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Refugee Education: A Rapid Evidence Review

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Rapid Evidence Reviews

This publication is one part of a series of Rapid Evidence Reviews that has been produced by EdTech Hub. The purpose of the Rapid Evidence Reviews is to provide education decision-makers with accessible, evidence-based summaries of good practice in specific areas of EdTech. They are focused on topics which are particularly relevant in the context of widespread global challenges to formal schooling as a result of Covid-19. All the Rapid Evidence Reviews are available at https://edtechhub.org/research/.

This rapid evidence review was written by EdTech Hub and Refugee Support Network. Refugee Support Network is a UK-based NGO that helps young refugees build brighter futures through education.

Contents

Abbreviations and acronyms

EdTech   Educational technology

ICT   Information and Communications Technology

IOM   Internal Organisation for Migration

LMICs   Low and middle-income Countries

MOOC   Massive Open Online Courses

OER   Open Educational Resources

PSS   Psychosocial support

RER   Rapid Evidence Review

TIGER   These Inspiring Girls Enjoy Reading

UNESCO   United Nations Educational, Scientific and
                Cultural Organization

UNHCR   United Nations High Commissioner for Refugees

Summary

This Rapid Evidence Review (RER) provides an overview of existing literature on the use of educational technology (EdTech) for education of refugees in low- and middle-income countries (LMICs). The RER has been produced in response to the widespread global shutdown of schools resulting from the outbreak of Covid-19. It therefore has an emphasis on transferable insights that may be applicable to educational responses resulting from the limitations caused by Covid-19. In the current global context, lessons learnt from the use of EdTech in refugee contexts — in which education is often significantly disrupted and education systems and responses are required to rapidly adapt — are salient.

This RER provides a summary of the potential benefits of using technology for education of refugees as well as its risks, limitations and challenges. Notably, the RER aims neither to advocate nor discourage the use of technology in refugee education in response to the Covid-19 pandemic, but rather to provide an accessible summary of existing evidence on the topic so that educators, policy makers and donors might make informed decisions about the potential role of technology for the education of refugees and more broadly.

The RER involved a systematic search for academic and grey literature about the use of EdTech in the education of refugee children in LMICs. However, in some cases, literature that included refugee education in high-income country contexts were also considered. After a screening process, 33 studies published in the last 15 years were analysed. Details on the inclusion criteria, as well as the associated limitations, are explained in the methodology section. The rapid nature of the review required a focused approach to literature discovery, and a thematically guided process of analysis, so that a timely response to Covid-19 might be provided. As such, the search strategy was not designed to be exhaustive.

The findings of the thematic analysis of the relevant literature on technology for refugee education are structured according to four themes:

1. **Continued access to education:** This theme discusses how technology can facilitate continued access to education amid significant disruption caused by displacement.
2. **Modalities and pedagogies:** This theme examines the ways in which technology delivers or supports education and learning, with a particular focus on pedagogies.

3. **Supporting educators of refugee children:** This theme explores how technology can support educators of refugees, both inside and outside the classroom.
4. **Psychosocial support:** This theme examines the ways in which EdTech and related pedagogies may support the psychosocial wellbeing of disrupted learners.

The key findings from this review are:

1. **EdTech can facilitate access to education and learning during periods of disruption caused by forced displacement.** However, EdTech must be adapted and contextualised to each refugee setting: this has to account for local attitudes towards technology and promote refugees' feelings of ownership, particularly among education stakeholders on the front lines of implementation.
2. **EdTech should support, not replace, teachers and others supporting learning, even when they are not fully qualified** (as is often the case in refugee settings). Integrating pedagogical capacity-building is key. This will normally necessitate a learner-centred approach, which may differ from the way most teachers and students understand learning. Adapting to the new pedagogical method, together with the use of EdTech tools, is likely to require ongoing training and support for teachers and educators.
3. **Technology enables continued support for teachers beyond basic training and can facilitate local to global connection**s, widening the support network and learning community for teachers of refugees.
4. **Psychosocial wellbeing of children affected by forced displacement can, at times, be supported through EdTech modalities and pedagogies**; digital games and EdTech that encourages creativity and imagination and facilitates social connections and support networks demonstrate potential.
5. **The implementation of EdTech presents some challenges.** Cost and logistical feasibility are primary issues, but the design and maintenance of tools and their content should also be considered carefully, as these have further implications on full-cost appraisals over the life of interventions. The sustainability of interventions must be considered from the outset in order to avoid further disruption to refugee children's education progression.

1. Introduction

The Covid-19 pandemic has resulted in widespread and unprecedented global disruption to education. Information Communications Technology (ICT) can play an important role in tackling the educational challenges raised by Covid-19, resulting from physical distancing policies which often advise that students and teachers cannot congregate in schools in the conventional manner, by delivering education over distance and at scale.

This RER provides a summary of the potential benefits of using technology for education of refugees as well as its risks, limitations and challenges. It does this in order to offer insight and evidence that can assist in the development and implementation of effective EdTech interventions across the globe and in situations of forced migration within the current context.

1.1. Background

Despite being consistently prioritised by refugee children (Gladwell and Tanner, 2014) and a right enshrined by the United Nations Convention on the Rights of the Child, education is often disrupted by forced displacement. Recent UNHCR statistics uncover the extent of this disruption: an estimated 63% of refugees are enrolled in primary school compared to 91% of children globally, and approximately 24% of refugees are enrolled in secondary school compared to 84% of children globally (UNHCR, 2019: pp. 5–6). There are a number of well-documented challenges related to refugee education, including lack of educational resources, limited availability of schools, overcrowded classrooms and untrained teachers (UNESCO, 2018).

Technology has increasingly been leveraged by humanitarian actors to respond to the significant disruption to the education of refugee children. It is believed to hold "*great promise*" (Lewis and Thacker, 2016: p.5) in supporting refugee education because of its ability to move with refugee populations, deliver educational content to remote locations at a potentially low cost, and reach those unable to be in school (Joynes and James, 2018).

1.2. Purpose

Lessons learnt from the use of technology for the education of refugees are salient in the current global context. There are several similarities that can be observed between the widespread disruption caused to education

by the Covid-19 crisis and that resulting from forced displacement. Namely, educational responses in refugee contexts have had to:

- Respond to significant disruption and adapt education systems with limited time and resources;
- Address the disparities between students in terms of educational levels and the resources and support accessed outside of school;
- Support teachers who may be unprepared or under-trained to respond and adapt to a new situation;
- Support the socio-emotional wellbeing of disrupted learners (UNESCO, 2018).

This evidence review, alongside others, contributes to an emerging evidence base on the use of technology for education during the Covid-19 pandemic, and organises the most relevant literature into coherent themes for the consideration of key stakeholders.

