# 1 Introduction: Projects, Pandemics and the Repositioning of Digital Language Learning

Michael Thomas and Kasumi Yamazaki

#### 1 Background

It is difficult to ignore the fact that this volume has been completed during the six months from March to September 2020, a period of unprecedented social and economic flux around the world that has profoundly influenced all levels and aspects of education (Bates, 2020). Across the developed and developing world, the Coronavirus (COVID-19) crisis has amplified inequalities inextricably linked to existing education and health systems and forced policymakers and educators to question inherited models of teaching, learning, literacy and the role of digital technologies and online learning (Jandrić, 2020). While online education has occupied a steadily increasing role and profile over the last two decades, especially since the emergence of Massive Open Online Courses (MOOCs) in 2012, the widescale adoption of web-based instruction within a matter of weeks in March and April, was swift and unforeseen.

As time has passed since the initial move online, it has been acknowledged that the forms or 'emergency remote learning' that have emerged require us to reflect more deeply on appropriate forms of pedagogy, curricula and teacher training for the post-COVID-19 digital age (Cahapay, 2020). And while many teachers have come to grips with online and blended learning for the first time during the last six months, the new 'phygital' environment (a neologism mixing the 'physical' and 'digital') has brought to prominence deep-seated concerns about the potential consequences of an even more dramatic consolidation of this direction of travel: the increasing casualization of teachers, the growing use of analytics and performance indicators, the role of internationalization, the implications of an unpredictable global educational marketplace, and the sustainability of models of growth in education (Macgilchrist, Allert & Bruch, 2020). As Zhao (2020, 1) has pointed out, "The massive damages of COVID-19 may be incalculable. But in the spirit of never wasting a good crisis, COVID-19 represents an opportunity to rethink education". In this vein, when we look back on the pandemic of 2020 from a future vantage point, will educators be able to say that it precipitated a profound rethinking and progressive reorganization of education? Or will it be seen as an event that continued and perhaps even deepened and extended recent trends related to the de-skilling of teachers, resulting in greater casualization, increased uptake of instructivist remote learning and more reliance on digital technologies, sometimes under the guise of disruptive learning, in post-pandemic educational institutions? (Selwyn, Hillman, Eynon, Ferreira, Knox, Macgilchrist & Sancho-Gilet, 2020). These are questions that confront us all as academics, teachers and researchers, particularly in the area of language education and the niche subfield of second language acquisition, computer-assisted language learning (CALL), which is often at the forefront of changes in the rapidly changing local, national and global marketplace for students and new educational technologies.

Pre-dating the pandemic, numerous research studies over the last two decades have explored these key questions from a variety of perspectives (Gray, 2019). Foreign language education has often found itself deeply entangled with these debates because of the rapidly changing macro-policy landscape (O'Regan, Gray & Wallace, 2018). It is no longer the case, if indeed it ever was, that these are simple questions of pedagogy or curricula. Across all disciplines from STEM (science, technology, engineering, and mathematics) to the Arts and Humanities, teaching and learning are increasingly shaped by global as well as local sociopolitical factors as educational institutions respond to their role in the global economy and network society. Technology has been a key driver of these socio-economic changes in the workplace but increasingly also in the field of education and training. The role of education in increasingly wholly or partly privatized systems in which teachers and learners have become consumers has turned learning into a product and challenged the notion that it is concerned merely with humanistic goals (Giroux, 2014). In its place, driven by the culture of the marketplace and increasing student fees, in many educational systems learning has become a commodity, positioned primarily as service industry that prepares students for employment and the world of work (O'Regan & Gray, 2018). In UK higher education, as an example, the government's Teaching Excellence Framework or TEF, evaluates the success of teaching based on statistics related to the employability of graduates six months after the completion of their course of study and no classroom observation of actual teaching practice is included in the review process. The TEF is a symbol of the increasing use of evaluation frameworks, metrics and analytics, borrowed predominantly from the world of business and marketing, that have been imported into the field of education (Block & Gray, 2016).

