity and social justice, those concerns have already been present among researchers in applied linguistics and Second Language Acquisition (SLA; Blume, 2019; Ortega, 2017, 2019; Randolph & Johnson, 2017; Reagan & Osborn, 2020). That is true as well for research in Computer-Assisted Language Learning (CALL; Anwaruddin, 2019; Gleason & Suvorov, 2019; Helm, 2015a). There are of course practical and pedagogical challenges. Where do I find a textbook with corresponding up-to-date content? How do I incorporate social issues in a beginning level course, when students are struggling just to put together coherent sentences? No pat solutions will be offered here, but I will outline what I see as fruitful directions towards an instructional model that is primarily online, socially inclusive, and invites students to become engaged global citizens. This aligns with Levine's "human ecological" approach to language pedagogy in which he sees "implementable change at the micro level as a means of ultimately affecting change at the meso and macro levels of context" (Levine, 2020 p. 45). No model of language learning will be universal in its applicability, but I believe we do have an opportunity now to leverage new widespread experiences with online learning along with ongoing social concerns and activism to create the basis for a learning environment that holds the promise of being responsible and transformative at the individual and societal levels.

Blended Language Learning

I am putting forth as a metaphor for the proposed model an image/concept that is not new, but which I believe holds relevance for us today, namely the "porous classroom." The term was coined by Breen (1999), evoking an open learning environment: "The classroom walls become its windows" (p. 55). Rather than being a space isolated from the outside, Breen envisioned a classroom dynamic in which learners interact with both the local community and the wider world. Larsen-Freeman (2018) took up the concept: "Boundaries between the classroom, the school, the society, and the world are seen to be permeable" (p. 64). On the one hand, that translates into the incorporation of social and global concerns in teaching and learning. On the other, it can mean reaching out to local and remote communities and cultures to enrich learning. That might involve leveraging the linguistic and cultural resources of nearby ethnic communities or interest groups (heritage clubs, for example) as resources (see Randolph & Johnson, 2017). Place-based apps are another option. The mobile game-based app Mentira draws on a local Latinx neighborhood to provide real-world exposure to Spanish and to demonstrate the importance of pragmatic language use in interpersonal interactions (Holden & Sykes, 2011). An approach in use for some time is for students to engage in service learning, in which they have the opportunity not only to learn but to engage with underserved communities (Baker, 2018; Rauschert & Byram, 2018). My VCU colleague in Spanish, Anita Nadal, has been working in that direction for some time, most recently arranging for students to volunteer at a local elementary school, helping immigrant students with their English as well as with social pressures and acculturation challenges (McNeill, 2019). At the same time, the college students (many of whom are Latinx themselves) serve as aspirational role models. Nguyen and Zeichner (2019) found that in training Vietnamese student teachers, the process of incorporating field trips to villages with underserved populations as part of their curriculum led to a change of perceptions of language teaching, away from the idea that it represented simply a "transfer of knowledge" towards a recognition that socio-economic issues should play a role as well. Another approach could be to expand the notion of "linguistic landscapes" (Gorter, 2006) to include not only public multilingualism in city signs and other written media (Chern & Dooley, 2014) but also an examination of the living situation of different communities.

While opportunities for in-person engagement with other linguistic and cultural communities, including study abroad, may continue to be constrained, at least in the near future, there remain more avenues than ever online to make connections. Of course, language instructors have used online resources—artifacts, communities, services—for access to authentic linguistic/cultural materials and target language speakers since the early Internet days. As more resources have become available in more languages, they have increasingly been incorporated, if not quite "normalized" (Bax, 2003), into instructed SLA, from supplementing face-to-face classes to functioning as core materials in online courses. Engaging with L2 materials and speakers online supplies learners with a variety of voices, registers, and informal speech

patterns which can richly supplement the traditional standard language taught in classrooms and in textbooks (Thorne et al., 2009). Engaging with target language speakers asynchronously through participation in L2 or multilingual interest groups (fan sites, gaming communities, Reddit forums, etc.) or synchronously via virtual exchange or apps like WeChat provides opportunities through real-life exchanges for the development of interactional skills and pragmatic language knowledge. In recent years, virtual exchange or telecollaboration has become widely used, offering as it does, direct linguistic and cultural contact (Godwin-Jones, 2019c; O'Dowd, 2019). That includes rich opportunities for engagement with current social, economic, or political issues, as seen through the Soliya initiative (bringing together Westerners and inhabitants of the Middle East; Helm, 2016) or the Erasmus + Virtual Exchange Program, a "pre-mobility" program which is designed to develop cross-cultural understanding as preparation for students engaging in study abroad (Batardière et al., 2019). A recent program from that EU flagship project, "Newcomers and Nationalism: Exploring the Challenges of Belonging in Europe," "invites refugee and non-refugee students from all over Europe and the Southern Mediterranean" (Sharing Perspectives Foundation, 2018).

