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Initiating and Exploring Digital Transformations in Teacher Education in Palestine: Insights from an Erasmus+ Collaboration

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Abstract

Digital technologies are heralded as enabling affordances for active and student-centred learning, with self-determination and self-efficacy as corresponding qualities arising from modern pedagogical concepts. Critical affordances of social technologies and social pedagogies include collaboration between individuals, and enhanced agency, as students become empowered to act upon the world through technologically-enabled forms of communication and participation. This chapter outlines an Erasmus+ collaboration between UK, German, Turkish and Palestinian Higher Education Institutes working on a project of digitally transforming pedagogical practices in departments teaching the Learning of English as a Foreign Language (TEFL) through partnerships and in-country workshops. Inherent to this collaborative project was the notion that the Palestinian context and the preservation and celebration of Palestinian culture, identity and indigenous knowledge systems were unique and necessary for renewed pedagogical practices, stimulated from within a teacher education culture situated in values. The chapter explores the barriers and opportunities implicit in utilizing mobile technologies and their associated pedagogic applications among Higher Education TEFL teachers in Palestine. It concludes by arguing for new concepts of praxis that place social justice at the core of Teacher Education, based on what has been learnt from this unique project and context against a backdrop of perpetual disruption.

Keywords

curriculum – CPD (continued professional development) – social technologies; transformative learning

1 Introduction

1.1 *TEFL-ePal and Erasmus+*

TEFL-ePal (<https://tefl-epal.ps>) was an Erasmus+ funded project between University of Wolverhampton (UK), European partnering staff and Palestinian Higher Education Institutes that began in January, 2019 and ran until May, 2022. Its aim has been to innovate local teaching and learning of English as a Foreign Language (EFL) through the use of digital and mobile technologies through several workshops (shown in Table 1), which both prepared the ground for transformation and explored innovative pedagogical theory and technical methods.

Erasmus+ is a program of the European Union that seeks to support education and training among youth in Europe, offering mobility and cooperation opportunities in Higher Education (HE) and other areas. Priorities and activities through these opportunities are aligned to the European Digital Education Action Plan and the European Skills Agenda (see: <https://education.ec.europa.eu> for further detail). Palestine and Turkey were both included as 'Third Countries' and thus able to apply for funding. The TEFL-ePal project was such a program, with Palestine the principal beneficiary lead by Al Quds Open University. The aims of the project besides the innovation of teaching extend to several objectives that broadly seek to rejuvenate the curriculum of language learning in Palestinian HE institutions – institutions whose staff and students face numerous challenges described through this chapter (See: <https://tefl-epal.ps/aim-and-objectives>). Technology underpins many of those, but there is a higher aspiration to develop a culture of research, professional development and innovation that Palestinians and Arabs can rightfully recognize and own.

1.2 *Aims of the Projects*

The TEFL-ePal project sought to realize a highly challenging aspiration in aiming to reify transformative models of teaching (Biesta & Miedema, 2002). Here, we draw on teachers' insights from the paradigm shift – one of didactic practice to an innovative and dynamic curriculum model. The responses explored later in the chapter highlight the challenges and opportunities in realizing the project's aspirations during the trigger event of the Covid pandemic. Covid itself has naturally been a stress test for the entire world and while it is background to some of the conversations drawn upon later, elucidation of it in this chapter is spared the reader. Nevertheless, it must be noted that when the project started in January 2019, the world of the pandemic could not have been imagined. Just over

a year after our launch, everything was dramatically different and educational access was a major concern. Palestine was no different to anywhere else, with school and campus closures, technologies assisting in some form of continued provision, though access was problematic for students with connectivity issues in many areas and staff put on reduced salaries, while handling increased amounts of challenges. Arguably, Palestine is used to levels of disruption that the pandemic wreaked, with issues such as forced campus closures, roadblocks and society locked down, making timetabling precarious and precipitating a requirement for students to depend on mobile technologies for distance education (Traxler et al, 2019). This was a central challenge to our thinking about Palestine as a vulnerable state subject to continual disruption. The school or campus in Palestine is as unpredictable and capricious as the world outside it.

Against this backdrop, the TEFL-ePal project aimed to “develop flexible curricula, with face-to-face and online courses to be accessible to all learners, with no restrictions” (TEFL-ePal, 2020). It also aspired to bridge socio-political gaps and give Palestinians a greater voice on the international stage and to develop the use of digital technologies to improve access to and the experience of education. These are aims that mirror the desire for sovereignty in pedagogy outlined through this chapter, whereby partners from Palestine and the UK used these aspirations as foundation for collaborative training workshops in the UK in 2019, which showcased pedagogical and technological skills supporting transformative teaching and learning. We worked in collaboration and without hierarchy. What we needed to learn about were current practices in teaching and learning, the issues and limitations with those and how, if at all, technologies and related pedagogical values can transform those obstacles with purpose and respect of context, rather than in a determinist fashion. This was accomplished through site visits described in this section.

1.3 Project partners and their roles

Each partner had designated roles. The Wolverhampton representatives' duty was to share pedagogical knowledge related to digital technologies. They worked alongside partners from Anadolu University, Turkey (technical expertise in computer science) and Chemnitz University, Germany (linguistics), as well as the local partners from Palestinian HEIs. Their roles respectively were to design repositories for any Open Educational Resources (OER) to be archived online (<https://dspace.gou.edu/>), to help establish 'language laboratories' by

preparing technical hardware, such as desktop computers and servers, and to design online elements for Virtual learning Environments linked to new English language textbooks created by Chemnitz University colleagues. The textbook content complied with the Common European Framework of Reference for Languages thresholds (standardized descriptors constituting uniform proficiency and competency levels for language learning across European languages). Chemnitz University were responsible for the content and pedagogical activities in new textbooks and quality assurance of their designs. The table below is included to give an overview of the main planning meetings between partners, in each country and with brief description of the participant activities, expanded on through the chapter.