Since the emergence of neoliberal forms of education in the late 1970s and early 1980s, humanistic disciplines such as foreign language learning have often been caught in the crosshairs of this debate about the use value of the liberal and creative arts versus the sciences or STEM and more directly vocational forms of education. In its defense, advocates have responded to the challenge by identifying the value of language learning in economic or strategic terms, noting its cultural importance for developing transferable skills. Following this line of argument, languages are central to cross-cultural communication and multiculturalism, and important areas of the economy such as the military and intelligence services prioritize less commonly taught languages such as Chinese, Russian and Arabic, as well as the strategic fields of translation and interpreting. From the egalitarian perspective, foreign language learning is also strategically important in dealing with the integration of increasingly large flows of refugees and migrants. In the UK, for example, English as a Second Language (ESL) is worth an estimated £2billion annually to the local and regional economy, a figure that places it above the national fisheries industry by comparison. In line with the growth of instrumental approaches to education over the last four decades, it is perhaps no accident that we have also seen the rise and mainstreaming of digital educational technologies (Torsani, 2016). These technologies have moved from providing individual tools aimed at helping language learners and teachers, often through autonomous and increasingly mobile learning platforms via smartphones and tablets, to giving learners opportunities for social interaction and collaboration through the use of games and immersive environments, thus supporting the social turn in learning theories that we have also seen since the early 1980s (Block, 2003).

It is important, then, to consider the strategic, historical and socio-economic factors shaping foreign language education policy and practice in any particular national context, as they are often overlooked in favor of less overtly ideological concerns in the research literature. The growing turn towards more instrumental forms of language learning at the beginning of the 1980s in the form of task-based language teaching (TBLT), a natural outgrowth of dissatisfaction with communicative forms of language teaching, reflects this functional approach in some respects (González-Lloret & Ortega, 2014; González-Lloret, 2017). In the intervening period, task-based language teaching has led to an extensive and wide-ranging body of research, with research on task types, task sequencing, and the efficacy of the task approach across different levels, in different cultural, proficiency and skills contexts, among many areas of enquiry (Van den Branden, Bygate & Norris, 2009). From the early 2000s, research on TBLT also started to consider the role of digital technologies in overcoming some of its perceived misconceptions and limitations (Thomas & Reinders, 2010). Indeed, research and practice on TBLT has clearly breathed new life into communicative language teaching, giving it a role to play in teaching students the skills they may need in the world outside the classroom and beyond the kind of 'drill and kill' rote learning that characterized the generation before CLT in the shape of grammar translation and audiolingualism (Van den Branden, 2006). While research on TBLT has addressed specific aspects of linguistic concern, the types of tasks

have often been limited and pedagogical in nature and it has rarely been cited as contributing to the wider repositioning of language learning required by the economic critique.

Arising from and related to task-based learning, project-based learning derives from similar origins but has often wider and larger, cross-disciplinary aims and objectives. Projects are naturally longer in duration than individual discrete tasks and crucially, require a diverse range of skills and disciplinary knowledge from students to complete them (Beckett & Slater, 2019). They are typically collaborative and the range of different skillsets underlines the importance of multimodality in terms of datasets, disciplines, and perspectives. Several countries have pioneered approaches to project-based learning under a variety of names and descriptors. In Finland for example, long-renowned for its radical educational ideas, it is called phenomenon-based learning, while elsewhere it draws on theme-based approaches to learning which we might see integrated into learning approaches typical of primary schools. Another name for project-based learning is cross-curricular learning, which reflects the integration of several disciplines to enable learners to solve a common problem or achieve a common goal (Barnes, 2015; Ward-Penny, 2010). While it appears to continue the instrumentalist approach of task-based approaches on a larger scale in terms of the number of participants, the size of the tasks, and the duration of the activities, initiatives that have harnessed project- and crosscurricular approaches also include an emphasis on engaging learners in 'grand challenges' or 'wicked problems' alongside a more recent focus on raising awareness about social justice, environmentalism, sustainability and civic engagement (Macgilchrist, Allert & Bruch, 2020). Indeed, there is a growing body of work on project-based learning of this type that aims to engage learners in online-mediated 'challenge-based learning' addressing specific questions of societal value and significance (Beckett & Slater, 2019).