L2 users/learners can, of course, take advantage of online resources and digital tool/services independent of formal instruction. Indeed, recent studies have pointed to the language gains made by recreational users of L2 media, largely disconnected from educational settings, and intent not on language learning but on socialization and entertainment (Sockett, 2014; Sundqvist & Sylvén, 2016). In fact, there has been evidence of improved progress of "self-directed fully autonomous" learners over those in language classrooms (Cole & Vanderplank, 2016). It should be noted that most studies have focused on English learners for whom abundant online resources are available, including popular options such as pop songs (along with lyrics) and English language television series and movies (with subtitles). Resources for other languages vary (Chik & Ho, 2017). A further caveat of the studies on informal language learning is that they deal with learners beyond the novice level. Also, although some studies show improvement in productive skills through online L2 media consumption (Kusyk, 2017; Scholz & Schulze, 2017), most focus on the development of receptive skills and vocabulary development. On the other hand, engagement in activities such as fanfiction or discussions on affinity sites (sports, gaming, etc.) offer affordances for both reading and writing (Black, 2006; Sauro, 2017). That holds true for the use of social media as well (Anwaruddin, 2019).

A consensus is building in SLA research that an optimal language learning scenario involves students taking advantage of the myriad online resources available for implicit learning, as well as profiting from explicit instruction, especially at the early stages of SLA (see Andringa & Rebuschat, 2015; Ellis, 2015; Lee, 2016; Little & Thorne, 2017; Ortega, 2017). That targeted instruction can, of course, be done-and is being done increasingly—in a completely online environment. In many instances, distance learning may be, in fact, a necessity. If the option is available for some degree of in-person teaching, that offers benefits worth considering (as health concerns allow). In fact, there has been considerable interest and research done in recent years on the option of combining online and in-person instruction, usually labeled blended or hybrid learning. Some use the term flipped classroom, however that traditionally is used to point to the process of recording lectures to be viewed at home (Evseeva & Solozhenko, 2015). There have been, in recent years, a number of review articles and meta-analyses of blended learning (BL) projects and research findings targeting SLA (Anderson, 2018; Bernard et al., 2014; Grgurovic, 2017; Mahmud, 2018; McCarthy, 2016). By and large, these studies indicate that BL offers roughly the equivalent learning outcomes of face-to-face instruction. However, as Anderson (2018) cautions, those outcomes are not always based on reliable, objective assessments. Furthermore, implementation details are scant, in terms of which technology tools/services are used and how they were integrated (Anderson, 2018).

The BL model is typically understood to be a format in which between 20% and 80% of the coursework is done online. The format is intended to allow for flexibility in terms of the mix of online and face-to-face components, offering both the advantages of an instructor-led environment—the comforting physical presence of a caring, mentoring, immediately accessible human being—and of the digital world— unlimited access to target language resources and communities (Lee, 2016). In this way, one hopes, it is possible to

combine the best of both formats, the explicit, structured learning associated with traditional in-person instruction and the implicit, open-ended environment of online learning. Of course, a teaching presence is eminently possible in an all-online environment, depending on how a course is set up and run. However, the digital projection of the teaching voice, even through videoconferencing, is mediated and different in significant ways from a classroom presence (see Kern, 2014). Anyone who has taught in a virtual classroom using Zoom or comparable videoconferencing software is likely to have experienced on the one hand the extraordinary capabilities such tools offer today, integrating many sharing features, allowing for lively, engaged interactions and substantial learning. Furthermore, the informal setting, complete with the option of all-day pajamas, can be inviting. On the other hand, interactions are constrained given the limited nonverbal communication clues (facial expressions and body language indicating understanding or not, boredom, or a willingness to participate), a potentially uneven visual representation of participants (awkward camera angles, bad lighting, bizarre backgrounds, video feed turned off), possible audio glitches (echoing, muting/unmuting confusion, low volume) and issues with the physical surroundings of the participants (interruptions, background noise, spotty screen presence due to family/work obligations). Of course, in a classroom too there can be practical issues with the physical space (comfort, light, technology glitches) and problems of attention span (distractions, boredom), as well as the requirement of physical displacement, with the concomitant issues of transportation, parking, childcare, etc. But in a physical space there are richer opportunities for direct, unfiltered peer to peer and instructor to learner socialization, a crucial component of the learning process (Marcum & Kim, 2020).

