Introduction by Editors of the Special Edition

Introduction: Teaching Languages in Times of Social and Technological Change and Divide

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This journal issue captures a unique time, a time between the lingering aftermath of a global pandemic and the increasing power and presence of artificial intelligence. It does of course however focus specifically on language learning but against an ever-changing geo-political background, a background in which language and technology are now some of the most powerful but unacknowledged factors. These all profoundly affect the mechanics of teaching and learning on the one hand and the social, political, and economic structures of our societies on the other, and of course the relationships between them.

The nature of our topics and the nature of the academic publishing cycle mean that this editorial rests on our collective expertise and experience rather than the borrowed and biased authority of the work of others. The topics in question are the pandemic, artificial intelligence (AI) and refugees. These are all global phenomena but we are keen to explore their particular impact on language learning and digital technology.

The pandemic has caused, we are told, a global 'pivot' to digital learning. This may be true, but the digital learning in question was probably a conservative version driven by the pressures to keep education systems functioning; language learning in the pandemic was probably a microcosm of this, forced by expediency to use the established technologies and to focus on the details and mechanics of language as text, rather than the social context and authenticity of language as speech. There may have been exceptions to the pandemic in many sectors in many countries but the 'pivot' meant converting online dedicated systems, perhaps those delivering specialist subjects, teaching minority languages, supporting rural scholars or helping special needs, to into general-purpose systems with untrained staff, trying to fill the gaps with as little disruption, training, and resistance as possible. This necessarily meant that the discursive, social, or pastoral dimensions of learning were the main focus together with the transmission and assessment of content. So there was a direct impact on the nature of language learning but an indirect impact on the training of language teachers, inhibiting foreign exchanges for exchanges, and on the balance of languages, weakening the learning and teaching of minority languages, where digital resources were less well developed, possibly Welsh or Basque for example.

Language learning cannot be immune from the impact of geopolitical events. Climate change and ecological degradation; repressive and authoritarian governments; civil and military disruption and occupation; and natural disasters are all leading to massive and increasing movements of people to countries perceived as safer and prosperous and more stable. These movements include refugees, economic migrants, and IDP (internally displaced persons), with peace-keepers and aid workers travelling in the other direction. There is also widespread depopulation from minority language rural areas to the 'informal settlements', or slums, of metropolitan conurbations.

Artificial Intelligence (AI) is expanding and changing at an extraordinary rate, with educational regulators, researchers, and professionals struggling to keep up amidst new technologies for teaching, with new techniques for using those technologies for teaching and with popular, public, and press ambivalence about dangers and uncertainties. We need however to consider the specific impact on language and the learning of language, on different languages and the different dialects of those languages.

In general, of course, AI merely accelerates and extends the continual social and cultural impact of digital technologies, including mobile phones, computer networks, embedded systems, and robotics, in different aspects of societies and economies. There was already talk of the 'hollowing out of the labour market', meaning the increasing chasm between 'high-end' employment, basically knowledge workers and creatives, and 'low-end' employment, meaning manual and unskilled workers. The phrase is used to describe the impact of digital technologies on individual life chances, and the consequent increase in structural unemployment or in leisure time, depending on how political systems react to these changes, as digital technologies take over. Either of these scenarios will have consequences for education systems, but these are committed by politicians currently to the fantasy of ongoing full employment. Education systems are by their nature always trying to solve last year's problem.

The 'hollowing out of the labour market' does, however, also apply differently to different countries and to different sectors. So as some countries or regions have specialised, say Nairobi in Kenya with call centres, or Bangalore in India with programming, these countries will be adversely affected compared to say those countries or regions specialising in design, research, management, or entertainment.

So to return to languages and language learning, we might expect to see increased AI in computer-based language learning, as we have already with Duo Lingo building in chatGPT, and causing a shift away from classroom-based learning. We might also expect to see more trustworthy automated translation and interpretation, threatening the jobs of translators and interpreters, building on the growing success of real-time in-ear translation technologies. These do however have a differential impact on languages since both these types of technologies will be deployed initially with languages, and dialects, that represent the biggest markets, the global power languages not the regional dialects. This does however only echo the ways in which digital technologies represent the culture, language, and values of one specific community, one that might be stereotyped as Silicon Valley, and this is most easily observed in the images, emojis, interfaces, icons, and fonts with which learners interact daily. It is also less easily observed but more profoundly in the search engines, mapping technologies, websites, for example Wikipedia, and repositories, including OER, that underpin their learning.

The point is made that AI is not creative. All it does is harvest the world's existing digital resources. This not only means that it harvests the world's existing prejudices, misunderstandings, fake news, and bias, but also reproduces the balance of languages that can be studied and learnt. Learning Klingon and Elvish (or American English) will be easier than learning any of Africa's 200 endangered languages and thus cultural diversity is threatened when language learning is constrained. Nor is AI trustworthy given frequent reports of its capacity to 'hallucinate' so the learning of 'correct' language cannot be guaranteed. The impact of all these will be both short-term and obvious, and longer-term and subtle but pandemic, population movements, and AI all increase digital divides, the distances between people and communities with surplus educational, digital, and financial capital and those without.