## 2 Project-Based Language Learning

There are strong similarities and continuities between task-based and project-based language learning, principally in that they both share a common concern with activities or 'real-world' tasks that engage learners in the world beyond the classroom. Like TBLT, advocates have argued that PBLL provides ample opportunities for interaction to enable meaningful second language learning. Moreover, as has been the case with defining the keyword 'task', projectbased approaches have suffered from ambiguity (Ellis, 2009). While the quantity of research on language learning has dramatically increased over the last four decades, English language education industry has expanded dramatically. Less commonly taught foreign languages have seen a decline in the curriculum in many countries and where budgets are tight, these are often the first areas to be targeted for closure in an increasingly marketized and competitive system of higher education. Project-based learning is different in that it aims to appeal to a wider range of disciplines beyond merely language learning. In the context of project-based language learning, the integration of different skills, activities, and tasks with different durations is a key principle. The latter is important, as projects are longer than discrete activities and may be seen as several interconnected tasks. In terms of language learning theory, this extended notion of a project provides more opportunities for input and output as learners move towards a common target. In project-based learning, other skills are developed, including project management and problem-solving, prior to disseminating the solution in a concluding reporting stage. Projects can take place in a mixture of learners' L1 and L2 as well, and an emphasis on collaborative problem-solving can help to integrate many of the processes of interaction central to second language acquisition, such as negotiation of meaning (Beckett & Slater, 2019) The higher order cognitive skills associated with the project approach are central to constructivist learning theories, including creating, evaluating, analyzing, applying, understanding and remembering.

Several varieties of project-based learning have developed, mediated by cultural traditions of learning. In Finland, phenomenon-based learning has developed by interweaving

multiple disciplines across the sciences and arts and humanities, including foreign language education without privileging it (Symeonidis & Schwarz, 2016). In Italian schools, Content and Integrated Language Learning or CLIL has been developed in a similar way, and has become an approach which enables students to study an area using the target language (see Cinganotto, this volume). Using 'hard' CLIL, which is more subject focused and relies less on communication, or 'soft' CLIL which aims to use the target language most if not all of the time, content is also taught.

These cultural variants provide an indication of how project-based learning can require high levels of student engagement and cognitive skills. In opposition to transmission or delivery modes of pedagogy, what in Freire's terminology would be called the 'banking' model, project-based learning is a type of social and experiential learning involving risk and interaction in place of rote and memorized forms of learning (Freire, 2000). Central to the projects are meaning-based tasks that encourage students to combine 'learning by doing' with research skills. Unlike specific tasks that may be required within relatively short timescales, the longer project durations involved suggest that collaborative learning in this context may lead to lower levels of learner anxiety and stress, and higher levels of student engagement and creativity, as students occupy a range of changing positions in a collaborative team and thus develop diverse skillsets.

There are inevitable similarities between project-based approaches and constructivism given the focus on high levels of student engagement, the importance of designing authentic tasks, and the role of collaboration and mutual discovery rather than individual forms of learning, as well as a recognition of multiliteracies including information and communication technology literacy. In online environments, collaboration can also involve language learners or groups of learners in different geographical locations working together, code switching between their L1 and L2 as is the case with telecollaboration or virtual exchange (O'Dowd,

2016). Accumulatively these skills are harnessed to address problem-based forms of learning. The role of the teacher or instructor is often seen as a facilitator in this type of collaborative learning rather than an expert, though s/he may also be called upon not merely to enable learning as a facilitator would, but to question and problematize learning and normalized assumptions as per a 'difficultator' (Bax, 2011).

While task-based learning has attracted a range of criticisms such as its appropriateness for non-western learning cultures, the same applies to projects, which continue the same emphasis on soft skills rather than traditional linguistic form, and it is clear that not all learners will find the collaborative or group-based approach appealing or meaningful (Thomas & Reinders, 2015). Learning cultures may also lead to challenges with the types of leadership often required by learners in projects, as well as their cognitive skills. The same challenges may also apply to teachers who may prefer to maintain close control over their classrooms, as collaborative projects often lead to noisy environments in which instructors are required to play a range of positions and different roles. In addition, meaningful forms of project-based learning may also impact on the type of learning environment required and influence the physical design and layout of classrooms as well as the cultural context and the wider goals of the educational sector within a particular system, especially when it is more outcome or performance and therefore examination focused (Thomas, 2017).

