



# Digital Technologies to Advance Global Citizenship Education in Schools

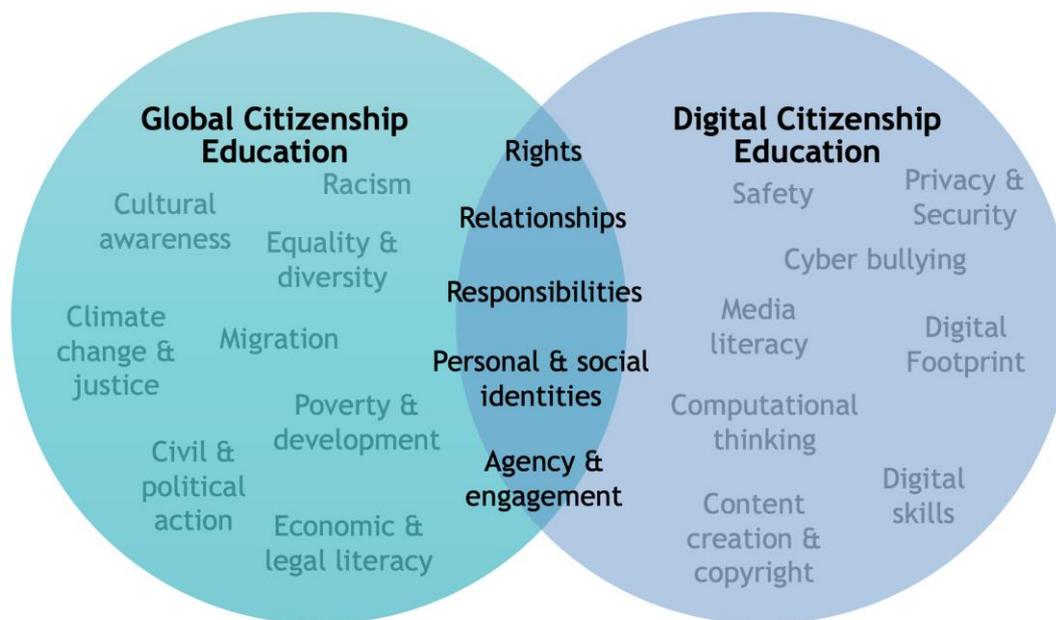
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## Introduction

How can technology be used in classrooms to advance Global Citizenship Education? That is the general question that guides the present report as a result of a research project conducted at the Centre for Human Rights and Citizenship Education in partnership with Trócaire. The overall aim of the project was to develop a knowledge base on the contribution of digital technologies (DT) to school-based GCE programmes and teaching. It consisted of a systematic review of the most recent literature and published evidence, a discussion with experts in the field of digital technologies and education, and an exploration of teacher practices in Ireland and beyond.

As illustrated in Figure 1, an initial exploration showed an overlap between Global Citizenship Education (GCE) and the emergent field of Digital Citizenship Education (DCE). GCE is a dynamic and contested field. Established critiques argue that problematic policies and approaches weaken GCE's critical and transformative intent (Bourn, 2015; Bryan and Bracken, 2010; Andreotti, 2006). Yet, increasingly, GCE is understood as an educational response to global trends and challenges that is underpinned by globally oriented knowledge, values such as interconnectedness, culture sensitivity and empathy and skills that relate to critical thinking, civic participation and activism (Sant et al, 2018; Goren, H., & Yemini, M., 2017; Mannion et al, 2011). Many of its aims relate directly to the skills promoted in multiple DCE frameworks including, the responsible use of technology and the internet to create, communicate and disseminate safely, respectfully and responsibly (Berkman Klein Center Report). Based on these interconnections, the present project is limited to school-based initiatives and practices that address key tenets of GCE that also overlap with DCE (Figure 1). These include rights, relationships, identity, agency, engagement and duties.



**Figure 1. Key elements of Global [Digital] Citizenship Education (Martinez Sainz & Barry, 2019)**

**Rights:** refers to the rights individuals have in a global and interconnected society and includes, but are not limited to, human rights, environmental rights, cultural rights, digital rights, and so on.

**Relationships:** emphasises the relationships among individuals and groups fostered as a result of a global society, and includes aspects such as cooperation, collaboration, conflict resolution, communication and empathy.

**Identities:** focuses on the individual and social identities that are forged in a global and interconnected society and includes aspects such as cultural identity, religious diversity, freedom of expression, inclusion, multiculturalism, etc.

**Agency:** refers to the individual capacity to make autonomous decisions on economic, civic, political or cultural matters within a global and interconnected society.