1.3. Application

The insights presented in this RER are expected to be viewed as principles for the planning and implementation process of technology for the education of refugees. The expectation is that readers will use their own expertise from their local context to apply the appropriate recommendations. This means the recommendations are not specific guidelines that can be applied universally. Patterns of good practice have emerged from the evidence on how, when and why technology can be used for refugee education, and it can be reasonably expected that many of the insights are applicable in the context of widespread educational disruption caused by the Covid-19. The evidence can also inform how education for refugees in LMICs can be adapted during this time.

1.4. Research questions

Two research questions guide the study:

1. What are the key emergent themes in the available literature on the use of technology for education of refugees in LMICs?
2. What are the key learnings and recommendations that can be drawn from the available literature to inform a response to the Covid-19 pandemic?

1.5. Definition and scope of the study

For the purposes of this review, the term refugee is used to describe those who have been forced to flee their homes, in particular as a result of or in

order to avoid the effects of armed conflict, generalised violence, violations of human rights or natural or human-made disasters.[1] The term is used in this RER to cover both internal displacement (internally displaced persons) and cross-border displacement (refugees).

Another RER focuses on the use of technology to support education in emergencies. While there is some overlap with emergency contexts (see Limitations section) this RER focuses specifically on challenges facing the education of those who have been forcibly displaced as opposed to those living in emergency contexts..

1.6. Theme identification

After conducting a scoping review to compile a list of relevant keywords, a systematic search was conducted for evidence on refugee education. More detail on that process, including the inclusion and exclusion criteria, is provided in the Methodology section. After all screening was completed, 33 papers were selected for analysis. A thematic analysis of these papers led to them being classified into four themes, all of which have sub-themes. Those themes and sub-themes, which are discussed in depth in the Findings section of this review, are:

- Continued access to education
    - Access to education in displacement contexts
    - Forms of education and learning made accessible
    - Quality and continuity of education content
    - Equitable access to education
    - Cost and sustainability considerations
- Modalities and pedagogies
    - Modalities of delivering education and learning
    - Integrating pedagogy into EdTech interventions
    - Learner-centred approaches
    - Community participation for contextualisation
- Supporting educators of refugee children
    - Educators of refugee children targeted by EdTech initiatives
    - Supporting continuous teacher development
    - Enhancing access to teacher training courses
    - Practical support to educators and education systems
    - Supporting teachers to engage with EdTech resources
- Psychosocial support
    - Psychosocial wellbeing and EdTech-related pedagogies and modalities

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[1] Adapted from IOM's key migration terms available at: www.iom.int/key-migration-terms

- ○ Game-based EdTech tools
- ○ Nurturing resilience and identity development.

1.7. Structure of the RER

Following this introduction, the methodological approach is discussed, including details of the scoping review, the literature search, eligibility criteria and possible limitations of the methodology. Detailed findings are then presented under the four themes that emerged from a thematic analysis of identified literature. The report concludes by providing a synthesis of the findings from the literature.

1.8. Methodology

The methodological approach is informed by the Cochrane Collaboration Rapid Reviews Methods Group interim guidance on producing rapid reviews (Garrity et al., 2020). This permits a rigorous and systematic approach while defining the scope narrowly enough that it can be completed within a short span of time.

While the intention was to model this rapid evidence review on a systematic, thematic review of primary studies, it quickly became apparent that there are significant evidence gaps on this topic, particularly in terms of rigorous, quality evaluations or impact studies (Tauson & Stannard, 2018). Consequently, a decision was made to include reviews of other literature or systematic reviews.[2]

The research process therefore comprised a systematic sequence of scoping, searching and screening. In the scoping phase, the research questions and eligibility criteria were defined and a brief scoping review was conducted to help elicit relevant search terms for the search queries. A focused set of searches was then run within the relevant academic databases. The search results were then screened according to the inclusion criteria.

1.9. Scoping review

Unlike systematic reviews, the criteria for scoping reviews are not yet well-defined. However, these reviews are widely considered as representing a stage prior to a systematic review where the key concepts

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[2] Higgins and Green (2011) distinguish a systematic review thus: "*A systematic review is secondary research that seeks to collate all primary studies that fit prespecified eligibility criteria in order to address a specific research question, aiming to minimise bias by using and documenting explicit, systematic methods.*"

and ideas that define a field are explored and discovered in an iterative process (Daudt et al., 2013; Levac et al., 2010). Notably, the scoping review of this study did not aim to map out all the concepts, theoretical or otherwise, included in the scope of technology and refugee education. Instead, it had a more specific focus: to identify keywords and terms that had been used in studies that discuss the use of technology for and in the education of refugees.

The scoping review process began by noting relevant keywords and terms already known to the authors to search for additional literature. The process was iterative, with the terms found in one article leading to searches for other articles that then revealed different, or the same, terms. Using this method, a list of 26 search terms was compiled (Annex A). It is important to draw attention to the point that when a search term brought up an article with a relevant title, those articles were saved to be screened later alongside those that were found during the main literature search explained below.

1.10. Literature search

The literature search began after establishing the search terms at the end of the scoping review. Google Scholar constituted the primary source of literature. Figure 1 details the process used to arrive at the articles that were ultimately thematically analysed in this review. It is important to highlight that unlike a more traditional systematic review process, which may screen all search results, the rapid review methodology used herein relied on a system of quotas. As such, only the most relevant results (up to a maximum of 500), as ranked by Google Scholar, were selected for the first round of screening. Seventy-five articles were initially captured for further screening.