#### **3 Projects and Digital Technologies**

The role of digital technologies has become increasingly prominent in education over the last twenty years, as technologies have moved from being viewed as tools to help individual learning, to networks that facilitate and support social interaction and collaboration. A major spur for these developments was the emergence of Web 2.0 technologies from around the year 2005 onwards, and their emphasis on user-generated content and user agency. There has been a strong emphasis on technology as liberatory, democratic and aligned with the agency within the Web 2.0 paradigm, building on the ability of end-users no longer simply to consume content but also to produce and disseminate it. Indeed, the technologies and applications associated with Web 2.0 reinforce these ideas, such as wikis and blogs, as well as more creative use of media literacy in photo- and video-sharing websites such as YouTube and via social networking such as Twitter and Facebook, as well 3D immersive virtual and game worlds (Yamazaki, 2019). These online communities promote social learning, peer-to-peer learning, and the sharing of expertise, while also empowering individual learners (Thomas & Schneider, 2018).

Research on these collaborative environments suggests that they promote new forms of multimedia literacy, presenting opportunities for multimodal forms of communication in settings that would prove difficult in traditional classrooms. Undertaking projects in these immersive environments can lower risks, both psychological and physical for participants, particularly those with learning difficulties or who are less extrovert (Thomas & Schneider, 2020). The act of making and creating is central to these types of constructivist environments and this helps to produce agency in the language classroom. Such projects draw on students' higher order critical thinking skills and they can participate with others in communicative activities such as role-plays, discussion and other forms of collaborative dialogue and interaction, thus presenting opportunities for target language use.

On the other hand, the use of social media of this kind has also brought significant challenges to educators. Online forms of education promote communication but can also present obstacles to effective communication as a result of the lack of nonverbal cues and abbreviated forms of language use. Discourses promoting the use of digital technologies in education have become pervasive, but technology usage may not suit all learners or may include bias towards particular types of learners. This understanding undermines the notion of 'digital natives' or any attempt to homogenize learners in a generational sense, though more research is still needed on the digital skillsets of language learners in this respect in particular (Thomas, 2011).

While it is clear that there are several challenges presented by the use of digital technologies, there is no denying that it has become increasingly prominent in language learning in the first world and more central to task- and latterly project-based learning. Both task- and project-based learning have turned to technology to plug perceived gaps and weaknesses in their approach (González-Lloret & Ortega, 2014). Digital technologies have been primarily of value in language learning to stimulate motivation and engagement by offering opportunities for communicative interaction, or developing other skills such as intercultural communication or digital literacy. The move from simple tasks to larger projects brings the potential for the extension of broader skillsets, with less structure but more focused on learner agency and L2 identity development and strategies aligned with enquiry, problem-solving and investigation (Savery, 2015).

Research in the field has tended to be perceptions driven and more research utilizing relevant theory is necessary to move the field forwards. Consideration of the effect on learning outcomes is important but an exclusive focus on measurable outcomes would risk reinstating a testing focused agenda which project-based learning was actively established to reconsider. Indeed project-based learning aims to pivot instructed learning towards a more holistic notion of second language learning that engages with a wider range of subject disciplines and multiple skillsets, particularly those not typically represented in classroom learning. Projects involve an emphasis on the unmeasurable and the productive nature of meaningful play. Nevertheless, more research is needed to understand how learners process tasks within a project-based approach, and to examine the structure and sequence of task completion, as well as the roles students adopt as they grapple with complex tasks in a project context. How and which types of learners are capable of problem-solving are important questions to address within the

learner-centered context of projects. Likewise, we need to understand more about the responsibility and role of teachers in facilitating and challenging students, as well as their changing instructor profile at different stages within the process. Related to these are the skills required to manage complex multidisciplinary learning contexts, and how learners and teachers deal with different types of profiles and disciplines in which they will typically not be experts. Project-based teaching places a heavier cognitive load on students as well as teachers, and researchers need to grapple with how to collect data effectively from these complex 'phygital' learning contexts following their verbal and nonverbal interactions as they complete physical tasks over extended periods of time and as they move around the physical and virtual spaces and landscapes. This requires a multimodal approach to data collection involving several approaches and real-time data collection such as video, learning analytics, observation and other forms of screen capture (Zheng, Newgarden & Young, 2012).