**Engagement:** encompasses the awareness of global issues and challenges as well as an active involvement and participation on their solutions in order to transform local and global realities.

**Duties:** refers to the responsibilities individuals have in a global and interconnected society in relation not only to other individuals but also towards other groups, countries and societies.

The project encompassed desk-based research in order to review empirical studies and practitioner-based initiatives that explore teaching practices. In addition, we carried out a number of elite interviews with experts in teacher education and/or digital technology. We also carried out a global consultation online and interviewed two practising teachers who work in Ireland. In the following sections we present each strand of the project detailing the methods of data collection and analysis, in addition to the main findings that emerged from them. In particular, we present pedagogical strategies employed in the use of digital technologies for GCE, in addition to the advantages, challenges and risks associated with these endeavours. Following on, we consider the implications of these findings and offer a number of recommendations. The report also includes a 'Digital technologies directory', a tool for teachers to support them to identify technologies for GCE in the classroom.

### **1. Critical scoping review of existing evidence**

As part of the project, we conducted a critical scoping review of both evidence and initiatives related to the use of digital technologies to advance GCE. The review was limited to research on and initiatives implemented in formal education settings, although it was open to any geographical region. A more detailed discussion of the inclusion criteria for either evidence or initiatives is presented below. To analyse evidence on the topic, we conducted a review of evidence related to how and why digital technologies

are currently used to advance global citizenship education. A scoping review, as defined by Pham et al. (2014), is a type of research synthesis that aims “to map the existing literature in a field and it is particularly useful when the topic has not yet been extensively reviewed or is of a complex or heterogeneous nature” (2014, p. 371). We followed the iterative stages proposed by Arksey & O’Malley: (1) identifying research questions, (2) identifying relevant evidence, (3) selecting eligible evidence, (4) charting the data, and (5) collating, summarizing and reporting the results (Arksey and O’Malley, 2005). In the following section, we explain the methods for literature searching, selection and extraction of data and analysis used.

Two broad questions that guided the critical scoping review:

1. Why are digital technologies currently used to advance global citizenship education?
2. How are digital technologies used to advance global citizenship education?

### **1.1 Literature searching**

For the scoping review, we considered academic articles in peer-review journals, as well as grey literature. Grey literature included project reports, theses, conference proceedings, preprints, working papers, newsletters, technical reports, recommendations and guidelines, data and statistics, presentations, field notes and evaluations. The typology to categorise the grey literature in this review follows the document index developed by GreyNet (2004). The decision to include grey literature follows Lawrence et al (2014) findings on its value as evidence for public policy and practice as well as the recommendations by the ESRC UK Centre for Evidence-based Policy and Practice for conducting a systematic review search (Boaz et al. 2002). The review considered evidence in English, Spanish and Portuguese according to the language skills of the researchers and the search was limited to evidence published since 2010 to obtain the most recent evidence and maintain a manageable cohort of evidence. The databases from which

the evidence was collected include *Web of Science*, *Eric* (Education Resources Information Centre) and *Google Scholar*.

### **1.2 Data selection, extraction and charting**

The initial search was conducted in the electronic database *Web of Science* as it covers a broad range of disciplines and includes a variety of academic publications, from journal articles to books, book chapters and conference proceedings. The first search queries consisted of the following terms in the title: 1) Global Citizenship, 2) Global Citizenship Education, and 3) Digital Citizenship. The results of the initial queries were then filtered based on the following criteria: entries published since 2010 and that explicitly include in the abstract the use any of the digital technologies identified for the review (Websites, Social networks, Mobile apps, Games, Virtual reality, Artificial intelligence, Podcasts, Videos, Robotics, Coding software and GIS (Geography Information Systems)).

The same query parameters and eligibility criteria were used in the *Eric* and *Google Scholar database* to identify further publications and relevant grey literature for the review. Then, a 'snowball' technique was adopted in which citations within articles were searched if these seemed relevant to the research question guiding this review (Hepplestone et al., 2011). Once selected, the preliminary data set was then screened to narrow down the list of publications using the key elements of global citizenship education defined previously as a necessary condition for inclusion. This means that the publications have to relate specifically in their title, abstract or keywords at least to one of the key elements: rights, relationships, identities, agency, engagement and duties. The full text of each eligible publication was assessed and analysed initially by one of the authors and later, all eligible publications were discussed by the two researchers.