It is important to highlight as well that the results were not screened and ranked for quality or limited to peer-reviewed/academic publications. Relying solely on peer-reviewed academic articles would have resulted in a narrower, less generalisable review. Crucially, this would also have excluded a larger number of voices from LMICs due to the systemic factors that exclude many academic researchers in LMICs from mainstream peer-reviewed journals.
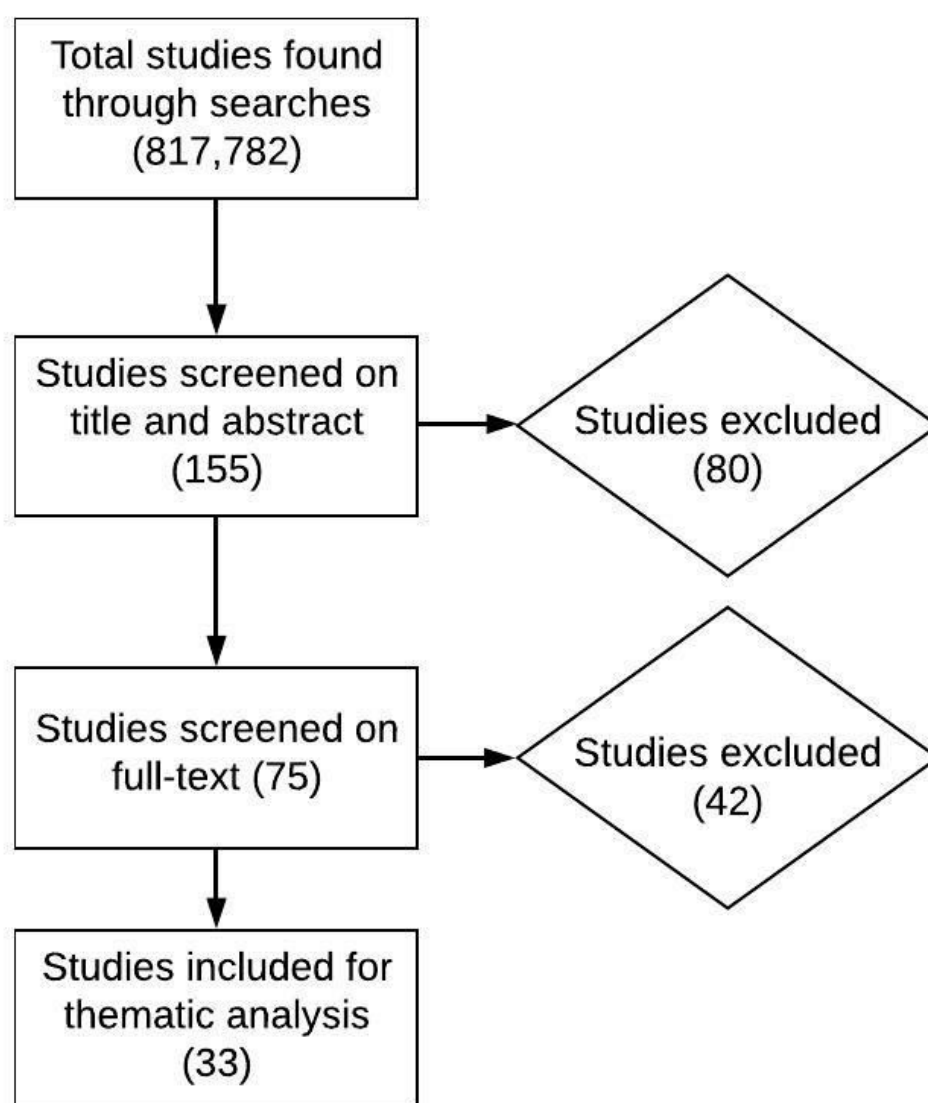
1.11. Screening and eligibility criteria

The title and abstract screening, as well as all other subsequent screenings, were conducted according to the eligibility criteria laid out in Table 1. It should be emphasised, though, that the screening criteria were

not absolute. For example, when search terms returned a large number of studies, quotation marks were added to core concepts (for example, "education technology" or "refugee education") to focus the search on the most relevant literature.

Moreover, while the majority of selected sources met the eligibility criteria, a small, complementary collection of sources that were deemed especially informative, but did not meet all criteria, was referenced. However, these exceptions were only made when an article met all except one of the eligibility criteria. An exception, for example, might therefore be made if a study explored the use of technology for refugee education, but focused on refugee camps in high-income countries.

One limitation of relying on Google Scholar as the primary source of literature was the number of low-quality papers collected. While the title and abstract may have demonstrated the necessary relevance to be captured initially, the substantive content often proved to be of low quality. These, therefore, were only filtered out only after the full text had been read.

Figure 1. *Literature search and screening process*

Table 1. *Eligibility criteria for literature searches and screening*

Criterion type	Inclusion criteria
Education	Primary and / or secondary
Geography	LMICs
Literature type	All
Date	2008–2020

Finally, attention is drawn to the other methods that were used to find literature. These involve snowball sampling searches. While the main thrust of the literature review involved a highly systematic approach, we recognised that there might be influential literature that might not be captured through those searches alone. The decision was therefore made to search the reference lists of the most relevant papers found through the systematic literature review for additional sources.

1.12. Limitations

There are some limitations to this review stemming from the rapid timeframe and the nature of available evidence. These include:

- **Limited availability of data:** There is an acknowledged and long-standing gap in the evidence base on EdTech and refugee education (Joynes & James, 2018), particularly in terms of rigorous evaluations, impact studies and the perspectives of refugee communities and children (Tauson & Stannard, 2018). Much of the literature examined either draws on narrative summaries of 'good practice' from existing projects in refugee settings (for example, Wagner, 2017) or evidence from EdTech interventions in other low-resource contexts (Joynes & James, 2018).
- **Overlaps in the literature:** Because of this limited availability of data, it was not always possible to draw from studies that solely focused on the use of technology in pre-tertiary education in refugee settings in LMICs. On some occasions, the literature also incorporated conflict and emergency settings more broadly (notably Tauson & Stannard, 2018; Burde et al., 2015; Carlson, 2013), access to all levels of education, including tertiary education (notably UNESCO, 2018), and refugee education across the globe including in high-income countries (notably UNESCO, 2018).
- **The search and inclusion strategy:** An inherent limitation of the RER is that the search and inclusion strategy is not, by design, exhaustive and therefore it is possible that not all relevant literature has been located and included.

2. Systematic review and thematic analysis

2.1. Continued access to education

A prominent theme across the literature examined is the potential of education technology to enable continued access to learning for refugee children which is disrupted in forced displacement.

2.1.1. Access to education in displacement contexts

Type of refugee setting

The literature suggests that technology has the potential to provide access to education in different displacement settings. Camp-based settings are most often discussed across the literature examined (see, for example, UNESCO, 2018). While there is some emerging evidence on EdTech initiatives in urban settings (see, for example, Wagner, 2017, and Baeyer, 2017), UNESCO (2018) notes that relatively few projects have been implemented and evaluated in urban refugee settings. Similarly, while some literature presents examples of technology moving with refugee children on their displacement journeys (see, for example, Wagner, 2017) there is limited evidence on such interventions; instead, it is technology's potential that is emphasised, such as by Wahyuni and Fatdha (2019).

Type of EdTech used

The type of technology leveraged to provide access to education detailed in the literature includes mobile phones, tablets, computers and, less frequently, radio. Joynes and James (2018) identify two dominant types of media used for refugee education: first, personal smartphones, tablets and other handheld devices promoting mobile learning; and second, 'connected classroom' packages combining computers and digital learning content. Taftaf and Williams (2020), in their literature review on refugee distance education, suggest that the type of technology able to be leveraged for educational purposes varies across urban and camp settings, concluding that refugees residing in urban areas are exposed to a greater variety of technological tools.

Constraining factors

While much of the literature draws on the fact that refugee children and young people are digitally connected (Maitland & Xu, 2016, as cited in Joynes & James, 2018), there are significant challenges that constrain

access to technology in refugee contexts. Poor infrastructure across refugee settings — including internet connectivity and electricity — is repeatedly emphasised as undermining the viability of education enhanced or provided by technology (Anderson, 2013; Burde et al., 2015; Kimwise et al., 2019; Lewis & Thacker, 2016; Taftaf & Williams, 2020). Tauson & Stannard (2018) and Unwin et al. (2017) state that the use of technology must respond to the infrastructure in place in refugee settings and assess actually existing conditions.