In the context of project-based learning and digital technologies, several approaches to the blend of content and communicative skills have emerged, with CLIL being perhaps the most important. In the context of CLIL an immersive approach to language learning is coupled with subject knowledge and expertise (Dalton-Puffer, Nikula & Smit, 2010). CLIL approaches have developed to the extent that they can best be envisaged as a continuum from hard to soft varieties, though the typical approach adopted in a particular context will depend on local factors and a hybrid approach. Within a CLIL project-based approach, students also have opportunities to use both L1 and L2 and there is a desire to effectively integrate a range of other skills and competencies such as intercultural communication. Like other varieties of task- and project-based learning, CLIL also places a heavier cognitive load on teachers and students and training is essential to bolster the specific knowledge and skills required by the approach. Teachers need to consider the importance of materials design and students need to be aware of the extra emphasis placed on cultivating their analytical, predictive and comprehension skills

(Torsani, 2016). Culturally the benefits appear potentially significant, with opportunities that draw on research in virtual exchange to investigate multiculturalism, intercultural awareness and cross-disciplinary approaches to knowledge and skills development. In the research on virtual exchange and language learning, as technologies have improved opportunities for reliable video streaming and online collaboration, we have seen a transition from tasks and projects focused primarily on linguistic outcomes, to those which have a wider social and values-based dimension as well. The latter show significant potential for reconceptualizing foreign language learning using (where appropriate) digital technologies to address problems related to inclusivity, social justice and environmentalism, and other 'wicked problems' and 'grand challenges' of importance to teachers, students and researchers across the humanities and sciences.

### 4 An Overview of the Book

Following this introductory chapter, the rest of the book is divided into three parts. Part I on "Project-based Language Learning and Virtual Exchange" consists of three chapters which each explore telecollaboration from different perspectives. Part II on "Project-based Language Learning and Pedagogical Contexts" contains four chapters, each dealing with a variety of learning environments and languages including French, Italian, English and Japanese. Finally, Part III on "Project-based Language Learning and Social Justice" looks towards the future of project-based approaches by exploring its potential for a wider social impact agenda in the form of social justice, equality and diversity.

In "Project-Based Language Learning, Virtual Exchange and 3D Virtual Environments: A Critical Review of the Research", Benini and Thomas provide an overview of current research trends and issues in project-based learning that specifically focuses on the contexts of telecollaborative and 3D virtual learning. Through the lens of a connectivist framework, the authors identify the changing roles of teachers and students arising from the ongoing advancement of technology, highlighting the potentialities as well as the need for creating interactive, immersive, and collaborative teaching and learning environments. With a theory grounded in student-centered pedagogy and the acquisition of 21<sup>st</sup> century skills, the authors explore the ways in which the multimodal approaches can enhance student learning with regard to motivation, autonomy, collaboration, and digital skills as well as sociolinguistic and pragmatic competences. Based on the systemic review of PBL, telecollaboration and 3D virtual learning research, Benini and Thomas conclude the chapter by addressing the advantages and challenges to the proposed PBL environments afforded by technology.

In "Business English Telecollaboration in PBL: Indonesian and Saudi Arabian Contexts", Bangun and Alfaifi investigate the use of technology-mediated PBL approaches in the context of EFL Business English classrooms. In particular, the authors provide a systematic review of literature aiming to identify the trends and issues of telecollaboration in PBL with a special focus on two teaching and learning environments in Indonesia and Saudi Arabia. With reference to the cultural and pedagogical foundations specific to these environments, Bangun and Alfaifi point out the importance of technology-mediated PBL, not only for the purpose of fostering English language proficiency, but also to promote cross-cultural understanding among the participants through the implementation of social entrepreneurship projects. In the theoretical review of technology-mediated PBL in Business English, Bangun and Alfaifi lay out a summary of current research with regard to its theoretical frameworks, PBL processes, various telecollaboration PBL tools, and modelled PBL studies' outcomes. Based on the critical review of literature, the authors present a practice-theory-practice approach guided by sociocultural theory, and discuss how the effective implementation of Computer-Assisted Language Learning (CALL) and PBL approaches may shed light on the cross-curricular development of social entrepreneurship projects in an English for Business course in the two countries. The authors conclude the chapter by calling for future research involving mixedmethod approaches to better understand the complex nature of telecollaboration and PBL research.