As a result, 27 suitable entries were identified and extracted using an electronic standardized protocol that included the following categories:

- **Reference:** including the full details of the publication
- **Country** in which the study or research takes place (if applicable)
- **Age group** of the participants of the study or research (if applicable)
- **Curricular disciplines** explicitly considered in the publication
- **Types of technologies** discussed in the publication (videos, presentations, podcasts, mobile apps, social networks, games, virtual or augmented reality, geographic information system or other).
- **Pedagogical strategies** behind the use of digital technologies (comprehension, circulation, creation, connection and/or collaboration)
- **Topics of GCE** covered in the study or research (global citizenship, rights, relationships, identities)
- **Findings** in relation to identified challenges, advantages, and risks related to the use of digital technologies.

The list below shows the titles of the literature reviewed:

1. (2011) Blogging for Critical Global Citizenship: Pedagogical Challenges and Possibilities
2. (2013) Digital Democracy and Global Citizenship Education: Mutually Compatible or Mutually Complicit?
3. (2014) Constructing Online Spaces for Intercultural Dialogue Media literacy initiatives for global citizenship
4. (2014) Digital Storytelling in Global Citizenship Education
5. (2014) Fostering Intercultural Dialogue at the Intersection of Digital Media and Genocide Survivor Testimony
6. (2014) I wouldn't Have Had a Clue How to Start. Reflections on empowerment and social engagement by former youth journalists
7. (2014) Media Literacy, Digital Technologies and Civic Engagement: A Canadian perspective

8. (2014) Pop-Up Newsroom as News Literacy Covering poverty through a global reporting project
9. (2014) Reflexivity and Global Citizenship in High School Students' Mediagraphies
- 10.(2014) Video Production as a Tool to Reinforce Media Literacy and Citizenship in Egypt
- 11.(2014) Virtual Partnerships. Implications for mediated intercultural dialogue in a student-led online project
- 12.(2015) Digital Storytelling for Transformative Global Citizenship Education
- 13.(2016) Are K-12 teachers ready for technology- enhanced teaching and learning? A Study on Teachers' TPACK Level in a Provincial City in China
- 14.(2016) Building a Presence in the Online Space: An opportunity and a Challenge for 21<sup>st</sup> Century Students
- 15.(2016) Digital Citizenship: Communication Capabilities and Technological Literacy
- 16.(2016) Digital Diversity and Belonging in Higher Education. A Social Justice Proposition
- 17.(2016) EDUSAT: Harnessing Educational Potential in India
- 18.(2016) Enabling E-Learning Through Science Literacy For The Digital 21<sup>st</sup> Century As A Right In Education
- 19.(2016) Recognition of the Social Different-Social Justice for Learning Within Individualized Mobile, Convergent Mass Communication
- 20.(2016) Unlocking the Potential of Social Media for Participation, Content Creation and E-Engagement. Students' Perspective and Empowerment
- 21.(2016) Video connections. Media Education and Global Citizenship a New Form of Alliance
- 22.Virtual Reality, Learning Scenarios, And Teaching Science To Learners From Other Cultures: Whose Reality?

23.(2016) What Teachers Believe About Democracy and Why It Is Important – How (Should) We Prepare Students for Democracy and Citizenship

24.(2017) News versus Newsfeed: The Impact of Social Media on Global Citizenship Education

25.(2017) Tecnologias digitais na educação: possibilidades para o desenvolvimento da educação para a cidadania global [Digital technologies in education: possibilities for education development for a global citizenship]

26.(2018) Digital Pedagogies for a Better World

27.(2019) Teachers, Twitter and Global Citizenship Education. Global discussions, national boundaries

### **1.3 Findings the critical scoping review strategy**

The scoping literature review focused primarily on identifying challenges, risks and advantages of using digital technologies for GCE. In addition, it also identified key pedagogical strategies behind the uses of these technologies in the field. It is worth noting that the scope of the review did not include details of specific technologies or implementation of particular software, apps or programmes. The overall aim of the analysis was to understand how digital technologies are used to advance global citizenship education and why these are chosen over non-technological options. As a result, the first section of these findings is focused on the main pedagogical strategies identified in the literature. Relevant examples of technologies that address these pedagogical strategies are also included. The second section of the findings addresses key challenges, principal advantages and main risks of using digital technologies to advance GCE.

#### **1.3.1 Pedagogical strategies**

From the review, we identified four different types of pedagogical strategies that are commonly implemented. These strategies are creation, circulation, communication and collaboration. They represent

not only ways in which digital technologies are used in the classroom, but also indicate educational intentions behind their use and desired learning outcomes. Below we provide some examples of each strategy.