Table 1. Timeline and overview of main meetings and workshops

Date & Location	Event description	Participants
January, 2019 / Anadolu University, Turkey	Kick-off project; partner institutions coming together; knowledge exchange and identification of limitations, barriers and underpinning project methods, while addressing the objects and delegating responsibilities to different partners.	Hosts from IT and computer sciences in Turkey; 4 UK teacher educators and researchers; 2 German linguistic teachers and researchers; various Palestinian classroom teachers, project leads, researchers and linguists
April, 2019 / Wolverhampton University, UK	Observations of language teaching in UK post-16 colleges; University of Wolverhampton-led workshops showcasing good practice on pedagogical practice and embedding of digital technologies used in and out of classrooms for learning and assessment.	15 Palestinian teachers and department or faculty leads and UK teacher educators
July, 2019 / Various Palestinian HEIs	Palestinian meetings and field visits to sites, exploring current resources; exploring a needs analysis report; establishing pedagogical values for transformative teaching and learning practice.	All visiting partners from Turkey, Germany and UK.
October, 2019 / Wolverhampton University, UK	Visit with tours showcasing problem, project- and inquiry-based learning in different disciplines; technology for	Approximately 15 Palestinian teachers and department or faculty leads visiting the UK, (including new visiting staff

	differentiation; assessment for learning.	who didn't attend the first trip).
March, 2022 / Various Palestine HEIs	Final data collection and field visits for evaluation of language laboratories, meeting students and teachers to see resources in situ and gauge impact of project	2 German linguistics teacher / researcher and 2 UK teacher educators and research staff.
May, 2022 / Anadolu University, Turkey	Conclude the project; focus on achievements and future collaborations and continued research	All partners from UK, Germany, Palestine and Turkey.

The gap in dates between 2019 and 2022 was due to Covid travel restrictions. In that time, the continuity of the project was challenged, though there were opportunities for teacher professional development deploying the tools introduced in the UK workshops. Research was conducted through Google forums, exploring the advantages and barriers that technologies represent in local teaching practices throughout Covid.

This chapter next outlines the background to this project, with some description of Palestinian TEFL, before giving more detail to the workshops and meetings shown above. Finally, it draws on reflections from the Google forums into an evaluative discussion of the project.

2 Background to TEFL-ePal project

From an initial meeting in January 2019 (see Table 1), participants shared perceptions that technologies can be potentially important drivers of innovation in teaching and learning. The UK and Palestinian educators, being directly involved in technological implementation through teaching, broadly agreed on theoretical approaches that develop human capacity through the interaction with tools, nurturing capabilities and self-efficacy, as well as changing and improving educational processes. However, we (hereafter 'we' denotes the Palestinian and UK writers representing their partnership) noted the local context as being culturally significant in the need to develop capacity, whether that was personnel agency, technical infrastructure or appropriate knowledge (Traxler et al., 2020). We are also aware that perceiving technology in isolation as a determiner of education is disingenuous. This risks unmooring it from the numerous factors that make up other potential problems, challenges or

opportunities from a wide range of realities, including the personal and professional people's values behind the use and choice of technology. But equally importantly the social, cultural and political backdrop against which the education is situated and the technology introduced.

Among many challenges, the segregation wall and geopolitics which complicate mobility across Jerusalem, the West Bank and the Gaza Strip (Romahi, 2010) are central. Baalousha and colleagues (2009) also report on poor infrastructure and few qualified staff resulting in limited pedagogical technique, with Romahi (2010) describing teaching done to students who are passive recipients of knowledge that is packaged and transmitted. While a dated reference, the partners on the TEFL-ePal project report these as contemporary challenges. The practices are very much against the grain of the Palestinian Ministry of Education's vision for a sector at the center of Palestinian society that pursues capabilities for transformation, with "values, culture, and technology to produce knowledge and employ it for its liberation and development" (Ministry of Education and Higher Education, 2017, p. 37). This is in tandem with a UNESCO report that calls for a vision for the education sector in Palestine: "[a] Palestinian society that has values, culture, and technology to produce knowledge and employ it for its liberation and development" (Ministry of Education and Higher Education, 2017, p. 37). It is clear that in such circumstances educators need to be adaptive, innovative and flexible, making use of what they have got access to and, ideally, engaging students as co-creators in the learning process. However, the second point here is one such cultural difference of note.

In Arabic educational cultures, positive attitudes from staff and students are reported on using social media for teaching and learning (Alsurehi & Youbi, 2014). Concerns around privacy, gender, behavior, norms and codes and relying on mainstream platforms like Facebook reflect conservatism in Arabic cultures with strict regulation of use in many organizations. Khalifah (2010) explains how tribalism in Palestine impacts on the perception of knowledge and that those with leadership status are invested with a legitimacy and trust as authorities of knowledge. It is also observed (Muhtaseb, 2022) that Palestinian society works as a collective, rather than an individualist society. This serves to remind us not to restrict the utilization of technology to social communication networks, nor to simply adopt methods of competition, but to promote collaboration between students in learning.

Tensions between social software and everyday social practices have long been identified (Mejias, 2005) and as long as technologies continue to evolve, a digital divide can exist if local community customs are not

embraced; noting Arabic cultural differences to teaching and learning may be key to implementing, for example, social media into education. Differences in paradigms exist, for example, between perceptions of learning as 'being' (self-discovery, perhaps meaning-making) and 'becoming' (dynamic and ongoing), or learning as 'doing' (active and pragmatic) and 'having' (the acquisition of knowledge) (Sfard, 2009). The approach to learning is set by the teacher and student and realistically is likely to be a blend of all of the above. Muhtaseb (2022) has found that

cultural aspects exert different, and sometimes competing, influences on academics and students' practices in online educational environments... Traditional school education and a lack of digital literacy were found to affect students' and academics' practices.(p. 3)

Muhtaseb is referring broadly here to the general paucity of infrastructural resources for educators, that impedes professional development, such as scientific resources and equipment, but also IT skills. Although alternatives might be located online, for example OER, educators may be unaware of these or they may be culturally inappropriate (i.e. in language or as reference points). These limitations in resources may hinder student perceptions of education, as well as inhibit a view of the world around them. The chapter writers recognize that education and digital discourse is not limited to technical issues, but is "a predominantly social affair – based around struggles over benefit and power, equality and empowerment, structure and agency, inequality and social justice" (Selwyn 2012, p. 148). Our project was determined by a non-imperialist positionality from the start. Those from Europe went to Palestine not to deliver a message or instruct from an intellectually superior position, but treated the project as a knowledge exchange and mutual learning opportunity. UK partners were quickly cognizant of the overarching significance of the local culture, including the boundaries of brutal geopolitical oppression. In writing this, we wish to convey the lived experience of local people, but we will inevitably fall short in capturing the complexities involved in living under a military occupation where checkpoints and the separation wall disrupts normal life for everyone. Under those circumstances, we conceive of the potential for mobile technology to transcend some of those barriers (Tawil-Souri & Aouragh, 2014).