In Chapter 4, "Project Based Language Learning as a Method to Create, Edit and Publish Online Learning Materials in Australian Primary Schools", Thushara Ari analyses an exploratory case study of telecollaboration involving a private primary school in Sri Lanka and a primary school in New South Wales in Australia. Building on the favorable results of a previous study (Gamage & Chappell, 2013), this chapter first outlines how PBLL can be used as a method to design and implement telecollaborative learning projects, before identifying modifications to Blin's (2012) model of telecollaborative learning. In conclusion the chapter presents findings arising from case study and suggests how this approach can be used to help support the acquisition of cross-cultural capabilities in the K-6 English language curriculum.

The first chapter in Part II of the book, "Project-Based Learning in Online Synchronous Writing Classrooms: Enhancing EFL Learners' Awareness of the Ethics of Writing", examines PBL in the context of an online synchronous writing course with a particular emphasis on the ethics of writing. Through a quasi-experimental case study among EFL graduate students, Nami explores how PBL-based online writing environment may contribute to the development of student technical writing, namely, skills and knowledge pertaining to plagiarism, patchwriting, paraphrasing, in-text direct citation, end of the text referencing, and in-text referencing. In the review of recent PBL literature in the context of language learning classrooms, there is a general consensus of research favoring PBL on L2 learners' literacy development, particularly because of the problem-solving, contextualized and meaningful nature of the learning involved. However, Nami also points out the general limitations in the field, arguing that the lack of empirical evidence surrounding the effectiveness of PBL in CALL is prevalent and in particular, the issues surrounding how online PBL instruction may enhance the development of student writing proficiency. To respond to this call, Nami

examines the effectiveness of a synchronous PBL writing course compared to the control group which received the conventional treatment. Based on the pre- and post-PBL writing analyses in two different contexts, the findings suggest that there was an overall improvement of writing quality among both groups of students. However, when looking specifically at the technical writing skills, the PBL group performed better at appropriately using strategies pertaining to referencing and paraphrasing to avoid plagiarism and patchwriting issues. These findings suggest the effectiveness of PBL-based online synchronous writing courses.

In Chapter 6, "Incorporating Digital Projects into an Advanced Japanese Course: Effectiveness and Implementation," Xie explores how the use of digital storytelling can play an important role in acquiring not only the content specific knowledge related to Japanese culture but also language proficiency in speaking, writing, reading, and research, as well as translation. In her primary study involving ten undergraduate students in an advanced Japanese language course, Xie draws attention to technology-enhanced project-based language learning as a theoretical framework, aiming to create an integrative learning environment for students. In the study participants took part in a semester-long content-based advanced Japanese course with learning objectives related to the acquisition of contemporary Japanese culture and society through various authentic media and literal sources. As part of the course assignment, the participants were assigned to undertake an anime voice-dubbing project for their mid-term, and a short-video project about Japanese culture for their final examinations. The participants' assignments were later assessed on content, comprehension, productivity, accuracy and effort. Based on the comparative analysis of the student performance between the digital and nondigital projects, Xie found evidence supporting the effectiveness of digital storytelling projects. Students generally performed better for both projects in terms of linguistic and content skills, in particular, in the categories of comprehension, accuracy and effort. The survey data also revealed positive perceptions and experiences among the participating students. Overall, Xie's findings suggest the potential of technology-enhanced PBLL for more integrative forms of language teaching and learning.