- Creation. The development of digital stories, presentations, videos (often used for assessment or to showcase learning)
- Circulation. The use of digital platforms to communicate ideas, for example citizen journalism
- Connection. The development of links between different groups, for example skype hangouts
- Collaboration. The development of joint projects, work or campaigns

These four strategies should not be seen as mutually exclusive but rather a continuum that reflects the varying frequency of use as well as different levels of engagement for students. The complexity of tasks or activities that use technology also varies. For example, at one end of the continuum (creation/circulation) the use of digital technologies can be sporadic and employed for basic activities such as the creation of a powerpoint. They can also be accompanied by little engagement from students, such as the use of the internet to access information or share a video with students. On the other end of the continuum, there are examples of a more integrated use of technology in the classroom. These uses require higher levels of student engagement that also present students with more complex tasks (i.e. collaborative projects among classrooms in different countries).

As a result, these pedagogical strategies represent different opportunities or levels of participation for the learner, whereby connection and collaboration represent deeper levels of participation. This highest level may help to foster agency and citizenship through participatory politics among young people. However, in reality, practice varies and is heavily dependent on how the technology is mediated and the intentionality behind their use. We will return to this point later in the report.

### ***1.3.1.1 Relevant examples***

Below are some examples of how different types of technologies were used across initiatives for specific GCE topics. A further exploration of the challenges, advantages and risks will follow.

#### *eTwinning*

eTwinning is a community for schools in Europe that offers a platform for staff (teachers, head teachers, librarians, etc.) to communicate, collaborate, develop projects, share and be part of a learning community. Respondents used it to for teaching about identities, diversity or multiculturalism.

#### *Empatico*

Empatico is a platform to connect classrooms combining live video with research-based activities designed to foster connections among students ages 6-11 and to amplify the stories of students and their experiences of connecting with others. Respondents used this platform to teach about relationships among individuals and groups around the world.

#### *School Digital Champion Programme*

The Irish Government seeks to enhance the use of technology in teaching and learning in collaboration with the Department of Education and Skills and with support from RTÉ. The School Digital Champion Programme provides an opportunity for second level students to take part in an exciting and innovative programme that has the potential to involve learning at many levels. This exciting programme enables students to develop their creativity, critical-thinking and communications skills. Respondents took part in this programme as a way to connect their students with individuals and communities outside their school.

### **1.3.2 Challenges**

In this section we provide an overview of the findings related to the challenges identified in the literature on the use of digital technology for advancing GCE. The three main challenges explored are;

- 1) an uneven knowledge base and urgency of digital literacy
- 2) a lack of critical engagement
- 3) an unequal access to digital technologies.

An important challenge many of the studies described in their results was an uneven knowledge base among teachers and students in relation to the use of technology and general digital literacy. The literature on GCE provides further evidence that digital literacy remains a challenge among students. Indeed, the widespread misconception that children and young people are digital natives because they were born into a digital world has been debunked (Livingstone, 2009). For instance, Wiedman, Carnes & Street (2014) discussed the disparity between the perceived digital literacy among students and their actual capacities to interact with technology. Collins (2011) emphasised the need for technical training for students so they can actually engage with the technology as intended. The uneven knowledge base applied to different types of technologies, from processing news and interacting on Facebook pages to more sophisticated media and content creation.

A second challenge identified in the literature is a lack of critical engagement in the use of digital technology to address GCE. Many studies identified that particular uses of technology could lead to a lack of criticality among learners when dealing with sources of news or content. At times, students struggled to identify underpinning assumptions or address competing views or ideologies. Whilst some studies did demonstrate creative ways in which technologies could be helpful when dealing with GCE topics, unless there was a strong intentionality to engage in critical GCE, technologies can either reproduce assumptions and prejudices or focus on

the technical aspects of learning, rather than the GCE content. For instance, Andreotti & Pashby (2013) argue that the advantages of technology are 'assumed' or taken for granted and this can result in a lack of critical engagement.

A smaller volume of literature raised questions about the extent to which digital technologies are accessible to all. Two factors feature here. One relates to infrastructural requirements and the second to digital literacy, a minimum competency required to fully engage with technology. However, the review did not provide enough evidence on how studies using technology for GCE addressed the digital divide or dealt with inequalities in terms of political and social capital that the use of technologies implies. Accessibility in the broad sense raises important challenges to the idea that digital technologies can democratise knowledge and learning opportunities. By contrast, some argue that they can exacerbate existing gaps among learners (Andreotti & Pashby, 2013).