Physical separation may make the mediating and mentoring role of the teacher more difficult. As Marcum and Kim (2020) point out, "transactional distance" (Moore, 1993) is an inherent danger in online learning due to the psychological and communication gaps created, making it more difficult for students and teachers to develop personal relationships. Establishing a trusting relationship in online communal spaces is of particular importance if course content includes topics beyond tourist-level views of the target culture, venturing into potentially emotionally fraught issues of personal identity/privilege, social justice and civic action. One approach, used in multilateral virtual exchange, as in the Soliya project (Helm, 2016), is to use mediators, who are able to facilitate dialogs linguistically through repetition and rewording of comments or questions, contextually by soliciting participation or providing historical/factual information, and emotionally by encouraging participants and easing tensions. The degree to which mediation is helpful or necessary depends on context, for instance, the number of students, their homogeneity, and the goals and modalities of instruction. Successful mediation, as demonstrated by the Soliya project, can occur online, although the nature of human mediation is likely enhanced by physical presence (Aspden & Helm, 2004; De la Varre et al., 2011).

Another mediating role played by teachers is to encourage and facilitate the use of informal language learning resources. That applies equally to face-to-face and to online courses. Depending on course content and goals, online resources can be integrated in myriad ways. Thorne and Reinhardt (2008) advocate the use of "bridging activities" to bring online L2 experiences into instructed environments. This involves advanced students exploring online artifacts that become objects of study in the classroom setting, through "the use of a teacher-mediated language awareness framework, contributions from participating students who search for and bring in texts that are relevant to their immediate or projected future communicative interests" (p. 562). The texts chosen are subjected to contrastive, corpus-informed, and discourse analyses. The language patterns uncovered in this way supplement the prescriptive presentation of grammar and vocabulary normally found in textbooks. The motivational benefit of having students choose resources of personal or professional interest is a key component as well of the curations project described in Mathieu et al. (2019) in which intermediate-level students find and describe online resources in the L2. A selection of resulting resources is developed into learning modules, with the intent of creating a portfolio of content, varying in content, mode, and scope. In both models-bridging activities and curations-instructors provide guidance, coordination, and language assistance. Little and Thorne (2017) describe this as a process of "structured unpredictability," with the instructor providing structure and guidance, and students discovering on their own online resources for learning, helping to develop their skills as autonomous

learners. Sydorenko et al. (2019) promote the concept of "serendipitous learning", the idea being that language and learning can happen anywhere and everywhere, so that learners (and instructors) should be alert to unexpected encounters and experiences of potential pedagogical usefulness. The teacher's mentoring role is particularly important at lower levels of proficiency (Nielson 2011; Trinder, 2016). In the curations project, students were supplied with recommended starting points as well as tips in the use of L2 search engines and media. Similarly, in the Russian Language Flagship program (Garza, 2016), students were given training in Russian language computer literacy and in the use of online sites popular with Russian native speakers.

Optimizing Learning Materials

In a recent overview of the use of technology in language learning in the US, Lomicka and Lord (2019), found in their survey of language programs that 55% of language classes reported using a BL format. That survey, along with Anderson (2018), found that BL was implemented in similar ways across the US, through the use of a Learning Management System (LMS; e.g., Canvas or Moodle) as a delivery mechanism and publisher-supplied online textbooks and electronic workbooks as content (examples are Pearson's MyLabLanguages or Vista's Supersites). Studies have shown some ambivalence on the part of language instructors in switching to partially or totally online courses, with concerns expressed over the pedagogical effectiveness of technology, lack of confidence in its use, the possible loss of control over student learning, and time constraints (see Anderson, 2018; Lomicka & Lord, 2019; Pomerantz & Brooks, 2017). Student satisfaction levels are reported in those studies to vary as well. Lomicka and Lord (2019) found widespread preference (both by students and instructors) for face-to-face language classes.

One of the primary drivers behind the dissatisfaction with BL, as uncovered by Anderson (2018) and Lomicka and Lord (2019), was the use of publisher websites. These have become adopted widely, at least in the US, where they are heavily marketed. They offer convenience and consistency, with each unit typically following the same layout and components. Combining textbook and workbook, they are designed to obviate the need for instructors to create their own content or learning exercises. For grammar and vocabulary exercises, a traditional present, practice, produce model is used, with a mix of self-correcting and instructor-marked assignments (Anderson, 2018). Publisher websites typically have some open-ended exercises, but rely principally on mechanical, form-focused practice, for which there are machine-gradable right or wrong responses, reflecting a behavioristic view of language learning. They provide few opportunities for peer-to-peer interactions, collaborative learning, or engaging in real-world communication in the L2. The effectiveness of the learning content varies, but production values are quite high in terms of presentation, graphics, and layout. Publisher sites are marketed as all-in-one packages, with the implication that language teachers will not need to find their own learning sources external to the site. On the other hand, some activities may involve students going outside the packaged website, conducting webquests or consulting particular L2 sites/media.