2.1.2. Forms of education and learning made accessible

The literature outlines emerging evidence on the ability of technology to enhance refugee children's access to formal and informal education and learning.

Access to formal learning

There is evidence that technology can provide increased access to formal learning in schools in refugee contexts (UNESCO, 2018). Technology is often used in this way to overcome the barrier of limited educational resources in classrooms. For example, the Instant Network School programme, implemented by UNHCR and Vodafone, provides schools in refugee camps in Kenya, Tanzania, South Sudan and the Democratic Republic of Congo with equipment, tools and digital educational materials. UNESCO (2018) cites preliminary data from the programme suggesting increased enrolment and retention rates.

Additionally, the literature underscores the potential of open educational resources (OERs) in terms of providing refugee children with rapid access to textbooks and other educational resources at a low cost (UNESCO, 2018; Lewis & Thacker, 2016). However, there are limitations to their use in refugee settings, discussed further in the section on quality and continuity.

Access to non-formal learning in education centres

The literature highlights the use of technology in providing access to non-formal learning in education centres or other settings outside of school (UNESCO, 2018). In particular, a number of articles and papers discuss how EdTech can act as a bridge to formal schooling in displacement by helping children catch up on their study skills, literacy skills and, on some occasions, language learning (Lewis & Thacker, 2016; UNESCO, 2018; Taftaf & Williams, 2020). Tauson and Stannard (2018: p. 37), in their narrative literature review, conclude that technology can "*help to fill-in the gaps during disruption and increase the speed with which learners can return to full time education*".

Reaching children unable to physically attend school or education centres

Technology is often discussed as being able to reach refugee children unable to physically attend school or education centres, including as a result of insecurity, serious disruption to education systems, or because they are on the move (UNESCO, 2018). The Eneza SMS study tool — providing access to refugee children in Dadaab refugee camps with study materials for primary subjects through SMS content — is referenced as an example of such an initiative (UNESCO, 2018; Wagner, 2017). However, an examination of the literature suggests that these types of initiatives are scarce, adding weight to an argument put forward by Baeyer (2017: p. 453) that education programmes for Syrian refugees in Jordan rarely design interventions outside of camp settings or community centres or "*aim to reach refugees where, for the most part, they really are*".

Motivation to learn

The literature tentatively suggests that EdTech can indirectly increase access to learning by enhancing refugee children's motivation to attend school and learn (Tauson & Stannard, 2018; Baeyer, 2017; Wagner, 2017; Tawileh, 2018). For example, Wagner (2017: p. 6) says that, from preliminary observations, "*simply introducing Eneza into schools has a direct impact on enrolment and retention as children are excited to be using an innovative learning tool*". However, Tauson and Stannard (2018) argue that this should be treated with caution as there is currently not enough robust evidence in the literature to substantiate this claim.

2.1.3. Quality and continuity of education content

The literature confirms that it is not enough to simply increase refugee children's and young people's access to education: the education enhanced or provided by technology must be relevant and high quality (UNESCO, 2018).

Particularly frequently referenced across the literature in this regard is the importance of curricula. While the literature examined does not engage with debates around whether the curricula for refugees should be aligned to home or host countries, the importance of a continuity lens is emphasised. In particular, it is repeatedly stated that that curriculum must be relevant to local context if children are to fully engage and progress (Tauson & Stannard, 2018; Wagner 2017; Dahya, 2016).

However, the literature suggests that EdTech content is often not contextually or culturally relevant — and this prevents continuity. Lewis and Thacker (2016), UNESCO (2018) and Joynes and James (2018) draw

attention to the "*scattered*" (UNESCO, 2018: p. 6) nature of OERs, which frequently lack quality control, are often unaligned to local curricula, and are rarely provided in languages other than English. Relatedly, Menashy and Zakharia (2019: p. 14) strongly caution against the potential unintended impact of private sector partnerships in leading to the creation of "*Northern-driven and decontextualised interventions*".

Taftaf and Williams (2020: p. 16) suggest this challenge could be addressed through a 'bottom up' approach to creating EdTech content. Including refugees in the creation of digital content can help them meet the needs of refugee populations. This is elaborated further in the section on pedagogies and modalities.

2.1.4. Equitable access to education

Access for girls and young women

While limited, there is some evidence on the equitable nature of access to education through technology. On the one hand, education technology is discussed as having potential to increase girls' access to education. The programme These Inspiring Girls Enjoy Reading (TIGER Girls) — a programme which provides Syrian refugee adolescent girls in secondary school in Za'atari refugee camp with access to digital resources and open learning — is an example (UNESCO, 2018; Wagner, 2017). Wagner (2017) cites key findings from a report conducted by Harvard Graduate School of Education that suggests the TIGER Girls programme helped adolescent girls stay in school and increased their desire to learn and improved their academic performance.

However, the literature also stresses the persistent gendered barriers to accessing both education and technology. Tauson and Stannard (2018) conclude that refugee girls are prevented from accessing education technology on an equal footing to their male counterparts. They emphasise that gendered barriers must be considered before engaging in EdTech initiatives that "*may exacerbate inequality in society*" (Tauson & Stannard, 2018: p. 9). Separate evaluations of UNHCR's Community Technology Access programme and International Education Associations' Digital Learning Innovations in Lebanon reveal higher enrolment rates for boys and young men than for girls and young women (Anderson, 2013; Tawileh, 2018). For Community Technology Access, this was attributed to competing household priorities and a focus on marriage over education (Anderson, 2013). For Digital Learning Innovations, this was initially attributed to cultural perceptions of girls' and boys' interests and a lack of girl-specific programmes (Tawileh, 2018).

Access for children and young people with disabilities

There is limited evidence in the literature on whether EdTech allows for inclusive education of refugee children with disabilities. Wagner (2017), through her analysis of existing practice on ICTs and education for refugee children, concludes that technology does not always reach the most marginalised refugee children, including those with disabilities. Additionally, the evaluation of the Community Technology Access programme found that those with disabilities were often unable to access computer centres (Anderson, 2013).

Community perceptions

Community perceptions of technology are important in understanding inequitable access to technology. Some children may be prevented from accessing technology because of community and parent perceptions. For example, a study in the Rohingya refugee camps in Bangladesh by Karim and Hussain (2019) found that many research participants viewed technology as unsuitable for providing education.

2.1.5. Cost and sustainability considerations

Issues around the cost-effectiveness of EdTech interventions are frequently raised in the literature and are acknowledged as requiring further evidence (Joynes & James, 2018; UNESCO, 2018).

Cost considerations

Tauson and Stannard (2018) suggest that EdTech interventions can, in some circumstances, represent value for money. The cost-effectiveness of EdTech interventions depends on the type of technology used, with mobile technology particularly highlighted as being cost-effective when leveraging existing mobile phone infrastructure and usage in refugee settings (Carlson, 2013; UNESCO, 2018).