3 Approach to knowledge exchange and outline of training workshops

While the UK partners were tasked with introducing pedagogical input that can support digital learning, they were cognizant of the issues northern European researchers should confront as outsider researchers, outlined by Bennett (2013), who labels as “epistemicide” the impact of alien epistemologies on indigenous cultures (see the notion of “information imperialism”; Mulder, 2008). With this in mind, it was important to be transparent about approaches, to denounce any notions of problem-solving that might be reductive or simplistic and to involve local partners inherently. We sought to evoke and establish shared philosophical values about a transformed educational initiative from all stakeholders.

However, we wanted to extend beyond the straightforward use of tools, without a philosophical praxis. We argue here for Pachler, Cook and Bachmair’s (2010) definition of mobile learning, which focuses on cultural dimensions, multimodality, informal practices and learning, and aspects such as autonomy and agency. Pachler, Bachmair and Cook have positioned mobile learning as a “mobile complex” where everyday life-worlds become learning spaces linked to user’s own media habits, giving an ideal application field for mobile devices. In such a manner, mobile learning relates more implicitly to the social, such as communities and their environments, than to the formal classroom. Indeed, as Pachler, Cook and Bachmair posit, “the question arises whether institutional pedagogy is necessarily the most efficacious context for learning.” (Pachler et al., 2010, p. 12).

3.1 Meeting in Wolverhampton, UK (April 2019)

The first joint meeting was designed to explore a range of apps used in practice, with a specific focus on what could enhance interaction but also improve access to learning beyond the classroom. The UK teacher educators arranged visits to community colleges with TEFL teachers to showcase pedagogical practices with technologies and encouraged their Palestinian colleagues to utilize mobile learning themselves to record what they observed with fields notes and photography, or by interviewing teachers from the visiting cohort or local presenters. Presentations were given that showed how community colleges promote refugees social

inclusion, using the language of navigating social services systems as a pragmatic source of learning through everyday scenarios, specifically using social service websites.

Elsewhere, sessions were held that involved colleagues leading on the use of Apps to help students with learning difficulties to self-organize and manage their learning, while others presented on Apps that helped with self-regulation in identifying knowledge gaps. In other instances, a Saudi Arabian doctorate student presented on his research into how language learning can be supported through visual simulations using Instagram to stimulate vocabulary recall. Workshops entailed practical demonstration and involvement, in order to allow participants the freedom to be ludic, make mistakes and identify barriers in live pressure-free settings with the digital tools.

Overall, the visit forged relationships between the partners involved. The UK team asserted that the lessons from the workshops could be cascaded as an effective means of local professional development in knowledge and skills. An important reminder was made by an educational developer from Wolverhampton who reminded us all that opportunities for innovative practice puts teachers in the position of the student, which is always beneficial.

3.2 Workshops in Ramallah, Palestine (July 2019)

For transformative practice, we needed to enact a collective vision into our planning, which we endeavored to fulfill at a knowledge exchange session in Ramallah in July 2019 with the partners on the project from four HEIs across Palestine (see Table 1). We began with an examination of a Needs Analysis, which had been conducted by an external organization by exploring attitudes towards language learning among HEI students across the Palestinian institutions. The results confirmed much research collated and analyzed by our lead, Aida Bakeer (2018), and official papers (Palestinian National Authority, 2015; Bianchi and Razeq, 2016) which indicate that local syllabus and learning outcomes fall short in the area of English as an academic language. These researchers attribute the difficulties and challenges to several reasons, such as poor and inappropriate content, traditional teaching methodologies, lack of professional educators in TEFL to integrate educational technology and low student motivation. Continuing dissatisfaction with the overall proficiency of language students is accounted for by a range of factors: poor pedagogical methods, a lack of access to technology, and unappealing materials (Bakeer, 2018; Dwaik & Abu Shehadeh, 2013). Furthermore, according to these researchers, teachers' traditional

practices can project negativity and low motivation to learn and among students, yet this is not to make teachers culpable for circumstances in which students see little opportunity for travel, work or study abroad. Limited exposure to the language and original source materials, limited integration and low confidence prevent some EFL students from efficiently testing their communication skills (Smith et al., 2022). There is clear payoff reported in the use of blended learning approaches to language teaching, with improved student attitudes towards learning, as well as enhanced autonomy and motivation resulting from introducing a wide range of resources such as video and television, forums and online feedback (Bakeer, 2018). Although student satisfaction is an important aspect to explore, the development of teachers' capabilities and improvements in pedagogic innovation, also highlighted in Bakeer's paper, are paramount for any transformation in practice. This oversight gave us an impression of provision and practice, and it follows that we can start approaching some of the practices in a collaborative and critical manner.

In the 6-day multi-partner workshop in Ramallah in July 2019, the UK partners launched the second work package of the project (see Table 1), which was the development of technical and pedagogical skills and competences. They endeavored to create a social constructivist approach to share knowledge around the meaning of education and the values of each partner organization to seek consensus of what the philosophy of learning should ideally look like. The results were collated, then agreed as a set of guiding aspirations for how learning experiences should be. This was an important threshold in the project, which shaped perspectives on the ways technology could be integrated from the ground locally, rather than from the outside Western partners. Palestinian partners agreed that education should...

- ...be truth-Seeking.
- ...nurture youth and the future and develop leadership capacity.
- ...implicitly support the national and local identity, while developing a global outlook.
- ...devise an authentic, personalized curriculum that is culturally diverse and open.
- ...be able to utilize flexible, adaptable materials.
- ...foster creative and critical thinking, problem-solving, collaborative, employability and life skills as well as developing character.
- ...be situated in an inclusive, safe environment where student input is (more) active and which celebrates and values student contributions.

- ...focus on developing a mobile and technological capacity in staff and students that supports autonomy and independence.
- ...be friendly, facilitating, fair, fun and firm (+ familiar).

The creation of new textbooks to be used in the HEIs TEFL departments was perceived as an opportunity for culturally situated resources, e.g. acknowledging Palestinian heritage, but with an outward, global perspective. Pedagogical theories that support technology in teaching were explored. Underpinning these are highly active approaches: personalized, project and problem-based learning and discovery learning. Universal Design for Learning (UDL) (Meyer & Rose, 2013) and Communities of Inquiry (Garrison, Anderson and Archer, 2000) were also utilized. These highlighted a range of strategies and techniques available that can complement the content as well as digital technology, while stimulating an imagination for transformation. There is a balance in these theories between the individual and the social or collaborative; we stress that is for the teacher and student to negotiate whether, when and how students learn autonomously or in groups, and is dependent on needs over ideals.