Issues like those described above impact language teachers, students, educational authorities, publishers, and other stakeholders. This volume focuses on the former, their many challenges and the constantly evolving competences and skills required to face them in the context not only of the knowledge-based society but also of other traditional societies that struggle against deprivation, depopulation, loss of identity, and oblivion. Specifically, there are ongoing and systemic challenges involved in the career development of language teachers, the need both to avoid fossilization of their formal and communicative capabilities in the target language, to update their pedagogical and psychopedagogical strategies and techniques, and to keep up with their students' demand for the innovative use of digital tools in the classroom. Furthermore, these are other elements that form part of a teaching scenario with novel modalities, programs and contents, such as open educational resources, research-informed teaching, and long-life learning.

An analysis of the underlying causes and implications of divides (whether economical, technological, or territorial) in language education reveals how teachers encounter further complexities in rural and deprived areas because didactic resources can be scarce, teacher turnover can be high, and lack of employment stability can undermine potential prolonged teaching projects. Also, in such areas, student population can be heterogeneous, with large vulnerable sectors, such as migrants and seasonal working families. Certain strengths can be identified in rural areas, such as the existence

of a tight, close and well-defined social community that often acts as a support agent in the education of their youngest. However, fuzzy or negative imaginaries of peripheral life are usually present in language course contents and materials, which has negative consequences in the self-identity of the corresponding stigmatised learning population and is partly responsible for what is commonly referred to as the demographic challenge. Although this analysis exceeds the scope of this volume, its editors aim to offer it as an opportunity to reflect on how to enhance teacher development and the cascade effect that this may have on students' education and the welfare of the surrounding community.

The set of manuscripts comprised in this volume approach language teacher development and its relation with digital technologies from different perspectives. What follows in this editorial is a brief description of the content in each article in the present special issue, providing readers with a preliminary view of the topics researched. First, Andujar and Spratt explore the characteristics of content and language integrated learning (CLIL) teacher language and how AI tools such as ChatGPT can help support and foster the language needed by CLIL teachers. Likewise, they also address the possible implications of using this technology from a teacher training and teaching materials standpoint. Second, Traxler addresses the role of decolonization in language learning and, more specifically, the case of Palestinians using digital technologies to learn English. The manuscript builds on the idea that colonization is present in almost every aspect of digital technology use while learning a language, and even more in the case of Palestinian English learners. Third, Read investigates the needs of language teachers in rural education through an analysis of rural depopulation and the state of education in rural areas. Based on the results obtained from different Spanish provinces which have suffered a demographic decline, a number of macrostrategies are proposed as part of the AGORA (Technological and methodological innovation for lAnguage teaching and GeneratiOn of synergies in Rural Areas) research project.

Fourth, Díez-Arcón and Martín-Monje investigate the integration of computer-mediated collaborative learning (CMCL) and peer assessment in language teacher development. Through a mixed-methods investigation, the aforementioned researchers explored student-teachers' satisfaction level with the techniques implemented in a TEFL course. Fifth, Bobkina and Domínguez-Romero explore the needs of English language teachers in Spain with regard to technology integration in language classes. In order to address this aim, the researchers used the technological pedagogical content knowledge (TPACK) framework to develop a questionnaire in which dimensions such as blending content, pedagogy, and technology were evaluated. Sixth, Contreras Soto, Oportus Torres, Sanhueza-Campos and Maluenda Albornoz made use of a flipped learning method to provide EFL teachers with video recordings and examine their perceptions with regard to oral skills development. A blended learning model combining synchronous English sessions and asynchronous flipped ones was used to facilitate the development of oral skills.

Seventh, Cahyono, Ardi, Siwa, Sari and Gestanti analysed the relationship between EFL teacher's technological pedagogical knowledge (TPK) and ecological agency when responding to differentiated learning policy in Indonesia. In particular, these researchers explored how EFL teachers at Indonesian high schools put into practice constructs such as ecological agency, differentiated instruction practice and TPK. Eighth, Daneshkhah and Shooshtari investigated the effects of dialogic interaction on EFL teachers' online professional development (OPD). To tackle this aim, the researchers analysed teachers' written reflective narratives and interviews and singled out the most significant themes related to teachers' OPD which were found in the data collected. Nineth, Del Peral Pérez and Castrillo de Larreta-Azelaín investigated, through the use of learning analytics (LA), the patterns and characteristics of participants in language massive online open courses (LMOOCs) in order to help MOOC teachers and designers to face the main challenges found in these environments. The researchers argue that by creating a personalized pathway, factors such as high dropout rates or teachers not cognizant of their students' characteristics and habits could be avoided.

Tenth, Rodríguez Arancon analyses the effects of using audiovisual translation in an online teacher training course at the Universidad Nacional de Educación a Distancia (UNED) in Spain. In particular, didactic audiovisual translation (DAT) was used during the course where student-teacher perceptions were investigated through the use of pre and post questionnaires. Eleventh, Bocanegra-Valle focuses on online teaching methodologies, specifically in the field of languages for specific purposes (LSPs). To address this aim, the study investigates LSP teacher education and professional development through an exploration of the current online training programmes for preservice and in-service LSP teachers. This exploration attempts to shed light on the learning gaps and institutional requirements to be addressed in online LSP

courses. Finally, Momenanzadeh, Mashhadi, Shooshtari, and Arus-Hita's investigation aims to compare teachers EFL preservice teachers' TPACK perceptions between Iran and Oman. At the same time, the researchers also attempted to explore gender differences in EFL preservice teachers' TPACK between the two contexts. To address this aim, a comparative research design and online questionnaires were used in both contexts to report on the differences as well as to maximize teachers' technological use in both countries.