However, the prohibitive costs of EdTech interventions are often referenced. A number of important considerations make EdTech interventions expensive, including: the provision of hardware, particularly for computer-based interventions (Carlson, 2013); replacing or repairing lost or broken equipment (Tauson & Stannard, 2018); refugees' access to the internet (Lewis & Thacker, 2016; Burde et al., 2015); refugees' access to mobile phone subscriptions (Lewis & Thacker, 2016); and secure storage of equipment (UNESCO, 2018).

Sustainability of interventions

The cost-effectiveness of EdTech interventions is relevant to continued access to education in displacement as it can, alongside infrastructure challenges, undermine the sustainability of projects in the long term (Tauson & Stannard, 2018). Initiatives which are unsustainable may further disrupt educational continuity for refugee children.

This relates to a "*do no harm*" argument put forward by Dahya (2016: p. 27) in her landscape review of technology in conflict and crisis settings: if a project is unsustainable, leading to "*unfulfilled hopes and promises*", refugee communities and children may become demoralised and lose faith in education programmes in the long term. Unwin et al. (2017) stress that the sustainability of an intervention must be considered from the outset and that initiatives should not be "*abandoned*" (Unwin et al., 2017: p.14) once initial funding has ceased.

2.2. Modalities and pedagogies

The modalities and pedagogies of EdTech and refugees are relevant not only due to the access they provide to continued learning, the emphasis of the previous section, but also due to the nature of that learning. Continuity of access is not a binary issue, and this section addresses the types of learning that exist, and their effects on learners, in more detail.

2.2.1. Modalities of delivering education and learning

The type of technology used can influence the way refugee children learn. The choice of modality should depend on the specific context and take into account what is already available and familiar to the target population (Carlson, 2013; Dahya, 2016), what is economically and logistically feasible, and what the specific needs of the target population are (Baeyer, 2017).

M-learning and e-learning approaches

One notable distinction to be made is between e-learning and m-learning tools. The former require computers and an internet connection, while the latter are based on devices with a wireless connection, such as mobile phones or tablets (Taftaf & Williams, 2020). Carlson (2013) sees mobile learning as more easily integrated in classroom teaching while other studies (cited in Taftaf & Williams, 2020) consider it useful in isolated areas because of its offline capabilities.

Online and offline capabilities

The literature also states that EdTech tools used in refugee contexts should have both an online and offline component (Dahya, 2016; Lewis & Thacker, 2016). The online side provides the opportunity to gather materials globally, but this should be made available offline to tackle the likely difficulties in internet access (Lewis & Thacker, 2016). Several OER platforms provide offline materials, such as the eGranary Digital Library and KA Lite (Dahya, 2016). Similarly, there are apps and programs that can be used completely or partially offline such as Kolibri and Learn Syria (Dahya, 2016; Lewis & Thacker, 2016).

Blended approaches and the importance of teachers

The literature strongly points to blended approaches that combine technological and human support to complement the strengths and weaknesses of each (UNESCO, 2018; Carlson, 2013; Dahya, 2016; Almasri et al., 2019). Blended learning should incorporate face-to-face, in-person teaching and digital materials (Dahya, 2016), as is the case for the Raspberry Pi for Learning Initiative used by UNESCO in Lebanon (Lewis & Thacker, 2016).

Most of the literature, in fact, agrees on the continued importance of teachers in the learning process: technology alone is not enough to ensure learning outcomes (Tauson & Stannard, 2018; Dahya, 2016). EdTech, therefore, could be seen as supporting teachers (as will be examined in the next section), and as a tool at their disposal.

2.2.2. Integrating pedagogy into EdTech interventions

The importance of focusing on how EdTech is used over the type of EdTech tool used is repeatedly emphasised in the literature (Tauson & Stannard, 2018: p. 8). While the literature underscores the importance of incorporating a pedagogical approach into the design of EdTech initiatives (UNESCO, 2018; Kamal & Diksha, 2019; Tawileh, 2018), this aspect can often be overlooked (Almasri et al., 2019; Dahya, 2016). However, in an evaluation of the Digital Learning Innovations programme in Lebanon, Tawileh (2018: p. 25) stated that "*the [technological] tools and resources alone would have had a very limited effect without the innovations in the process of teaching and learning*".

Adapting to the learner's level

EdTech allows teachers to adapt to the learner's level, giving students a greater level of autonomy in their learning pace and ensuring a balance between challenge and progress (Tauson & Stannard, 2018; Almasri at al.,

2019). An example is the TIGER girls programme in the Za'atari refugee camp in Jordan, where students can access open and personalised learning material on low-cost digital tablets and can track their progress on a dashboard. Coaches act as facilitators and can also follow students' progress through the tool, providing support and encouraging peer learning by matching stronger and weaker students to work in the same groups (UNESCO, 2018: p. 55).

Such elements of self-directed learning are seen as particularly useful in large, multi-level classrooms, frequent in refugee contexts: instead of running a standardised lesson, teachers can engage in more meaningful and targeted interaction with the students (Tauson & Stannard, 2018; UNESCO, 2018).

Pedagogy for out-of-school children

While EdTech initiatives seem to be mostly used in a school or community centre environment, with the mediation of a teacher, coach or educator, there are some programmes that target out-of-school children. In such cases, both design and content need to be particularly engaging, relevant for children, and intuitive to use. While evidence is limited, play- and game-based activities to support basic literacy and numeracy skills are often used and appear to demonstrate promise. The "pedagogy" translates into different levels that children go through while playing, gaining rewards when they perform well. Comings (2018) reports on the evaluation of two smartphone-based apps used to increase the literacy of Syrian refugee children in Jordan: Antura and the Letter and Feed the Monster. Although data for the evaluation was limited, the results were promising, with the target group generally performing better than the control one.

2.2.3. Learner-centred approaches

A learner-centred approach is recommended by most of the literature and is adopted by many of the projects that incorporate pedagogy (see, for example, Burde et al., 2015; Carlson, 2013; Dahya, 2016). 'Learner-centred' entails a design that centres around the students' perspectives and allows them a certain level of independence in managing their studies (Almasri et al., 2019). However, traditional, teacher-centred approaches may be prevalent in refugee settings, rather than the active learning solicited by many EdTech applications (Bock et al., 2020; UNESCO, 2018; Kamal & Diksha, 2019). For example, "*overcoming traditional models of teaching*" (Bock et al., 2020: p. 9) was a major challenge of the Instant School Network project run by the UNHCR in Dadaab camp in Tanzania.

Kamal and Diksha (2019) suggest that there may be challenges related to teachers', students' and communities' beliefs regarding what teaching and learning should look like, compared to what is needed to tackle the challenges of education in displacement. However, even when teachers seem to appreciate the learner-centred approach, the literature suggests that they may not be able or willing to adopt it in their everyday practice, especially if they do not have enough support. Tawileh's (2018) evaluation of two EdTech projects in Lebanon and Jordan supports this: in Jordan, while teachers claimed to appreciate the learner-centred approach involved, surveys with young people revealed that there was very little actual change in teachers' everyday practices.