### **1.3.3 Advantages**

Next, we present main findings of the scoping review in relation to advantages identified of the use of digital technology for GCE. These include;

- 1)possibilities for children and young people to experience global citizenship
- 2)a shift towards a more participatory approach
- 3)support for teachers' activities

Global Citizenship is oftentimes critiqued as an ambiguous concept. However, the possibilities for digital technologies to offer students an *experience* in global citizenship emerged as a strong theme in the literature. The capacity for DT to make connections between people across space and cultures is one of the most frequent benefits of using DT to support GCE. Pathak-Shelat (2014) identified three different types of dialogue that are possible online - dialogue with self, with us and with them. These online

interactions can support a sense of a common humanity, increase understanding across cultures, support intercultural dialogue and help connect the classroom to the outside world (Pathak-Shelat, 2014). In addition, it is recognised that meaningful online spaces can, not only connect people but also support self-organisation that in turn, enhances democracy and participation (Andreotti & Pashby, 2013)

A significant body of literature relates to the benefits of using DT to address a range of media-related skills and competencies that are associated with a global citizen. Opportunities include the development of critical media literacy, opportunities for youth journalism and also a form of participatory media (Melissa Wall, David Baines & Devadas Rajaram, 2014; Kellner & Share, 2005). This latter form extends the idea of young people as consumers of media and provides opportunities for them to become involved in citizen journalism, youth journalism and in effect, become producers of media. Some of the studies explored a number of techniques to facilitate this and highlight further, more intrinsic benefits associated with GCE such as the ability for critical thinking, a greater understanding of different perspectives and an awareness of how media consumption shapes one's identity (Schofeld, 2014; Collins, 2011; Harris, 2014; Pathak-Shelat, 2014; Andreotti & Pashby, 2013)

Literature included in this review leaned significantly towards the advantages of using DT to advance and promote key concepts and tenets within GCE. In addition, the use of DT to support teachers' professional development was identified. Quaynor & Strum (2019) suggest that digital platforms, such as Twitter, create an inclusive, flexible and generative space for teachers online, to share and exchange ideas and reduce the sense of isolation that some GCE teachers report. In particular, they focus on the use of Twitter to facilitate the exchange of ideas across space. They found the teachers are increasingly using Twitter for

professional purposes that include acquiring knowledge and resources, collaborating with other educators and participating in Twitter chats, for example #edchatie in Ireland and #ChildRights internationally. As a result, Quaynor & Strum refer to it as a “site of professional collaboration”. Significantly, they also establish that such platforms can help to break down siloes that teachers can operate in. Oftentimes, passionate and committed GCE teachers operate on their own in the schools, viewed as either lone rangers or champions in the area (Bryan & Bracken, 2011). The use of online platforms to support these teachers on an ongoing basis is one advantage that DT can offer GCE in schools.

#### **1.3.4 Risks**

There was a significant lack of engagement with associated risks that might derive from the incorporation of digital technologies into GCE within the literature reviewed. Several studies in the review used platforms - such as *Facebook, Twitter* or *Skype* (Aresta, Pedro & Santos, 2016; Pathak-Shelat, 2014) - or devices - such as smartphones (Bachmair, 2016) - that have been raising concerns in relation to safety, privacy and well-being. Yet it is remarkable how little these studies engaged in discussions related to online ethics and safety. This oversight is important considering the increasing concerns related to the ‘datafication of childhood’ (Stoilova, Nandagiri & Livingstone, 2019) and evidence on children’s understandings of online risks and their capacity to make decisions about their data, digital footprint and identity in the digital world (Pangrazio & Selwyn, 2018). Considering the key tenets of GCE (rights, relationships, identities, agency, civic engagement, and duties), any proposal trying to advance the use of digital technologies in this field should confront these issues directly.

The reproduction of systems of inequality and cultural superiority is a clear risk discussed in the literature, partly as a result of what many studies already identified as lack of critical engagement in the use of digital technologies to advance GCE. Some of the studies in the review

demonstrated how technologies could lead to a soft approach to GCE (Andreotti, 2006) by not engaging in complex discussions about conflict, human rights abuses or inequality, and reinforcing assumptions that perpetuate injustices or create echo-chambers. In several discussions about these risks, the studies reiterate the crucial role of the teacher to manage those risks through a more in-depth and critical discussion of the content or through guided reflection on learners' experiences.

## **2. Exploration of teaching practices**

The second phase of the research comprised of two components. In the first instance, we carried out a series of elite interviews with a number of academics and professionals working in the areas of teacher education and applied social sciences, in addition to a number working in the area of digital technology in Ireland. Secondly, we carried out two semi-structured interviews with teachers (one from primary, one from post primary) who integrate GCE and digital technologies into their teaching. These teachers were also asked to discuss relevant teaching materials, such as lesson plans, activities and materials for students. The intention of this fieldwork was to gain insights into how DT can support GCE, within the context of school settings. Following the collection phase, the data was then analysed using the software MAXQDA through a thematic analysis (Bazeley, 2007; Braun & Clarke, 2006), in order to explore patterns and themes across the different informants. These themes are summarised below.