Views of publisher sites collected in the surveys conducted by Lomicka and Lord (2019) point to the high cost of the materials and to frequent technology glitches. Anderson (2018) reported as well that "students tended to complain that the activities were isolated and repetitive" (p. 82). In use with my own students, a problem in self-corrected exercises especially those requiring typed input, was the fact that the exact wording in a response was needed, rather than the system parsing the input for the presence of that item. Responses which included, for example, a period at the end of a sentence were marked incorrect. Anderson (2018) points to an additional issue in the use of publisher materials, namely that they box instructors in, in terms of both content and sequencing:

[A] problem with the use of prepackaged materials is that they may easily end up determining, rather than supporting, the course curriculum. Instructors are tasked with teaching what is in the textbook in a precise order; otherwise, the online components would not match up with the course. Prior to textbook website packages, textbooks were more flexible; even though each subsequent section might have built on the previous ones, there were no automatically graded online activities

that presupposed knowledge of all of the vocabulary and grammar from earlier sections (p. 83).

One practical issue with publisher sites is the inconvenience for both students and faculty of having a gradebook on both the publisher site and on the university's LMS. This is surprising, given the availability of registering a set of resources external to the LMS (in this case the publisher site) as an LTI (Learning Tools Interoperability) resource, thus making it possible for graded items to be automatically recorded in the LMS gradebook (see Godwin-Jones, 2012).

A larger issue with the use of both an LMS and publisher sites is their status as closed systems. The use of these systems implies for both students and teachers that these resources are what is appropriate and sufficient for language learning. Unfortunately, the uniformity and one-size-fits-all approach is not likely to inspire student investment in learning, while the lack of access to either the LMS course or publisher site after the end of the semester reinforces the idea that language learning is not a lifelong endeavor, but an academic exercise, with no need for any resources to maintain language proficiency. Given the changed health and social conditions in which instructed language learning is taking place today, it is more important than ever to help our students become effective autonomous learners. That entails in today's world learners gaining knowledge of and experience with a variety of options for language learning, including mobile apps, L2/multilingual social media, video streaming options, online affinity groups, and other opportunities for informal language learning such as gaming (Godwin-Jones, 2019b).

Prepackaged, commercial language learning materials by and large do not provide the flexibility to accommodate local contexts/needs or student choice/agency. It is certainly possible to supplement a publisher website with locally developed resources as suggested by Anderson (2018):

Instructors can layer other activities on top of the textbook package to encourage students to work thoughtfully with course material and achieve more than can be measured in self-grading activities. These additional activities, which often stimulate a greater quantity and more complex quality of language production than the prepackaged ones do, can include writing and speaking assignments and even synchronous or asynchronous interaction with classmates or target language speakers (p. 86).

Given the high cost of those materials and their extensive volume, that might strike many students and instructors as unnecessary. Yet as online instruction increasingly plays a central role in language learning, it becomes more important than ever to choose wisely the learning materials used. It seems unlikely that most language programs will have the necessary resources in terms of faculty time/expertise to develop from scratch their own learning materials (Towey et al., 2018). In addition, there may be curricular or problematic constraints that inhibit programs from moving in that direction. In a time of dwindling financial support for higher education (at least in the US)—and for the liberal arts and foreign languages in particular —there are not likely to be opportunities for funds to develop materials or to pay for assistance from graduate students or others in many institutions. Yet, if we want the best educational experience for our students, it is worthwhile for programs, or for individual faculty members, to investigate options for adopting existing open educational resources (OER), or in some cases to develop their own (see Beaven, 2013; Comas-Quinn, & Fitzgerald, 2013) . I would argue that BL done right necessitates looking beyond off-the-shelf approaches to optimize core learning content.