2.2.4. Community participation for contextualisation

A common problem for EdTech solutions is the converse of one of their biggest advantages: while they can be created by anyone and be easily deployed almost anywhere, this often means a standardised format that does not suit the specific situation, as previously mentioned in relation to OERs (Dahya, 2016; UNESCO, 2018).

The importance of involving the community

It is widely acknowledged that involving the community is key to creating relevant and contextualised EdTech material (Carlson, 2013; Tauson & Stannard, 2018; Lewis and Thacker, 2016; Taftaf & Williams, 2020; Kamal & Diksha, 2019; UNESCO, 2018). Community participation is essential from the early stages of developing an EdTech intervention: an initial assessment can identify technologies that are already available and familiar to the target group, involving lower costs for deployment and a higher likeliness of being used. The community can also be involved through a process of co-creation or co-design of the whole solution, so that final users inform both the type of tool and its content (Alain et al., 2018; Stubbé, 2018; Almasri et al., 2019). The biggest role of community participation, however, is seen in the creation of relevant and contextualised educational content (Lewis and Thacker, 2016; UNESCO, 2018).

Involving the wider community

'Community' can refer to a variety of people that have some connection — direct or indirect — to the educational project, such as parents and carers, community leaders, non-governmental organisations or social workers, teachers, educators and students (Taftaf & Williams, 2020; Alain et al., 2018; Stubbé, 2018; Almasri et al., 2019). Tauson and Stannard (2018) note that contextually appropriate content can make it easier for the families to engage, an aspect crucial in refugee settings (as previously discussed by

Karim & Hussain 2019). Moreover, building trust and ownership of the project are essential steps to ensure the buy-in of the community, which will in the end influence the views and the use of the tool (Alain et al., 2018).

Involving students

Students also have a significant role: the TIGER girls programme, for example, has an open learning exchange system called Planet Learning where the girls, supported by facilitators, can add local content that tackles camp problems (UNESCO, 2018: p. 55). In this way the students become educators, which engages them and adds a stronger element of empowerment (Bonasio et al., 2017 cited in Kamal & Diksha, 2019: p. 3).

Involving teachers

Finally, teachers and educators are recognised as being able to significantly contribute to the creation of EdTech interventions (Lewis and Thacker, 2016; UNESCO, 2018). Not only are they best placed to identify relevant content, they will also be a main user of an EdTech tool and so it is essential for them to feel ownership of it (Lewis and Thacker, 2016). The roles of teachers in relation to EdTech are therefore multiple: as content creators; as content mediators or conveyors; and finally, as receivers, as will be examined in more depth in the next section.

2.3. Supporting educators of refugee children

A common theme across the literature on EdTech in refugee contexts is the use of technology to provide support to teachers and educators, who are key to the quality of education that children access in displacement (Richardson et al., 2018).

2.3.1. Educators of refugee children targeted by EdTech interventions

The skills, background and experiences of teachers significantly vary across and within refugee contexts (UNESCO, 2018). Richardson et al. (2018: p. 32), in their literature review on the teachers of refugees, group teachers into two categories: teachers — both refugees and host country nationals — who are teaching refugee populations; and *refugees who became teachers*". The second category, described by Kirk and Winthrop (2007: pp. 718–719) as "*spontaneous teachers*", often comprises teachers with limited formal training and professional development.

A number of articles in the broader literature emphasise the significant number of under-trained teachers in refugee settings (see, for example, UNESCO, 2018; Carlson, 2013). While distinctions are not always clear in the

literature examined, the target group of technology interventions that support teachers in refugee contexts tends to be untrained teachers. There are exceptions, however, and some initiatives target trained teachers to enhance professional development and to provide specialist information on responding to the distinct circumstances of refugee education (such as the IRC project Connect to Learn (Dayha, 2016) and a planned massive open online course (MOOC) in Lebanon, discussed below).

2.3.2. Supporting continuous teacher development

Technology has been leveraged as a channel through which to connect teachers in refugee contexts with other teachers, both inside and outside of refugee contexts, in order to share learning, experiences and educational practices. A teacher professional development project implemented in Kakuma refugee camp in Kenya — Teachers for Teachers — has often been referenced as an example of how mobile technology has been used in this way (see, for example, UNESCO, 2018; Tauson & Stannard, 2018). Alongside in-person training and peer coaching, the project had a mobile mentoring component. Following training, teachers in Kakuma refugee camp were connected through WhatsApp with other teachers in the project's cohort and with global mentors with which they could share, test and improve teaching strategies (Mendenhall et al., 2018). In an analysis of data collected between 2016 and 2018, Mendenhall et al. (2018) highlighted the ways in which mobile technology positively affected teacher's professional development, including through building confidence and motivation.

Another study on the use of technology across two teacher training programmes in Dadaab and Kakuma refugee camps in Kenya (Borderless Higher Education for Refugees and the Kenya Equity in Education Program) also examined the potential of mobile technology in supporting teacher learning and development (Dahya et al., 2019). The study found that instant messaging groups were able to facilitate individualised connections between refugee teachers and international instructors. They also discussed "*unexpected ways*" (Dahya et al., 2019: p. 784) in which refugee teachers in Kakuma refugee camp used instant messaging to establish peer-to-peer networks, using technology to overcome challenges with mobility across Kakuma to actively collaborate with teachers from other schools within Kakuma.

Both studies caution that mobile technology "*does not function in isolation*" (Mendenhall, 2018: p. 20) and that it cannot replace "*face-to-face engagements*" (Dahya et al., 2019: p. 786). Across the literature examined, there is a general consensus that technology is most effective in

supporting educators when adopted as part of a blended and continuous learning approach, ideally with an in-person component. UNESCO (2018: p. 40) suggests that "*technology enables conversational learning [for teachers of refugees], which is otherwise difficult to achieve once in-person training has ended*". Additionally, both studies referenced the challenge of sustaining individualised virtual support networks. In particular, Mendenhall (2018) referenced refugee teachers' and global mentors' demotivation caused by delays in responses (including as a result of time differences), and Dahya (2016) noted global mentors finding engaging in ongoing remote support particularly time-consuming.

2.3.3. Enhancing access to training courses

The literature highlights a small number of examples of technology-enhanced teacher training courses with avenues to certification. Borderless Higher Education for Refugees,[3] previously mentioned in relation to instant messaging groups (Dahya et al., 2019), is a programme that aims to enable training courses for teachers, many of whom are untrained, in Dadaab refugee camp in Kenya (Boškić et al., 2018). This project — a partnership between universities in Canada and Kenya — used technology to enhance on-site training with access to digital content, including textbooks, videos and articles (UNESCO, 2018), as well as to provide some distance learning components (Boškić et al., 2018). Academics at partner universities — Moi University in Kenya (Kirui & Ndalo, 2016) and the University of British Columbia in Canada (Boškić et al. 2018) suggest that, from their experiences and observations, technology has the potential to provide access to quality teacher training opportunities otherwise not available in Dadaab. However, Boškić et al. (2018) noted challenges, namely gender-inequitable access to technology and education and technological issues.