### **2.1 Digital literacy for teachers**

The importance of digital literacy for teachers was identified by all the study's participants, so that they can be savvy in the use of technology. However, they also suggested certain caveats. For instance, one interviewee, who is researching the use of games for Development Education, explained that a key issue to consider is the rapidly changing nature of technology and how quickly children and adolescents can outgrow certain technologies (apps, games, videos, etc.). This represents an

important challenge for adults, including teachers and other professionals in education. Trying to 'keep up' with such rapid changes might be too challenging and time-consuming for those interested to incorporate technology into their practice. Another interviewee highlighted the resistance towards technology among development educators and discussed ways to counteract such resistance. For example, global citizenship education can serve as a lens that makes activities and projects using technology more meaningful.

Digital literacy is also key for teachers in order to manage certain risks that the use of technology represents in the classroom. These can include identifying fake news and having the correct information to screen for inappropriate content in the media they will share. As one of teachers exemplified:

I suppose there are risks. You have to make sure you screen everything [...] when I used to do things for the kids, pic, videos from You Tube for certain lessons and that... when I watched one of the videos in the middle of it [it had] pornography. They had thrown it in the middle of the video (teacher interview)

Interviewees agreed that teachers need to know how to use technology so they can teach their students and set an example of how to navigate the risks it poses and, overall, how it can be used critically, respectfully and ethically. From the responses of the interviewees, it is clear that GCE has an important role in framing the digital literacy of teachers, providing an important framework to approach content and discussions critically:

[Technology] if it's not set in a context of a process of education and agency and action; so if it's used in isolation it can trivialise what is enormously serious issues. [...] it can give people a sense of understanding when they don't understand. So what can happen with technology is that people can see something on You Tube and feel that this explains the injustice of global trade and it has done it in 5 minutes. And this becomes the

basis upon which they understand and act. It doesn't encourage them to critically analyse the complexity associated with the issue (teacher interview).

## **2.2 Learning opportunities vs teaching demands**

All the interviewees discussed the unique learning opportunities that emerged as a result of using different types of digital technologies from movies, to digital fieldtrips, classroom connections, debates or games. They maintained that these technologies provided students with unique learning opportunities and experiences. Technologies also facilitated a link to GCE tenets such as rights, identity and relationships, in addition to topics such as sustainable development and climate change. In these cases, technology had powerful potential and was seen by the interviewees as a means to facilitate new learning experiences that made students more aware of global issues. In addition, interviewees argued that these digital opportunities increased knowledge in a more engaging way.

Again it was a really transformative idea for student teachers actually because no more than coming in and encountering technology for the first time in certain ways, some of these ideas were; they had never thought about it... it can come as a huge surprise that there are you know issues of global inequality... It's all eye opening and all the rest of it but in the case of this project what I found really interesting was they were being exposed to ideas of issues of gender inequality; gender-based violence in some cases (expert focus group).

Even though digital technologies can provide unique learning opportunities, they can also place high demands on teachers that, in many cases, make them inoperable and unrealistic. Interviewees acknowledged that, at times, technologies create a lot of pressure for teachers and explained that as a consequence sometimes teachers do not want to risk using them. Some examples discussed included pragmatic challenges such as IT infrastructure

not working or simply not having enough time in their lessons for the necessary set up some technologies require are some of the examples discussed.

Time is a risk, you know that if the thing breaks down you risk losing the time you should be spending [teaching]. You've very limited time [...] If five minutes are gone for one thing and another five minutes, then you are down to half an hour. There is just no point, you can't really use technology that creatively in a half hour slot. (expert focus group)

From the discussions, it seems that teachers have to balance learning opportunities versus these demands and make pragmatic decisions on when the use of technology is worth it. In this sense, most interviewees emphasised the importance of remembering that technologies should be considered as tools for GCE, not only to avoid becoming over reliant on them, but to emphasise the role of teachers as mediators in enabling learning and relationships when these technologies are used. One advantage of considering digital technologies in this way is that it allows teachers and educators to put greater emphasis on the learning and relationships they want to foster, rather than the use of the technology in itself. However, there was also a strong sense amongst participants that technology is a large part of children and young people's lives, and as such, GCE must embrace it rather than ignore it. As one interviewee explained:

There's an obligation to engage through technology on all of those issues. I think in terms of human rights and relationships, I think they're enormously interconnected. I think people here; their understanding of human rights has to be based on I think an understanding of the lives that people live in the absence of rights or the potential that people might have if their rights are fulfilled. So I think there is a real sense. I think there's a real opportunity in terms of technology to

engage people in understanding better the lives that other people live without necessarily having to physically accompany that person (expert focus group).