In UDL, for instance, there is a focus on personalization and increased choice in learning mode facilitated through, for example, students being able to access learning through multiple communicative methods and to demonstrate their knowledge in wider modes of literacy than narrow and prescriptive modes, such as text-heavy communication (Meyer & Rose, 2013). A goal of UDL is for teachers to have more agency over how they teach and how a curriculum is represented, particularly improving inclusion for those with learning difficulties, highlighting the importance of personal choice. It has been embedded into language learning through multimedia classroom books, using digital photos and stories, which not only promotes a variety in access to learning materials but gives more option on how students express what they know (Rao & Torres, 2017).

In Communities of Inquiry, an emphasis is placed on collaboration between members to empower them to learn in a social-constructivist manner. The UK staff promote means of thinking about language learning from Sfard (2009) whose “participation metaphor” emphasizes the learning experience as collective activity, as opposed to the transfer of knowledge from knower to recipient, though, it also recognized that it has a place, particularly among novice students. It is apparent that mobile technologies facilitate interaction and provide channels for enhancing communication as dialogue, as outlined shortly.

3.3 Workshops in UK (October 2019)

The October 2019 University of Wolverhampton workshops included presentations on the use of social networks to stimulate community learning and overcome restricted time limitations to enable 'flipped' approaches (where content is studied before classrooms, in order that contact time allow teachers to apply the content knowledge (Arslan, 2020)) and stimulate peer learning and peer assessment through student-generated content. Elsewhere, we showed how YouTube could underpin agile learning, with instructions presented through a video with key terminology and students working in groups to investigate and solve a problem in a race to reach solutions. Another presenter shared how Kahoot, a web-based quiz, can support formative assessment in a pressure-free fun manner, as teachers design in learning checks with questions on taught content. The quiz represents a low-stakes form of assessment as it resembles a game, with timed answers and a podium of winners. However, teachers can also remove the timed element, so students can be thoughtful over answers and collaborate with partners and teams to lower pressure, while using it as an icebreaker helps with retrieval of salient content from previous sessions and allows students to identify insecure knowledge. Another presentation explored use of 'Plickers' to support 'Learner Initiated Feedback Technique' (LIFT) that applies cognitive complexity to language learning settings and encourages students to self-identify gaps or insecure knowledge in their results (see Bakeer & Scott, 2019, for more detail on the technical workshop).

Other elements of the workshop explored conventional theoretical teaching methods such as direct instruction or retrieval practice with strategies of using free remote technology apps such as Quizlet, which enables teachers to create timed quizzes shown on a central screen that students can reply to by sending answers via mobile devices. These give a sense of accomplishment and learning gain while securing the retention of knowledge and improving personalization through an ongoing assessment for learning. Continual feedback from teachers as knowledgeable others is paramount, and innovative approaches were demonstrated in workshops by teachers who built rapport with students through social technologies. These included platforms such as Edmodo.com, an easy-to-use and free mobile affinity space designed for educators with a similar appearance and functionality to Facebook. It has a 'wall' feature on logging-in of recent posts by teachers or students showing tasks or questions, while there is also private messaging available for students and teachers to stay in encrypted communication.

During the visit to the UK, much was made of outside classroom community learning, with up to 20 Palestinian teachers invited to undertake a discovery learning activity in the form of a 'scavenger hunt' in a local museum, with questions in advance and the answers located among the museum artefacts. Teams were formed and after instructions were explained, responses were recorded via photograph and audio and uploaded to a central repository in a race against the other teams, modelling how mobile learning mediates the spaces between culture, the classroom and online domains (Pachler et al., 2010). The situating of learning to the museum enables wider, informal learning to occur in autonomy and integrates the sovereignty underpinning the ethos for a culturally situated pedagogy that is at once local and global. The teachers posted reflective videos framed as interviews and using hashtags to social networks such as Twitter to compliment the digital storytelling of the day. These endeavors ensure the teacher remains informed by possibilities of pedagogical innovation and recognizes the need for autonomy and collaboration to be innovative.

Having an understanding of the plight of Palestine from partnerships makes us identify the ethical responsibility of introducing digital tools that are commonly engrained with surveillance software that have been tested in military settings for use in civil oppression. This had to become part of our discussions in confronting the reality of the ubiquity with which social technologies are imbued into everyday life. Herein is an educator's dilemma: the opportunity to inculcate digital literacies in educational settings, while inducing young students to use technologies created for data-mining purposes. Anonymity is a necessity for privacy, so educators must be careful not to do the bidding for surveillance corporations.

This dilemma can be extended to the creation of OER or Open Educational Resources, i.e. those which are created and freely shared online in accessible repositories without restrictions on distribution, copying or adapting that others can locate and use themselves. For language learning, these have popularly included platforms like YouTube to supplement teaching and learning. The downsides to this are the lack of culturally appropriate OER to some groups, such as Palestine, so it became apparent that the creation of OER from Palestine, rather than the borrowing of others, would have benefit on developing digital literacy and global learning competency of the local partners.

3.4 *Meetings in Palestine (March 2022) and Turkey (May 2022)*

The final visits and meetings occurred as Covid restrictions on travel started to be lifted. The purpose of the second meeting in Palestine, in March 2022 was to evaluate the project's success overall. This included exploring how teaching had changed, demonstrated by site visits and presentations by teachers. Access was made to language laboratories with new IT equipment installed, which showcased the virtual learning environments now being used. In Palestine new interactive textbooks were launched that enabled extra-curricular activities through mobile devices to extend learning beyond the classroom using hashtags and QR codes, linking to OER. The repertoire of OER was also shared to the various partners.

Finally, the partners were able to collect data for future research papers as part of capacity building a research culture from the project across both of these visits conducted in close proximity. Discussions were held with TEFL classroom teachers and student groups to get feedback and compare results to the first Needs Analysis. In Turkey we went beyond these actions to consider future collaborations and working projects, which for the immediate future comprises the writing of evaluation reports, research studies, papers and chapters about the project. This has been fruitful and it is pleasing to see that a culture of enquiry among practitioners is developing innovation, and also that a dynamic education system can be devised from what is learned and shared from these projects, including their limitations.