Training courses for teachers in refugee settings are also starting to be provided through MOOCS, according to UNESCO (2018). However, evidence on the effectiveness of such initiatives is still emerging. Recognising this, Kennedy and Laurillard (2019) recently conducted mixed methods research to assess the feasibility of using MOOCs to provide specialist teacher training at scale in Lebanon for qualified teachers who may lack the skills and knowledge to respond to the learning and psychosocial needs of Syrian refugee students. MOOCs are found to

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[3] This project is often referenced in the literature in relation to providing access to higher education opportunities for refugees, which fell outside of the scope of this report. However, articles which reflect on the programme's value of providing formal teacher training opportunities through technology have been included as relevant (Kirui & Ndalo, 2018 and Boškić et al., 2018).

demonstrate potential; in particular, MOOC platforms can be used to "*engage teachers [of refugees] as researchers*" through "*designing, adapting, and testing learning designs and techniques in the classroom, collecting data, and sharing what they learn with each othe*r" (Kennedy et al., 2019: p. 2). However, in order to fulfil their potential, MOOCs should be co-designed with teachers and local populations.

The importance of adapting teacher training courses to be locally relevant and adaptable to teachers' learning needs is also underscored in the literature (Kennedy et al., 2019; Boškić et al., 2018).

2.3.4. Practical support to educators and education systems

In addition to supporting teachers' pedagogical approaches and professional development, the literature also sheds light on how EdTech can provide more practical forms of support to teachers, schools and, sometimes, education systems in refugee contexts.

There is some emerging evidence that educators proactively use mobile devices for practical tasks, such as communicating with parents of refugee children or undertaking independent research on teaching practices or content for lessons (Mendenhall, 2018). Joynes and James (2018: p. 15) also draw attention to how technology can help educators use limited school facilities efficiently; by allowing refugee children to study at home or off-site, technology can "*relieve pressure on school facilities*" which are often stretched in refugee contexts in LMICs.

Joynes and James (2018) also highlight how technology can provide systemic support to education in refugee contexts, particularly through the capture of educational data. They particularly emphasise the ability of mobile devices to rapidly map an educational situation, including the available infrastructure and numbers of teachers and students in a certain location; this can "*play an essential role in improving basic operational, planning and controlling functions in education systems*" in refugee settings (Joynes & James, 2018: p. 15). Such support can occur at local levels, such as in certain refugee camps, through to national level (UNESCO, 2018). UNESCO (2018: pp. 46–48) provides examples of the use of mobile technology in this way, with OpenEMIS being highlighted as an initiative providing support to education systems in refugee contexts in Malaysia and Jordan.

2.3.5 Supporting teachers to engage with EdTech resources and related pedagogies

Supporting the use of EdTech

Tauson and Stannard (2018) emphasise that the effectiveness of EdTech interventions is dependent on teachers. The literature highlights the importance of ensuring that teachers are appropriately trained to use different technologies and devices used in EdTech initiatives (Tauson & Stannard, 2018; UNESCO, 2018; Lewis & Thacker, 2016; Unwin et al., 2017). Tauson and Stannard (2018) state that EdTech is likely to be unfamiliar to teachers of refugees, as is true in many settings across the globe, and that they must be comfortable using it before adopting it in their teaching. UNESCO (2018) concludes that one-off training on EdTech infrastructure is not sufficient; support must be continuous, and EdTech tools could embed 'real-time' support for teachers into their functionality. Tauson and Stannard (2018) also underscore that EdTech training and support should be adapted to challenges specific to teachers in refugee contexts, including poor infrastructure and teachers' lack of time.

Supporting the adoption of EdTech-related pedagogies

As previously discussed, learner-centred pedagogies may be unfamiliar to teachers of refugees and require "*a change in teachers' working habits*" (Tauson & Stannard, 2018: p. 49). Tauson and Stannard (2018) state that changing teaching practices can cause additional stress for refugee teachers already responding to demanding pressures of working in displacement contexts and can have a negative impact on refugee children's learning outcomes. Teachers need time to adjust (Tauson & Stannard, 2018) and should be provided with high quality training and guidance on the level and pace of learning involved when using EdTech (Kamal & Diksha, 2019; Tawileh, 2018).

2.4. Psychosocial support

Although it might not be the primary aim of EdTech initiatives, psychosocial support (PSS) is often associated or evaluated in connection with EdTech tools. While there is limited evidence on the connection between EdTech and refugees' mental health and well-being, there are several points of intersection between the two (UNESCO, 2018).

2.4.1. Psychosocial wellbeing and EdTech-related pedagogies and modalities

Education is widely recognised to provide meaning, normality and stability for refugee children and young people and to support psychosocial wellbeing (UNHCR, 2019; UNESCO, 2018). However, the technology component of EdTech may also support psychosocial wellbeing. For example, Carlson (2013: p. 8) states that:

> "*simple, easy-to-use technology builds self-esteem; contextualized educational software reinforces student's identity. Technology which includes two-way connectivity enables personal communication which may be highly beneficial for students.*"

The literature particularly underscores the potential of EdTech to enable communication from local to global level for refugees who may feel trapped in refugee camps (Dryden-Peterson et al., 2017), and to facilitate human support and feelings of connection (UNESCO, 2018). Additionally, through its ability to enable refugee students to connect with and receive support from local and global networks, EdTech may help refugee students feel part of a learning community (Dryden-Peterson et al., 2017).

Additionally, the pedagogical approaches related to EdTech examined earlier carry elements of PSS: they often incorporate play and recreation, encourage the active involvement of students and incorporate life skills such as initiative, teamwork and planning (Tawileh, 2018; UNESCO, 2018).

2.4.2. Game-based EdTech tools

Some game-based EdTech interventions explicitly incorporate PSS elements. For example, the two mobile games developed for the project EduApp4Syria aim to improve refugee children's wellbeing (UNESCO, 2018). An evaluation conducted by Comings (2018) suggests that they successfully supported psychosocial wellbeing. Although this type of app cannot replace face-to-face support, it has the advantage of easily reaching large numbers of children.

Similarly, the mathematical game described in Stubbé (2018) has an added value in engaging out-of-school children beyond the strictly educational outcomes. This game was found to increase children's self-esteem and image of themselves, which was tentatively attributed to educational gains, the social aspects of learning together (also emphasised by Comings 2018), and the use of ICTs (UNESCO, 2018). However, a report by UNESCO (2018) cautions that while refugee children should be challenged

through such games, they should not be overburdened or experience feelings of failure which could undermine psychosocial wellbeing.