### **3. Global consultation with teachers and educators**

In the final stage of fieldwork, we conducted a global consultation using an online survey to triangulate the findings from the interviews and to better understand what technologies are used to advance GCE and also the way in which they are used. The structure and questions of the survey were revised by members of Trócaire prior to its dissemination online using targeted emails, social media channels and the CHRCE website. Below we provide a description of the survey, the results obtained and relevant examples provided by teachers and education practitioners.

#### **3.1 Description of the instrument**

The survey was conducted using Google Forms and participation was anonymous and voluntary. The instrument encompassed two broad sections. The first section focused on teaching experiences using digital technologies and the second on the use of technologies for specific GCE topics. In total the survey presented eleven multiple choice questions, and for the second section, it provided space for respondents to elaborate on their answers and to give details on how they used technologies for each specific topic. The survey was disseminated in English and Spanish and can still be accessed via the following links:

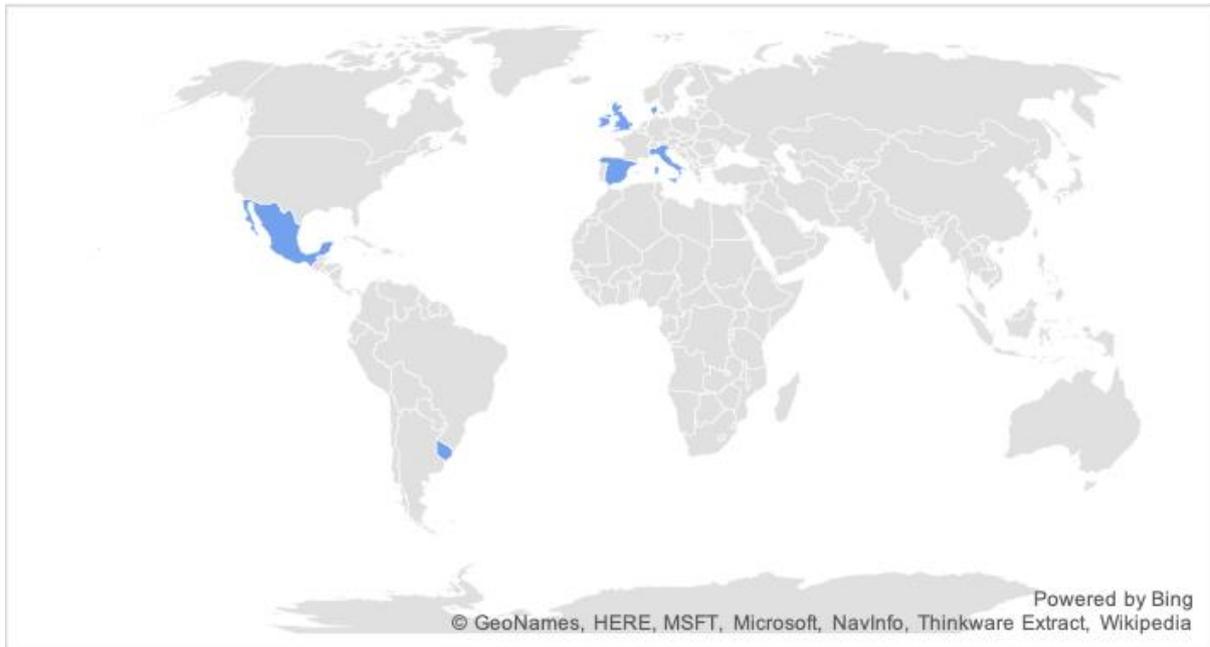
English version: <https://forms.gle/MBWRdWY7tS7STbwM6>