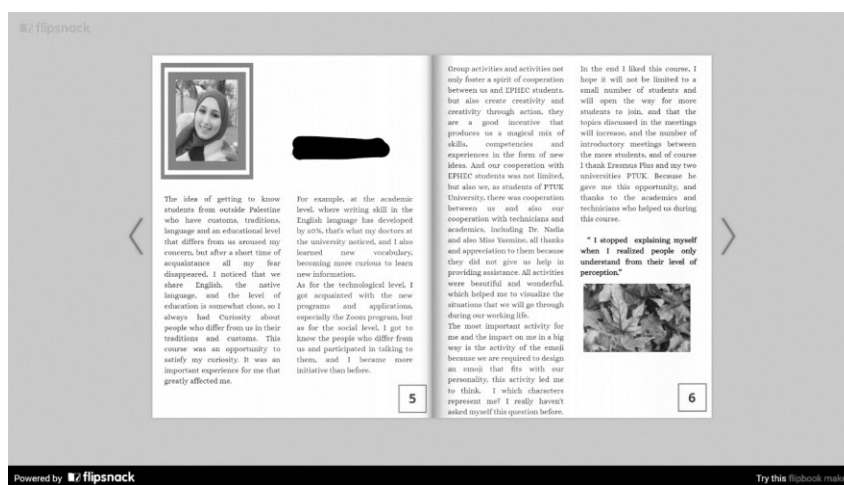
3.5 *Some examples from changed teaching practices*

In Palestine in 2022, it was evident to see practices and tools promoted in the earlier UK technical workshop enacted by local teachers. Examples included using online social networks (Edmodo.com, described earlier) or online journals (Flipsnack.com, where users can create digital books so that students write submissions and can add photographs and design elements) to extend learning beyond classrooms that many students cannot routinely reach. Teachers at a university in Bethlehem asked students to practice their spoken English with native speakers by finding and interviewing western tourists in the city streets about their impressions of Palestine. They uploaded the results to the online network and commented on one another's work to enhance peer interaction. The

teacher was able to give feedback and generate peer assessment and devise an assessment rubric based on the practice.

The use of Flipsnack (See Figure 2) enabled students to practice written English in open publishing (Scott, 2018). Open publishing is the notion that language is a social instrument and digital storytelling can help students to reflect on their life stories and educational autobiographies to develop confidence and authorial voice (Scott & Bennett, 2022).

FIGURE 2: Example of online writing in the Flipsnack journal; identity of student redacted



The values mentioned earlier in this section gave us the foundation for a socially just educational experience. Central to this is the importance of Palestinian identity, the preservation of their sovereignty and heritage as integral to language teaching, but also one that is progressive. We were mindful of the power of mobile technology to speak to the world. The digital literacy inherent at a cultural level in Palestine has been said to strengthen social and political agency (Traxler, 2018): individuals come to use harness mobile technologies as a media activism to tell the world the truth of what is happening in their immediate local context. Although it could be reckless as an educator to promote political activism among students in a region with such aggressive oppression, we can conceive of a pedagogical framework that is values-based and socially just and which empowers individuals and communities.

4 Research on the Project

4.1 *Research Design*

The chapter continues by discussing responses from 20 Palestinian TEFL language teachers from across the HEIs of mixed age, gender and teaching experience. An online forum was created with an open invitation to teachers involved across the project asked to participate, with open questions posted on a weekly basis over 12 weeks to stimulate responses in the period of December 2020 – January 2021. It was explained in advance that the forum was designed to look at the factors enabling and inhibiting teachers' ability to innovate with technologies.

The questions sought to get participants to reflect on practitioner changes through the project lifetime. Examples of questions ranged from prompts such as 'Please define and describe what innovative teaching with technologies means to you', to open questions ('is there anything you would like to do with technology that something prevents you from doing?'; 'what new technologies have you introduced to practice since the project started?'; 'how has the Covid pandemic facilitated or prevented new modes of teaching with technologies?'). Possibly most importantly, the question 'in what ways does your teaching with technology promote the values from the project listed here?' was included and accompanied by the pedagogical values collectively established in the workshop.

Participants posts were anonymized in order to encourage them to be as open and thoughtful (and potentially critical) as they could and editing of their posts was available to them in order that they could rewrite or add anything to their original response as the 12 weeks went on. They were able to read and comment on one another's responses and were able to write responses in Arabic if they preferred to support full expression. Ultimately, all Palestinian responses were written in English, so those that conclude this chapter are verbatim from the forum alone and were written in English. We acknowledge the perceived limitations this may have on expression, but also that all participants are University TEFL teachers with levels of fluency.

In various fashions, the questions explored teaching practice. They reflected on how the values established in the initial meeting (see chapter 2) had been met, or what barriers prevented them. Teachers were also asked to consider the influence of technologies on pedagogical transformation, including any potential sustained impact from the technical and pedagogical workshops on their practice. They were also asked how professional development had filtered through to other colleagues and to outline any continued obstacles towards pedagogical

change. Finally, they focused on the changes in teaching practice and perceived response from students. Taking a constructivist orientation, the responses were interpreted via thematic analysis in order to explore “social, cultural and structural contexts that influence individual experiences” (Kiger & Varipo, 2020, p. 3), looking at responses from across the forum and clustering them into overarching themes. Thematic analysis can take a variety of approaches, depending on the type of study. For instance, researchers may variously seek to understand individual perceptions or governing structures of organizations, and this could determine their focus. Here, no singular approach was adhered to; the data was rather approached and treated in a deductive and inductive manner to match the open-ended nature of the questions that allowed for plurality and multiplicity of views and experiences. The data was exported from the forum to blank documents and manually analyzed in order to be immersed and close to the data. Once preliminary themes were identified, member-checking with Palestinian co-authors of this paper was undertaken in order to ensure some accuracy in interpretation for how the themes were labelled according to the responses.

4.2 Discussion of Findings

There now follows an exploration of the forum responses, which were organized into three preliminary main themes: firstly, the preponderance of characteristics relating teaching and technology with the local culture was noted, which was labelled as the overarching theme ‘culturally-situated pedagogy’. Quotes from the forum that relate to that theme are drawn into discussion in the following section. The second theme was labelled ‘changes perspectives of teaching and learning’, and the third was ‘Continued Professional Development for a paradigm shift’. Please note that the discussions are kept concise for brevity in word count.