2.4.3. Nurturing resilience and identity development

EdTech may also help refugees to come to terms with their experiences. An example of this is the Ideas Box, a portable and customisable multimedia centre providing refugee children in Burundian refugee camps with access to educational and information resources, strongly featuring technology such as computers, mobiles and tablets (UNESCO, 2018). A report using qualitative methods on the project concluded that, among other benefits, Ideas Box provided refugees with a safe and secure space to escape from their daily realities or traumatic thoughts, engage in creativity to stimulate their imagination and rebuild a positive self-image, and access information to help them come to terms with their "*painful history*" and look towards the future (Lachal, 2015). Overall, it concludes that Ideas Box helps refugees "*start a process of resilience that allows them to recover from their traumatic state and overcome their stress and their apprehensions to plan for the future*" (Lachal, 2015: p. 28).

Limited evidence suggests that digital storytelling can support identity development processes and expression (UNESCO, 2018). An example provided by UNESCO is the Voices Beyond Walls programme in camps hosting Palestinian refugees in the West Bank and East Jerusalem. This programme engaged marginalised youth in workshops using drama, music, digital video and other modalities to express their perspectives on Palestinian history, culture and life in the camp, as well as their aspirations. An evaluation found that this programme supported "*shared satisfaction and identity*" (UNESCO, 2018: p. 26). However, the evaluation emphasised the importance of dealing carefully with hidden trauma. Fahed (2020) also identifies the value of digital story-telling modalities in refugee contexts. She discusses Tabshoura Tiny Thinkers, an offline server enabling early childhood education for marginalised children, including refugee children, in Lebanon, which draws on digital story-telling modalities to encourage "*autonomy, creativity and analysis*" (Fahed, 2020: p.74).

3. Synthesis

The following section offers a synthesis of the findings from the four thematic areas representing the literature. The opportunities and challenges presented by EdTech in refugee contexts likewise reflect potential similarities to those faced in the current crisis in education disruption brought about by Covid-19.

3.1. Continued access to education

The literature identifies a promising role for technology in addressing challenges with access to both formal and informal education in refugee contexts. The literature suggests that technology is being used in refugee contexts to complement formal education in classrooms, to enhance or provide non-formal learning in education or community centres, and to provide location-independent learning when refugee children are unable to be physically present at schools or education centres. The advantage of EdTech appears to be its flexibility and ability to provide education at a distance, move with refugees on their displacement journeys, and reach remote locations.

However, there is no 'one-size-fits-all' EdTech solution. In order to ensure access to quality education for refugee children, the literature repeatedly states that EdTech content must be contextualised, adapted to learners' needs and language, and provide continuity. The literature also cautions that EdTech may not reach marginalised groups, including girls and children with disabilities. Additionally, the sustainability of EdTech interventions are often undermined by cost and the infrastructure in place in refugee contexts. It is important that the sustainability of EdTech interventions is considered from the outset to avoid further disrupting refugee children's education.

3.1.1. Modalities and pedagogies

The literature suggests that the most important part of an EdTech project is how the content is delivered rather than the specific ICT tool used. There is a broad agreement that technology should support rather than replace teachers, and that blended learning approaches which integrate learner centred pedagogies are important. However, the literature suggests that this can be challenging in refugee contexts where teachers and students are often more familiar with traditional, teacher-centred pedagogies. Involving refugee communities — students, families and teachers — in the design and creation of EdTech interventions is therefore key to the development of contextualised content. In particular, involving teachers

can help to ensure that EdTech tools and related pedagogies are adopted in everyday practices.

There is some evidence that EdTech may, through its ability to track students' progress and achievement, offer teachers the opportunity to engage in more personalised and meaningful interactions with students and target support at those who need it. This can be particularly valuable in multi-level classrooms common to refugee contexts.

3.1.2. Supporting educators of refugee children

Teachers are fundamental to the success of EdTech interventions and crucial to the learning process. Some studies point towards the value of technology in providing continuous support to teachers who are often under-trained or unqualified in refugee contexts, with a particular emphasis on technology's potential to facilitate local and global connections and mentoring. Technology can also provide teachers of refugees with access to more formal teacher training courses at a distance.

Technology, particularly mobile technology, demonstrates potential in providing practical support to teachers teaching in refugee contexts. Mobile technology can also support education systems in refugee contexts more broadly through its potential to capture and analyse key education data.

Teachers should be provided with ongoing support in order to use EdTech tools successfully, particularly if they are unfamiliar with using technology in their teaching practices or learner-centred pedagogies. Steps should be taken to ensure that EdTech does not become a burden in refugee contexts already marked by higher levels of stress for teachers.

3.1.3. Psychosocial support

Finally, EdTech may support refugee children's ability to engage with education and learning by supporting their psychosocial wellbeing. Technology can facilitate social connections at the local and global level, helping refugees feel part of a wider learning community which may be valued by those who feel trapped in camps or other contexts. Moreover, learner-centred pedagogies, when they are included, can support students dealing with stressful or traumatic experiences. They encourage students' active participation and aim to build life-skills that are particularly important in refugee settings.

There is some limited emerging evidence on how game-based EdTech and engaging in creative and imaginative activities in

technology-supported educational spaces can support children's psychosocial wellbeing. Digital story-telling techniques are also beginning to emerge as a way to help refugee students process their displacement experiences and support identity development. However, there remains an evidence gap on this topic.

3.1.4. Relevance to the Covid-19 pandemic

There is an urgent need for robust monitoring and evaluation of EdTech initiatives that move beyond short-term observations to assess the longer-term impact of EdTech on refugee education. Despite persistent evidence gaps, an examination of the literature suggests that technology can support refugee education, and education more broadly, during the Covid-19 pandemic. Promising uses of EdTech in this regard include reaching remote locations, connecting people and resources, adopting learner-centred pedagogies, adapting to student's needs in multi-level classrooms (both in-person and virtual), assisting teachers in and outside the classroom, and supporting children's psychosocial wellbeing.

However, careful planning is needed. Interventions must be contextualised and respond to learners' needs, and communities and teachers should be involved in the planning and development processes. There should be a focus on pedagogies — the 'how' over the 'what' — to ensure quality teaching and learning during this unprecedented time.

4. Annex A: Search terms

- refugees
- refugee education
- EdTech refugees
- "education technology" refugees
- "refugee education" ICT
- "refugee children" AND "education technology"
- technology refugees school
- blended learning refugees
- "blended learning" refugee education
- "education technology" forced displacement
- forced displacement EdTech
- "meducation" refugees
- "online education" refugees
- teacher "professional development" AND refugees AND technology
- "distance learning" refugee children
- protracted displacement "education technology"
- OERs refugee education
- "mobile learning" "refugee education"
- "education technology" refugee integration
- refugee education technology
- refugee education ICT
- "psychosocial support" AND "education technology" AND refugees
- "psychosocial support" AND "ICTs" AND "education" AND "refugees"
- "social emotional learning" AND "education technology" AND refugees
- "socio-emotional learning" AND "education technology" AND refugees
- "SEL" AND "ICT" and "refugees"

5. Annex B: Bibliography

Denotes literature that provides context but not examined as part of the rapid evidence review.

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