In fact, depending on the target language, there are likely to be freely available online resources that can be adopted for local use (Dixon & Hondo, 2014; Pérez-Paredes et al., 2018). COERLL (Center for OER and Language Learning) in the US, for example, and Open Learn from the Open University (GB) are good starting points. Resources range from individual modules to full-fledged courses (Blyth, 2014). Collections of OER are available as well from sites such as Merlot or OER Commons. Godwin-Jones (2018c) provides an example of combining existing OER resources with locally created modules. Given the variety of academic majors represented in this intermediate-level course, it was important in terms of student interest and learning usefulness to have L2 content from different fields (art, engineering, history, economics, etc.). Additionally, students were asked to find and recommend L2 content online they found to be personally

and professionally compelling, which was then integrated into the course in the manner of the bridging activities described above. An advantage of such an approach is the ability to use current rather than outdated content, while providing students with meta-linguistic knowledge of language learning related to their own interests and academic backgrounds (see also Lázár, 2016). Locally developed OER can align with local curricular or programmatic needs. Goertler (2015) describes the creation of learning modules in support of the university's study abroad programs by having students interact with content based on the locations of their programs in Germany. Adding such modules allows for students to prepare both culturally and linguistically (an introduction to the local dialect, for example) for the experience abroad.

In using OER and self-developed materials, it is possible to build a learning model that is flexible and aligns with current best practices in SLA. One option, for example, is to render instruction, especially in grammar and vocabulary, more active by using an inductive approach. That might involve, as discussed in Godwin-Jones (2018c) selecting examples from a target language corpus and having students uncover patterns of usage. Integrating data-informed learning (Godwin-Jones, 2017) helps to break the false dichotomy of grammar and lexis, by demonstrating the proliferation of set language chunks. This aligns with current usage-based models of language (Ellis, 2017). Corpus-based learning relies on real-world language usage, emphasizing patterns over rules. It also demonstrates the crucial role of contextual usage, how individual elements constituting constructions reflect convention and frequency patterns, rather than being based on semantics or syntactic rules (Ellis, 2017). Words with equivalent meanings are not substitutable in fixed expressions, a key component of real language use and often a lesson in pragmatics difficult to get across to learners (Sykes & González-Lloret, 2020).

Pragmatic language use is best learned through actual communicative practice, one of the crucial elements of any BL implementation. This is another area where publisher websites tend to fall short. In his survey of BL programs, Anderson reported:

The low proportion of instructors and administrators reporting online interactivity with target language speakers or with classmates—or with anything other than with the computer—suggests that many blended classes are not taking full advantage of technological affordances for students to communicate with others in the target language outside of the classroom (p. 88).

Of course, it is possible in a BL environment to dedicate face-to-face meetings to active use of the target language. Beyond that option, adding exchanges with target language speakers beyond the classroom enhances the diversity of speech encountered, as well as providing a real world, non-academic, communicative context. That is the advantage of integrating virtual exchange into BL, or indeed, into any language learning setting. Studies have clearly shown how advantageous it is for the development of strategic and pragmatic competence for students to engage in telecollaborative encounters (Belz & Vyatkina, 2005; Chun, 2011; Lewis & O'Dowd, 2016).

Integrating Social Justice and Intercultural Awareness

The low cost of OER as an alternative to expensive textbooks is an increasingly attractive option at a time when there is growing concern (at least in the US) over the high cost of higher education. Low cost materials are crucial in developing economies and in financially strapped environments. In fact, there have been several studies of late which chronicle the use of OER in these contexts (Antoniou et al., 2016; Pérez-Paredes et al., 2018; Zhang, 2018). One of the important considerations in non-affluent environments is the availability and usability of learning content and activities on mobile devices. This may necessitate dividing up some content into smaller chunks or offering different streaming options for low-bandwidth access. One of the reasons for the wide use of TED talks in English language instruction worldwide is the fact that videos are available in a variety of options, and often accompanied by transcriptions and subtitles in multiple languages (Rasulo, 2015). Rendering learning content accessible in low tech environments is rarely addressed in CALL research, with some exceptions (Kukulska-Hulme, 2009). Inclusive teaching approaches should consider access as well for disabled populations (Navarrete & Luján-Mora, 2015). In a

development environment, that would entail using universal design for maximum accessibility (Steinfeld & Maisel, 2012).