The pedagogical dimension of PBL is also prevalent in Cinganotto's contribution in Chapter 7 entitled, "Project-Based Learning for Content and Language Integrated Learning and Pluriliteracies: Some Examples from Italian Schools". Cinganotto provides a thematic review of literature in PBL and Content and Language Integrated Learning (CLIL) as part of a broader attempt to conceptualize the characteristics of Project-based CLIL. In particular, Cinganotto focuses on "pluriliteracies," a model defined by the Graz Group at European Centre of Modern Language (ECML) which focuses on the integration of subject content and discipline specific communication. Through the theoretical interactions between PBL, CLIL and the "Pluriliteracies Teaching for Deeper Learning" (PTL) project, Cinganotto argues that the focus on pluriliteracies may promote deeper student learning and transferable skills both in languages and in subject content. The author further adds that the combined use of technologies in PBL and PTL play an important role in enhancing a more integrative approach for teaching and learning. In the latter half of the chapter, Cinganotto provides a summary of several projectbased CLIL case studies promoted by the Italian Ministry of Education in cooperation with INDIRE (National Institute for Innovation, Documentation, Educational Research). While some of the advantages and challenges of PBL for CLIL in Italy are considered to be linked to the level of digital literacy among teachers, overall, qualitative analysis of data retrieved from the participating teachers suggest several reasons for the effectiveness of technology enhanced project-based CLIL.

Drawing on sociocultural theories of learning, Chism and Faidley's contribution in Chapter 8, "Project-Based Learning via ePortfolios: Integrating Web 2.0 Tools into Higher Education World Language Classes", investigates the use of ePortofolios for PBL in the context of a university-level intermediate French course. The objectives of the study were to identify the implications of utilizing ePortofolios, particularly in terms of how ePortfolio tools like *Weenly* provide opportunities for linguistic and culture knowledge construction.

In the study, Chism and Faidley collected survey data from 18 undergraduate students to examine the student attitudes and perceptions toward the use of ePortofolios for PBL. The course consisted of four modules, with each centered around several cross-cultural topics such as family and friends, food, school and work, and leisure. After engaging with topics through various communicative activities in and outside the class, the participants were asked to create ePortofolios consisting of blog entries, Q&As, and vlogs, which were later used as qualitative data to examine the occurrence of any significant learning events. Based on the thematic and interpretative analysis of data, the major finding of the study was that the students using ePortfolios as a new tool for PBL generally perceived their experiences favorably compared to the traditional textbook approach. From an instructional point of view, the use of ePortfolios for PBL created an opportunity for peer-collaboration, learner autonomy, and effective open assessment, as well as supporting the cost-efficient implementation as opposed to the traditional textbook-based instruction.

Part III of the book on "Project-Based Learning and Social Justice" contains three chapters. The first by Hernández Alvarado and Brinckwirth entitled, "Transcultural Language Learning with Cinema, Social Justice and Teletandem", explores the potential of telecollaboration for project-based language learning (PBLL) via a large, cross-national pilot study involving university students in the United States and Mexico. The purpose of the study was to provide the opportunities for students to foster cross-cultural knowledge through guided teletandem exchanges, while at the same time evaluating the practical knowledge necessary to deliver successful teletandem interactions from the instructional point of view. In this study, Hernández Alvarado and Brinckwirth focused on the integration of social justice and institutionally integrated teletandem into a PBLL telecollaboration with the goal of optimizing

the effective implementation of online telecollaborative exchanges for large-sized class. By integrating cinema and social justice into a teletandem classroom, the authors aimed to provide more transformative and intercultural language learning experiences for their students. This pilot study followed structured and scheduled exchanges among the two participating universities, in which a group of students from each university participated in teletandem sessions in order to share perspectives on the different social issues between Mexico and the United States. During the study, various sources of data were collected, including an evaluation survey, journals, and *VoiceThread* reflections. Based on both the statistical and qualitative analysis of data, findings suggest that the participants, when engaged in the teletandem sessions, improved language learning experience. Students generally favoured the approach with evidence supporting their increased confidence and performance in speaking the target language.