4.2.1 TEFL-ePal: a culturally-situated pedagogy

The forum opened with a prompt asking across our partners where the new formats of embedding technology into teaching helped to meet the values extrapolated from the workshop session. It can be seen from some responses that what the teachers really benefitted from was a culturally-situated pedagogy, close to the values that were jointly established in the meeting in Ramallah, with one teacher acknowledging the bridge between sovereign culture and innovation: “*Capacity-building means preserving effective, traditional practices and continuing to develop and support them with what’s new.*”

Another teacher added: *“The activities are diverse and culturally-loaded and give students ample opportunities for self-expression and negotiation of meaning.”*

We can see elements of transformation in student dynamics exemplified in the educators’ answers, as one teacher said: *“[By] Giving the chance to students to be initiators and innovators.”*

As for the authenticity of the resources and materials of teaching, one teacher pointed directly to ‘identity’ as an important factor in the new learning processes:

“The new curricula content is related to student's culture and related to students' real life situations, which supports students identity. The design of the courses and the opportunities they provide students with to be active and share information with other students have the potential to increase critical thinking and participate in problem-solving even if their linguistic competences are limited.”

This quote demonstrates what Biesta (2009) calls subjectification, which is giving individuals a sense of who they are. This is reflected in the journal writing on Flipsnack, or Edmodo which empowered students to share snapshots or reports from their own communities, evoking student agency to act autonomously and collaboratively through interactions. There is also evidence of teachers having more freedom to teach about their own heritage, rather than studying a foreign text, through: *“the use of English for students to reflect on and discuss their own culture.”*

This coupling between autonomy and collaboration is especially important in a society where people are segregated and divided by road closures, the segregation wall, roadblocks and campus closures (Alfoqahaa, 2015; Johnson, 1989). Where students are often isolated, their ability to connect through technologies is vital and emancipating.

4.2.2 Changed perspectives of teaching and learning

The responses reflected a transformation in practice by teachers that positioned students as more central to their learning experience and, critically, gave students more choice and teachers more practitioner freedom.

“It makes the learning process (material, tasks, activities, projects, etc...) more personalized, enjoyable, and interactive for students.” The

second indicator regards enhanced practitioner freedom for teachers, which is evident above in the “personalized” approach. This cannot be understated where institutions are often highly prescriptive in the way they want teachers to teach. This can be didactic and instructional, which is unappealing to their students – as well as their teaching staff. We started to see some of the shaping of different approaches in terms of content, mode and access:

For me, I used YouTube videos for the clarification of ideas and concepts and for creating interaction. Such videos best exemplify flipped learning, a technique I often use. The whole material is actually uploaded and we also upload material of our own choice.

And in the following we see how pedagogy and technology dovetail and also lead to continual practitioner development:

I am now incorporating the blended learning approach in all my courses. I plan to learn more about and test emerging technological platforms which can accentuate my teaching practices and satisfy students’ affinity for all things technological.

Other teachers in the forum pointed to the use of technology as procuring dynamic skills among students: *“They showed great competence in problem-solving, collaboration, employability, and life skills.”*

There is clear understanding of the importance of interaction through technologies and how encouraging student participation enriches learning:

The teacher can reach students and they can interact with each other outside their institutions. It also means that the teacher can prepare or use digital materials before class, during class or after class to increase students’ participation, build up knowledge, develop skills and assess their work with immediate feedback aiming to develop performance.

The pedagogical support drawn from workshops was also clear for teachers who reported the following:

Project-based learning technique is widely implemented and my students liked it a lot. There was a massive change in the evaluation process. I divided students into groups; each group is reached through social media - whatsapp in particular.

I employed project-based learning using students' smartphones where they were asked to produce a kind of videotape while they are practicing the speaking skill to something related to their course language use.

These instances demonstrate the importance of pedagogical theory leading the use of the technology with the remote elements, indicating an innovative approach that seems emancipating.

However, inevitably numerous restraints were identified in terms of how the teachers were able to pedagogically innovate. Various reasons accounted for this, including: a lack of training by colleagues; institutional barriers such as permission to be innovative; the poor WIFI connectivity available; or finding time needed to prepare digital materials or create resources. As other studies have found (Alghamdi, Rajab and Rashid, 2016), we see that students congregate in seemingly trusted spaces, forming concentric communities within Applications such as Whatsapp or Messenger. One center reported that the use of project-based learning complements higher-level students better than lower-level students. However, even with low-level students, with less focus on heavy grammatical text instruction, students appear more enthusiastic with the new modes of applying their learning. The enhanced choices in pedagogical approach available for teachers and students are clear to see:

digital tasks were used throughout the courses. YouTube videos were chosen based on the level of English language employed and the relation to the course topics.

Students can choose their favorite topics from any source for a video talking project and they have the liberty of deciding on their presentation or design platforms (Canva, Prezi, Publisher, PPT, etc). They can even choose to work in groups, pairs, or individually.

These responses show that innovation is present as teachers develop more options from channels and platforms they become familiar with, opening up new possibilities for students.

4.2.3 Continued Professional Development (CPD) for a paradigm shift

In the UK, a culture shift in approaches to teaching vocational and technical education arguably happened through the Further Education Learning Technologies Action Group (FELTAG) 2014 report, which argued for the digitalization of practice. With pioneering practitioners referencing the recommendations from the report and sharing their own means of meeting it, a change in teaching culture started to occur as teachers congregated on Twitter or via online conferences to discuss their use of tools and emergent pedagogies (Scott, Iredale and Harrison, 2022).

This became the final theme that emerged in analysis of the teacher's responses: internal CPD, which chimes with the endeavors of FELTAG. As we asked what the main benefits from the project overall were, we received varied replies that focused on the development of staff capability:

I think the most important value of the project is the capacity enhancement of the staff members that enable us to integrate tech in teaching and learning and also assisted our academic staff to develop almost from scratch parts of the newly developed curriculum.

Others reported that it was technical capacity building it had facilitated:

For me as a technician and lecturer at the Engineering and IT department, the most important value of the project is we trained all the staff at our university how to design the interactive content and materials for different courses in particular the difficult one. Such as math and law courses.

There is a clear proliferation in the responses to staff development and where staff can lead and innovate. They will be able to better shape shared learning communities among practitioners for pedagogical and technical development via professional networks that appear to be lacking throughout the country. Informal communities of practice (Traxler et al., 2020, p. 56) that support CPD among teachers are a means to help cascade knowledge and best practice. It can be seen that this internal shaping of professional development is realized by some teachers who participated in the project:

If we want to conceptualize capacity-building, it fundamentally means improving effectiveness at the organisational level and at the individual level as well. It purports to make my profession more adaptive and responsive to the changing conditions. This can be done if we, the staff, are provided with greater access to resources, training programs, consultations and expert advice. All this can be coupled with strategic planning and networking opportunities.