Inclusive instruction for SLA is culturally sensitive and appropriate. An open, porous classroom, whether it be physical or virtual, integrates fair and balanced treatment of all cultures, with particular attention paid to traditionally marginalized populations. This is based on the fundamental understanding of human dignity and respect, "the idea that every human being is of equal and incalculable value, entitled to decent standards of freedom and justice, and that any violation of those standards must be acknowledged, testified to, and fought against" (Ayers, 2010, p. 791). This concern aligns with the call in SLA research for a personcentered approach to language learning (Ortega, 2017, 2019). A concern with social justice is increasingly evident in scholarship in applied linguistics and SLA (Ortega, 2017; Osborn, 2006; Randolph & Johnson, 2017; Reagan, & Osborn, 2020). This has been a particular concern in English language instruction, given the oversized role that language plays as a vehicle for and a barrier against social advancement (Godwin-Jones, 2018b; Hastings & Jacob, 2016). Larger societal issues are being integrated into instructed SLA as well, including climate change (Hauschild, Poltavtchenko, & Stoller, 2012) or gender rights (Pierce, 1995; Shi, 2006). A concern for social equity is evident in the rise of critical CALL (Helm, 2015a), which takes as a premise that the world is "inequitably multilingual and technologized" (Gleason & Suvorov, 2019, p. ii). That translates into consideration in teaching and learning of issues of power and equity. For CALL practitioners and designers of BL environments, that means not treating technology tools and services as neutral, but rather considering their use in the light of factors such as gender, race, and social class (Anwaruddin, 2019; Hellmich, 2019).

To gain an appreciation of the multiple layers at play in BL, it can be helpful to view the process from an ecological perspective and particularly through the lens of complexity theory (see Wang, Han, & Yang, 2015). The "initial conditions" of learners in terms of both personal backgrounds and language learning histories can vary tremendously, a situation which needs to be considered in understanding individual interactions with learning content and modalities (Godwin-Jones, 2018a). Complexity theory allows us to see online and in-person instruction not as separate entities, but as subsystems within a larger language learning environment. Magno e Silva proposes viewing learners and their learning as "language learning systems" (2018, p. 230). Such an ecological approach to language learning takes into consideration a variety of factors:

The language learning system would encompass the learners comprised of their various nested systems (cognitive, biological, affective, etc.), their teachers, the materials, the spaces they move across, and the places for learning that emerge as they interact with and within these spaces. (Murray & Lamb, 2018, p. 258)

Adopting a learning systems perspective can allow teachers to view the classroom as only one mode in a learner's personal learning system. The dynamic interplay between face-to-face and online instruction can lead to results that may be difficult to predict and that vary according to individual trajectories. Complexity theory reminds us to be cautious of facile cause and affect determinations as applied to a system as complex as BL (Anwaruddin, 2019; Godwin-Jones, 2019a). That is all the more the case if our BL model embraces complex societal issues.

Social justice education (Ayers, 2010; Anwaruddin, 2019; Nguyen & Zeichner, 2019) is likely to be for many language teachers a new, potentially controversial area to incorporate into their classes, whether in face-to-face mode or online. Yet many will likely recognize that we live in dramatically different times, with social, economic and political developments which threaten fundamentals of our society—democracy, security, and social fairness. Increasing nationalism and isolationism make it all the more difficult to solve global challenges like pandemics, global warming, or economic inequality which require international communication and cooperation. Essential to that process is an acceptance of cultural difference and the ability for representatives of different cultures to communicate and negotiate with one another. In other words, what is needed is what learning a second language can supply. Of all disciplines, it is language learning that is most amenable to including themes of intercultural communication and cultural diversity

(Levine, 2020; Ortega, 2017). Indeed, language teachers, being concerned with the use of a social tool—language, have always dealt with social practices. Teaching a second language without reference to everyday customs and behaviors of the target language culture would be a quixotic endeavor.

While traditionally "culture" in instructed SLA has often been integrated at a relatively superficial level, focusing on family, food, festivals and facts (Godwin-Jones, 2016), there has been in recent years a greater emphasis placed on gaining a deeper understanding of the target culture, to gain "the ability to put yourself into others' shoes, see the world the way they see it, and give it the meaning they give it based on shared human experience" (Kramsch & Hua, 2016, p. 42). Important in that process is for students to see both similarities among cultures (especially evident in global youth culture) but also recognize essential difference, deriving from separate historical developments, resulting in unique perspectives on society and humankind's place in the cosmos (Kramsch & Zhu, 2020). Having students engage in "diversity surfing" (Kramsch, 2014, p. 98), perfunctory, pre-programmed interactions with cultural others at a surface level, can result in distorted and superficial understandings, as well as providing no insight into critical issues or for the need for civic concern and action.