Chapter 10, "Stories, Communities, Voices: Revitalising Language Learning through Digital Media within a Project-Based Pedagogical Framework", also focuses on the use of digital storytelling using a PBL framework. Anderson and Macelroy's aim was to examine the significance of multilingual digital storytelling by drawing on findings from an ongoing project called "Critical Connections: Multilingual Digital Storytelling" which was initiated in 2012. This translingual-transcultural project engages students between age 6-18 in seven different countries (England, Algeria, Cyprus, Luxembourg, Palestine, Taiwan, and the United States) to take part in the collaborative production and publication of multilingual digital storytelling in over 15 languages. To effectively theorize the framework, significance and implications of the successful implementation of multilingual digital storytelling, Anderson and Macelroy revisit their previous critical ethnographic study (Anderson & Macleroy, 2016) to explore the claim that the use of digital media plays a critical role in transforming language learning into a dialogic, student-led, inquiry-based model, providing students with an opportunity to move beyond their classrooms to embrace critical and creative language learning experiences. To provide a better understanding of how multilingual digital storytelling with PBLL are designed, integrated and executed, the authors analyzed three sample cases of multilingual digital storytelling implementation. Despite some of the challenges discussed in the chapter, Anderson and Macelroy's findings provide major implications for both learning and pedagogical perspectives.

In the final chapter, "Epilogue: Critical Project-Based Learning and Moving Forwards in the Post-Pandemic University", Thomas reflects on the eleven chapters collected in the volume, and argues for a repositioning of both language learning and the sub-field of computerassisted language learning in light of the wider social turn in humanities teaching and research. In terms of research on CALL, the chapter argues for a 'social' and 'critical pedagogy' turn which moves beyond the narrow agenda of experimental research designs. It calls for a critical turn from purely pedagogical concerns to a wider, social and impact agenda, in the context of a cross-curricular approach to teaching and learning in which language learning plays a role alongside a multi-disciplinary approach. Within the increasingly corporate approach to language learning adopted across school, college and university curricula, this book aims to further stimulate discussion about the its purpose and scope, and to re-examine the potential of language learning, and its associated aspect of promoting cross-cultural communication and understanding, through the lens of a project-based approach.

The book's eleven chapters investigate the potential of digital technologies to complement PBL but does not assume that their use is always appropriate, all of the time, for all teachers, all students, all languages, or all proficiency levels. Indeed, it is most likely the case that future research on PBL and CALL technologies will have to explore a hybridized approach to cross-curricular learning, as Ellis (2015) has argued elsewhere should apply to TBLT. Such an approach would involve a blend of synthetic and analytical syllabi, teachers as

facilitators and difficultators, and learning theories that are constructivist as well as drill-based, as appropriate to the context. Such an approach would be comfortable with using digital technologies when relevant, while also critical enough to refrain from their use when not required. One constant limitation of CALL as a sub-field of SLA is that the acronym rather assumes that technology must always be used to 'assist' learning. Where PBL as other approaches to language learning are concerned, it is also important to involve activities in which digital technologies are not used, and to recognize that they are neither always beneficial to or even healthy for engaged, balanced and worthwhile forms of student learning.

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## About the Authors

Michael Thomas is Professor of Education and Chair of the Centre for Educational Research (CERES) at Liverpool John Moores University in the UK. He is the author or editor of over thirty books and peer reviewed special editions and founding editor of four book series, including Advances in Digital Language Learning and Teaching (Bloomsbury), Digital Education and Learning (Palgrave), and Global Policy and Critical Futures in Education (Palgrave). Among his other books on CALL are *Project-Based Language Learning with Technology* (Routledge 2017) and *Language Teaching with Video-Based Technologies* (Routledge 2020).

Kasumi Yamazaki is Associate Professor of Japanese in the Department of World Languages & Cultures at the University of Toledo, where she teaches advanced level courses of Japanese as a Foreign Language (JFL) and culture. Dr. Yamazaki's research focuses on a wide range of contemporary Computer-Assisted Language Learning (CALL) pedagogy and integration, namely, the use of 3D simulation games and virtual realities (VRs), the development of intelligent CALL (ICALL) systems, and the effectiveness of technology-enhanced language learning curricula. Dr. Yamazaki currently serves as Editor-in-Chief of *Technology in Language Teaching and Learning*.