The emphasis placed on capacity-building from these responses should be noted. The FELTAG report mentioned earlier fed a UK grassroots movement, since classroom practitioners who were hamstrung by institutional restrictions on use of mobile technologies to support learning in a digital world helped to realize its intentions. They shared best practice among themselves through social media chats and at informal conferences to trigger a paradigm shift in teaching. Two of the FELTAG report's guiding principles were, firstly, that Government cannot provide answers to professional instinct for change. Secondly, that ownership of the report's outcomes were set by the Further Education sector itself – a sector that covers wide-ranging community settings “including colleges, workplaces, private training providers” (2013, p. 6), and more. Language learning may be a different context to vocational practice, but there are overlaps in how a base of professional practitioners seek to utilize models of online pedagogy to rejuvenate a dilapidated curricula (Bakeer, 2018; Dwaik & Abu Shehadeh, 2013).

5 Implications

Recommendations may be distilled from that report to shape internal cultures in institutions since we are able to see here the value derived from technologies. Central to these are the implications of this chapter for a local notion of digital literacy that is culturally defined and culturally sensitive (Traxler, 2018). While digital literacy can conventionally be understood as a means for technologies to support orthodox literacies, as well as access to education, it can also signify criticality activism and other immediate needs borne out through practices using digital tools that reflect the local culture.

Teacher education is critical to this, and it must take a broad look at the challenges of an education system that in large parts can still be situated in a traditional past while trusting in professionals to be responsive and agile to the changing dynamics and needs of their students and the wider

world. We learnt clearly from the pandemic that online and self-directed learning is paramount in periods of disruption. Students need support in learning to learn; teachers need support in knowing where to find ready-made OER and materials that can enable more fluency in disruption.

The social domain is very clear in uses of technology and in teaching also. It is not really possible to go too far away from that in Palestine before issues of justice naturally arise as existential and ontological questions, and this is where a need for a socially just pedagogical approach is both imperative and currently impossible. Social justice must be implicit in teacher education in Palestine and that can be factored through a focus on digital literacy. There is space for instrumentalism or for a utilitarian approach to teaching and learning, to improve students' lives and give them employable skills, but education must also be egalitarian and retain a sense of what is truly at stake and confront the realities of dominance and resistance. Power dynamics in the classroom contribute to this, and teacher education must empower teachers to understand their role in promoting social justice.

6 Conclusion

We are aware of the need for pragmatism and that aspiration and idealism are center points but rarely – if ever – truly realized. The relevance of an education program that is culturally specific to its students is evidently important to the Palestinian staff from across different institutions. Aspects of project-based learning appear to be suitable means of creating a pedagogy matching a national curriculum, which aspires to sustain its heritage. The approach also appears to modify the learning environment, taking it to new directions by incorporating the home and community life in a mobile way.

The discussion of staff development with educators focused on their students' needs, and their own disciplinary commitment is paramount, does not require capital investment and will have pay-off. The impact of improved adaption of existing practices on students can be huge and create an entire shift in expectation of how teaching can be done, but it starts with the educational practitioners. It was previously mentioned how digital literacies and their related tools can help activists to realize and widen their voice, to preserve their communities heritage and share their stories widely and this can stem from a digitalized education system that embraces those tools. If in-course practices with digital literacies improve, this can result in local cultures cultivating their own community

web developers to develop bespoke Open Educational Resources, social platforms and private communications, as well as an authoring of the self that can empower social relations.

References

- Alfoqahaa, S. A. A. Q. (2015). Economics of higher education under occupation: The case of Palestine. *Journal of Arts and Humanities*, 4(10), 25-43.
- Alghamdi, E. A., Rajab, H., & Rashid, S. (2016). Unmonitored students self-created WhatsApp groups in distance learning environments: A collaborative learning tool or cheating technique. *International Journal of Research Studies in Educational Technology*, 5(2), 71-82.
- Alsurehi, H. A., & Youbi, A. A. A. (2014). Towards applying social networking in higher education: Case study of Saudi universities. *International Journal of Academic Research*, 6(5), 221-229.
- Arslan, A. (2020). A systematic review on flipped learning in teaching English as a foreign or second language. *Journal of Language and Linguistic Studies*, 16(2), 775-797.
- Bakeer, A. (2018). Students' attitudes towards implementing blended learning in teaching English in higher education institutions: a Case of Al-Quds Open University. *International Journal of Humanities and Social Science*, 8(6), 131-139.
- Bakeer, A., & Scott, H (2019). Teaching English as a Foreign Language in Palestinian HEIs: An e-Learning Initiative that Bridges Educational and Socio-Political Gaps "TEFL-ePal". *ALT (Association for Learning Technology)*. Retrieved 31 August, 2022, from <https://altc.alt.ac.uk/blog/2019/05/teaching-english-as-a-foreign-language-in-palestinian-heis-an-e-learning-initiative-that-bridges-educational-and-socio-political-gaps-tefl-epal/>
- Baalousha, G., Al-Talbani, M., Tayeh, M., Omari, N., & Talbani, I. (2009). The Development Role of Higher Education in Palestine. *Institute for Development Studies*. Retrieved 16 August 2022, from <http://www.idsps.org/new/doc/The%20development%20role%20of%20higher%20education%20in%20Palestine.PDF>
- Bennett, K. (2013). English as a lingua franca in academia: Combating epistemicide through translator training. *The interpreter and translator trainer*, 7(2), 169-193. <https://doi.org/10.1080/13556509.2013.10798850>
- Bianchi, R., & Razeq, A. H. A. (2017). The English language teaching situation in Palestine. In R. Kirkpatrick (Ed.), *English Language Education Policy in the Middle East and North Africa* (pp. 147-169). Springer.

- Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education)*, 21(1), 33-46.
- Biesta, G. J., & Miedema, S. (2002). Instruction or pedagogy? The need for a transformative conception of education. *Teaching and Teacher Education*, 18(2), 173-181
- Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: a tool to enhance trustworthiness or merely a nod to validation?. *Qualitative health research*, 26(13), 1802-1811.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational researcher*, 18(1), 32-42.
- Dwaik, R., & Shehadeh, A. (2010). Motivation types among EFL college students: Insights from the Palestinian context. *An-Najah University Journal of Research (Humanities)*, 24(1), 333-360.
- Further Education Learning Technology Action Group (FELTAG) (2013). *Paths forward to a digital future for Further Education and Skills*. Retrieved 21 December 2022, from <http://feltag.org.uk/wp-content/uploads/2012/01/FELTAG-REPORT-FINAL.pdf>
- Garrison, D. R., Anderson, T., & Archer, W. (2000) Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education*, 2(2-3), 87-105.
- Grande, Sandy (2009) American Indian Geographies of Identity and Power. In A. Darder, M. Baltodano, M., & R. Torres (Eds.), *The Critical Pedagogy Reader* (pp. 324-337). Routledge.
- Hamilton, M. (2001). *Sustainable literacies and the ecology of lifelong learning* (pp. 186-197). Routledge.
- Jalal, A. (2015). English study an escape for Gazans. *Al-Monitor: The Pulse of the Middle East*. Retrieved 16 August, 2022, from <https://www.al-monitor.com/pulse/originals/2015/07/gaza-youth-learn-english-language-job.html>
- Johnson, P. (1989). Palestinian Universities under Occupation 15 August-15 November. *Journal of Palestine Studies*, 18(2), 92-100.
- Khalifah, A. A. (2010). Educational Research in Palestine: Epistemological and Cultural Challenges- a Case Study. *Doctoral Dissertations Available from Proquest*. Retrieved 21 December 2022, from <https://scholarworks.umass.edu/dissertations/AAI3409606>
- Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical teacher*, 42(8), 846-854.
- McLoughlin, C. (2011). Reinventing the 21st century educator: Social media to engage and support the professional learning of teachers. In G. Williams, P.

- Statham, N. Brown, & B. Cleland (Eds.), Changing demands, changing directions. Proceedings of the ASCILITE Hobart Conference 2011 (pp. 847-851). Retrieved 21 December, 2022, from <https://www.ascilite.org/conferences/hobart11/downloads/papers/Mcloughlin-concise.pdf>
- Meyer, A., & Rose, D. H. (2013). Universal design for learning and the arts. *Harvard Educational Review*, 83(1), 98.
- Muhtaseb, R. (2022). *Social Media Use and Potential in Formal and Informal Science Learning: A Multiple Case Study of Three Palestinian Educational Institutions* [Unpublished doctoral dissertation]. University of Wolverhampton.
- Mulder, J. (2008). *Knowledge dissemination in Sub-Saharan Africa: What role for open educational resources (OER)*. University of Amsterdam. Retrieved 21 December, 2022, from <https://www.oerknowledgecloud.org/archive/mulderOER.pdf>
- Pachler, N., Cook, J., & Bachmair, B. (2010). Appropriation of mobile cultural resources for learning. *International Journal of Mobile and Blended Learning*, 2(1), 1–21.
- Ramahi, H. (2015). Education in Palestine: Current challenges and emancipatory alternatives. *Rosa Luxemburg Stiftung Regional Office Palestine*, Retrieved 16 August, 2022, from <http://www.rosaluxemburg.ps/wp-content/uploads/2015/11/RLS-Study-29.11.15-final.pdf>
- Rao, K., & Torres, C. (2017). Supporting academic and affective learning processes for English language learners with universal design for learning. *Tesol Quarterly*, 51(2), 460-472.
- Romahi, E. (2010). *Assessing the Educational System in Palestine: An NGO Perspective*. Retrieved 16 August, 2022, from <http://www.teachercc.org/uploads/articles/a4062e5fd611fa083d30b368f467e646.doc>
- Scott, H. E. (2018). Through the wall of literacy: Transformative practice in social networks among GCSE re-sit Further Education students. *Education + Training*, (60)6, 569-583. <https://doi.org/10.1108/ET-03-2018-0054>
- Scott, H., and Bennett, P. (2022). 'Silence is the sentence': adult learners' experiences of a co-created curriculum constructed through free writing tasks. *Prism Journal*. 1-10. DOI: <https://doi.org/10.24377/prism.ljmu.0402214>
- Scott, H., Iredale, A., & Harrison, B. (2022). FELTAG in rearview: FE from the past to the future through plague times. In J. Traxler & M. Smith (Eds.), *Digital Learning in Higher Education: COVID-19 and Beyond* (pp. 24-36). Edward Elgar.
- Selwyn, N. (2012). *Education in a Digital World: Global Perspectives on Technology and Education*. Routledge.

- Sener, J. (2007). In search of student-generated content in online education. *e-mentor*, 21. Accessed August 16, 2022: http://www.e-mentor.edu.pl/_xml/wydania/21/467.pdf. In *Sydney 2006. Sydney: University of Sydney*
- Sfard, A. (2009, November). Moving between discourses: From learning-as-acquisition to learning-as-participation. *AIP Conference proceedings*, 1179, 55-58. <https://doi.org/10.1063/1.3266753>
- Shehadeh, A., & Dwaik, R. (2013). The Practice of Teaching English to Young Learners in the Palestinian Context: A Multidimensional Analysis. *Arab World English Journal*, 4(3), 63-76.
- Smith, M., Scott, H. & Traxler, J. (2022). When Classrooms aren't an Option. Researching Mobile Language Learning through Disruption. In H. Reinders, C. Lai, & P. Sundqvist (Eds), *The Routledge Handbook of Language Learning and Teaching Beyond the Classroom* (pp. 395-407). Routledge.
- Tawil-Souri, H., & Aouragh, M. (2014). Intifada 3.0? Cyber colonialism and Palestinian resistance. *The Arab Studies Journal*, 22(1), 102-133.
- Tefl-ePal project (2019). *TEFL-ePal Project, Co-Funded by the ERASMUS+ Programme of the European Union*. Retrieved 16 August, 2022, from <https://tefl-epal.ps>
- Traxler, J. (2018). Digital literacy: a Palestinian refugee perspective. *Research in Learning Technology*, 26, 1-21.
- Traxler, J., Khaif, Z., Nevill, A., Affouneh, S., Salha S., Zuhd, A., & Trayek, F. (2019). Living under occupation: Palestinian teachers' experiences and their digital responses. *Research in Learning Technology*, 27, 1-18. <https://doi.org/10.25304/rlt.v27.2263>
- Traxler, J., Scott, H., Smith, M., & Hayes, S. (2020). Learning through the crisis: Helping decision-makers around the world use digital technology to combat the educational challenges produced by the current COVID-19 pandemic. *EdTech Hub*. Retrieved 16 August, 2022, from [https://wlv.openrepository.com/bitstream/handle/2436/623926/Traxler et al Learning through the crisis 2020.pdf?sequence=3](https://wlv.openrepository.com/bitstream/handle/2436/623926/Traxler_et_al_Learning_through_the_crisis_2020.pdf?sequence=3)