A central goal in the cultural dimension of SLA is as to leverage insights into the foreign Other as a means to develop greater intercultural understanding, moving beyond the dichotomy of home and foreign cultures, to a broader sense of global citizenship (Byram et al., 2017; Larsen-Freeman 2018). This has led to a greater emphasis in second language instruction on the explicit integration of intercultural competence (Lewis, 2017; Çiftçi & Savaş, 2018), in particular Byram's concept of "critical cultural awareness" (2011). A challenge to language teachers who adopt this perspective is assessment. While standard assessment instruments are available for both language proficiency and intercultural awareness, quantitative analyses can be used and may align better with the content and goals of inclusive, interculturally oriented SLA (see Godwin-Jones, 2019c). That can take different forms, such as learning diaries, discussion forms, blog posts, Facebook groups, or portfolios (Helm, 2015b). Similarly, in terms of linguistic and pragmatic learning, students can be asked to respond to potential scenarios or engage in simulations (Bardovi-Harlig, 2013; Sykes, & Dubreil, 2019). Appraisal theory (Schumann, 2001) has been found to be a useful way to measure change over time, such as perspective shifts that signal a decrease in the use of negative judgments or a "gradual softening of the way in which one positions herself with respect to the 'absolute' truth of utterances" (Belz, 2007, p. 156). Oskoz and Pérez-Broncano (2016) use appraisal theory as a useful framework for assessing both L2 writing and intercultural competence (see also Oskoz & Gimeno-Sanz, 2020).

The BL format offers an ideal vehicle for combining language learning and critical cultural awareness. Integrating virtual exchange as a fundamental component of a course offers rich opportunities for both pragmatic language use and for insights into different cultural orientations. Online encounters are of course not automatically harmonious or enriching (see O'Dowd et al., 2020). Reported experiences in computermediated communication and in virtual exchanges are ripe with potential areas of conflict, arising from linguistic roadblocks, uneven power distribution (native speaker privilege) or different views on social and political issues (see Helm, 2015b; Kirschner, 2015). Yet conflicts which might arise in exchanges can also be "rich points" (Agar, 1994), pointing to essential differences between cultures, that would not necessarily arise if conversations are limited to "safe" topics (Belz, 2007). Levine (2020) discusses the process of "conflict transformation" (Lederach, 2003), viewing conflict in L2 exchanges not as a threat or dilemma, but as an opportunity, that "can provide opportunities to grow and to increase understanding of ourselves, of others, and of our social structures; conflict helps us stop, assess, and take notice, and through conflict we respond to situations, innovate, and change" (p. 86). Similarly, a recent study of virtual exchange by Oskoz and Gimeno-Sanz (2020) "supports the premise of including controversial topics which, when guided by external readings and the mediation of the instructor, deliberatively address conflicting worldviews" (p. 203). As that citation indicates, one of the important dynamics in virtual exchange is the mediating role of the instructor. That can be especially important in contexts in which guidance is crucial in helping to interpret unexpected or uncomfortable exchanges. There is not only the possibility of postevent discussions but as well pre-contact orientations in areas such as current political or social developments. Also helpful in preparing participants is developing an awareness of pragmatic and strategic

aspects of communication in the L2, i.e., conventions for starting/closing conversations, for interrupting/changing topics, or for using appropriate modes of address/formality. Anwaruddin (2019) describes this kind of preparatory work as "contingent scaffolding", as a way to prepare students for encounters with both familiar individuals and strangers. He advocates a "pedagogy of serendipity", encouraging students to leave their comfort zones and encounter individuals and communities significantly different from their own (see also Kramsch & Zhu, 2020).

In addition to monitoring and mediating, language teachers play an important modeling role. Inviting students to report on their experiences with extramural language learning, for example, can legitimize experiences, demonstrating that learning is not confined to the classroom and that student initiative in finding and using resources plays a crucial role in the learning process. That could entail a teacher initiating discussion of mobile apps or social media students may not have considered as appropriate or legitimate language learning resources (Rosell-Aguilar, 2017). Enabling controlled use of mobile devices in the classroom signals to learners that language learning is not divorced from their everyday reality, which for many young people relies heavily on their phones (Godwin-Jones, 2018d). Blume (2019) discusses how teachers' attitudes towards gaming can be a crucial factor in whether students consider as an option the use of games in language learning (or in other academic contexts). The author explains how game-based language learning offers benefits through "developing linguistic capital in terms of motivation, language acquisition via social-cultural processes and identity construction" (p. 20). At the same time, she cautions that mediated access is important for reasons of equity:

Without guidance by educators as informed practitioners, a lack of gameplaying literacy creates a new kind of digital divide that has the potential to deepen socioeconomic disparities by limiting the acquisition of legitimized linguistic capital and devaluing learners' extramurally acquired linguistic capital (p. 20).

The recreational enjoyment of gameplay, as well as the non-standard, colloquial language used in interactions in and around games, are likely to result in students not considering their use for language learning and thus a teacher's intervention in this instance can be crucial in building a bridge between the academic and recreational worlds of the student.

Conclusion: Towards Transformative Practice

At the crossroads where we find ourselves today, I am arguing here that we can adopt the metaphor of the porous classroom as a vision for inclusive, engaged, and transformative language learning. The blended learning model in many cases will best serve that goal. In a mediated process, students interact with the L2 through artifacts, peer learners, and local/remote target language speakers in order to progress linguistically and to develop intercultural awareness and interactional skills. In real-world encounters with others in the L2, students gain insight into how culture shapes both language and values/behaviors. Through selfreflection and teacher guidance, students learn about their own cultural orientation and gain an understanding and appreciation of cultural difference (Kramsch & Zhu, 2020). This can lead students to frame language learning in the context of their present and future lives, helping students to use language "to accomplish the ways of 'being-in-the-world' ... that they desire" (Kibler & Valdes, 2016, p. 111). That translates into moving beyond SLA as a linguistic tool/skill to language as a way to engage with the world: "If FL [foreign language] education is to take learners seriously as legitimate users of the language, scholars and instructors must consider the different ways in which their students could imagine engaging with the world beyond the context of classroom" (Warner & Dupuy, 2018, p. 124). That involves, for language teachers, recognizing that course content (texts, discourses, media) always has an ethical dimension (Ortega, 2005; Warner & Dupuy, 2018).

From that perspective of inclusiveness, it can be helpful for course content or interactions to include vulnerable groups, such as "marginalized multilinguals" (Ortega, 2017, p. 293) or refugees (Duff, 2014). There are a number of studies of that nature, dealing with disenfranchised populations and language

learning (Juffermans et al., 2014; Polat & Kim, 2014; Smith et al., 2017; Vandommele et al., 2017). A similar perspective is evident in recent studies "decolonizing foreign language education," the title of an edited collection (Macedo, 2019). Incorporating such topics in the classroom can lead to an awareness of the connection between language and society, as well as functioning as a validation of multilingualism (Kramsch, 2014; Ortega, 2017):

That means taking the difficult step of refraining from putting the native speaker forward as a model and goal of language instruction. That entails moving from treating L2 learners as "double monolinguals" to instead leading them to be "emergent multilinguals" (Ortega, 2017, p. 304). Validating multilingualism is easier to do through online resources, hence the importance of recognizing and encouraging extramural language learning (Godwin-Jones, 2018a, p. 21).

A transformative experience through language learning can occur in many different ways, in educational settings or autonomously. However, the BL model facilitates that process:

The blended learning environment is deemed more effective than the traditional classrooms in facilitating transformative learning. This is realized by the employment of online learning platforms that provide the archives of past discussions, asynchronous interactions, hence the importance of sufficient time devoted to thinking and responding to others' arguments, and the presence of instructors as discussion facilitators (Cocquyt et al., 2019, pp.4–5).

Transformative learning as conceived by Mezirow (1991) describes a process in which learners reevaluate their worldviews and gain a new perspective as a result of experiences and encounters (Randolph & Johnson, 2017). This process is aided by critical examination, which can develop from intercultural contact with differently socialized individuals, exposing contrasting social frames of reference. Randolph and Johnson (2017) describe this as a process of "perspective transformation":

Perspective transformation, the hallmark process underlying transformative learning, is the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive our world, making possible a more inclusive perspective and allowing the individual to act on new understandings (p. 107).

The linguistic negotiation and adaptation to other speakers that occurs when L2 users interact are part of that transformative process, finding common ground in the face of linguistic and cultural difference (Douglas Fir Group, 2016). Studies in English in lingua franca exchanges have shown how that process unfolds in dialogs in person and online (see Godwin-Jones, 2020). The spirit of cooperation and solidarity have been identified as hallmarks of lingua franca and contact zone exchanges (Baker & Sangiamchit, 2019; Canagarajah, 2014). That open, flexible, and accommodating attitude can be taken as a central goal of L2 teaching and learning in general, along with the interactional competence to put that mindset into practice.

Solving intractable social problems on a macro level is beyond the scope of individuals, either students or teachers. However, we can model comity and inclusion through our teaching, as well as channel change on a micro level. In his recent monograph, Levine (2020) argues similarly:

I see the potential for many of the world's problems to be worked out at the local level, through individual human encounters, exactly the sorts of encounters one sees in something as mundane as a language class, as well as cumulatively over time in a rippling sort of way to the level of institutions or society as a whole. This is the essence of what I mean throughout this book by the transformative potential of language learning (p. 9).

As many of us struggle to adapt to online teaching and learning, we can be hopeful that language learning has the potential to be not just a tool for communication, but also an avenue towards social cohesion and acceptance of Others.

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