Spanish version: <https://forms.gle/K1njJypTa2mFXSYM6>

#### **3.2 Global results**

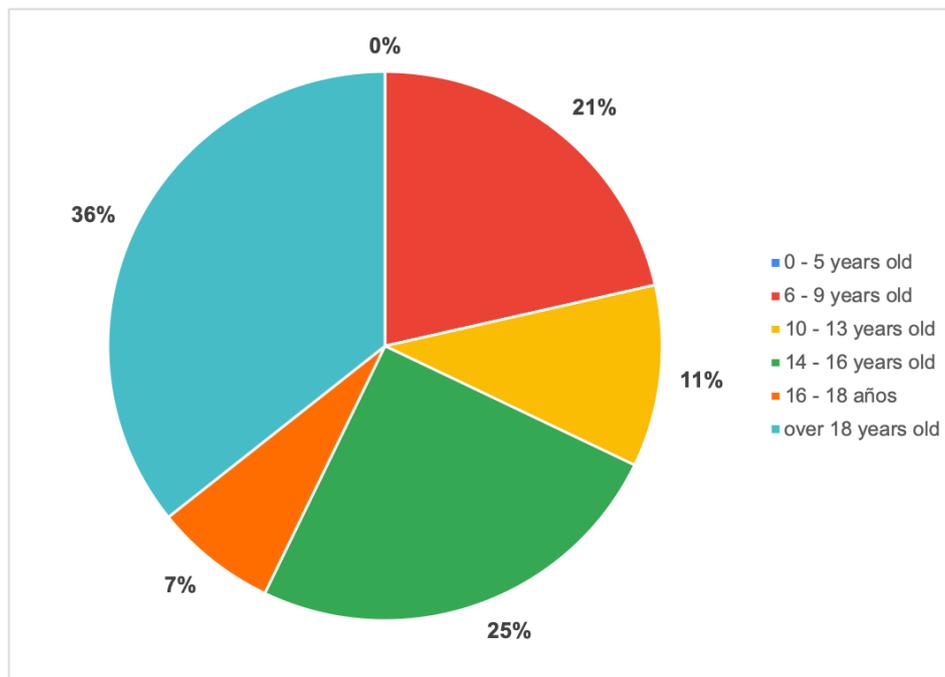
In total, 28 people from seven different countries participated in the consultation, including Denmark, Ireland, Italy, Mexico, Spain, UK and Uruguay (Figure 2). Even though the different countries provide valuable data on the practices in a variety of educational contexts, more research would be needed to identify practices in key regions such as Africa, Asia,

and the Pacific. Geographical diversity matters for the purpose of this consultation because research has shown there are significant differences in relation to the use of technologies across countries and regions.



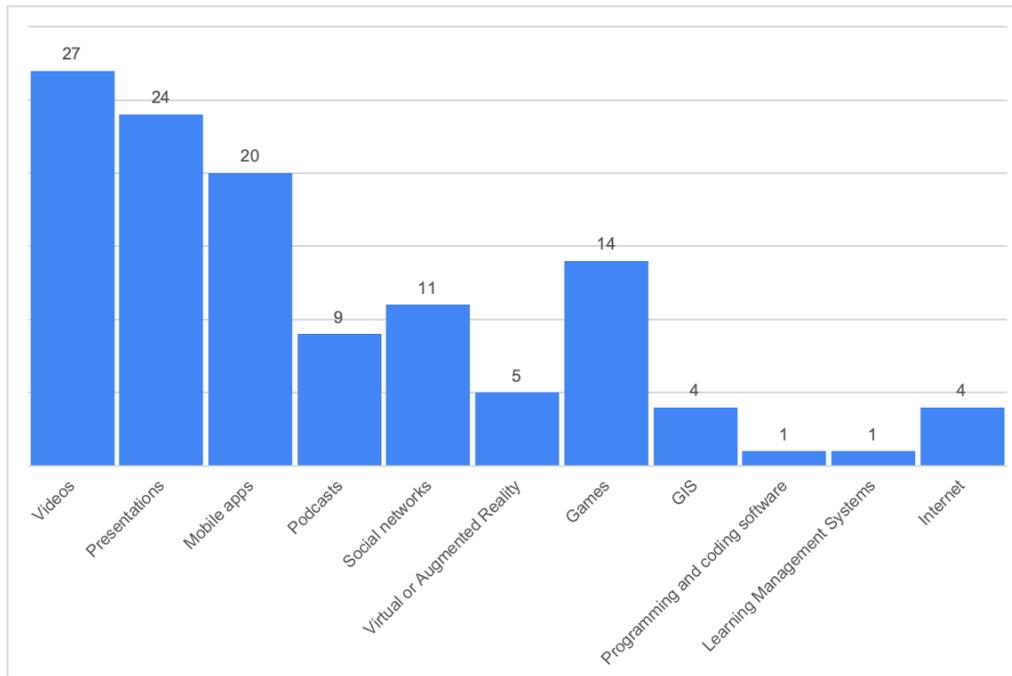
**Figure 2. Map of participating countries**

The consultation also provided diversity in relation to the age groups that the teachers and practitioners who took part in the survey work with. The majority of respondents (36%) work with students over 18 years old, mostly in further and higher education, but primary and post-primary levels were also represented. There is a gap however in relation to early years' education as none of the teachers and practitioners that completed the survey worked in this level. Figure 3 shows the percentages of responses according to the age group with which the respondents work



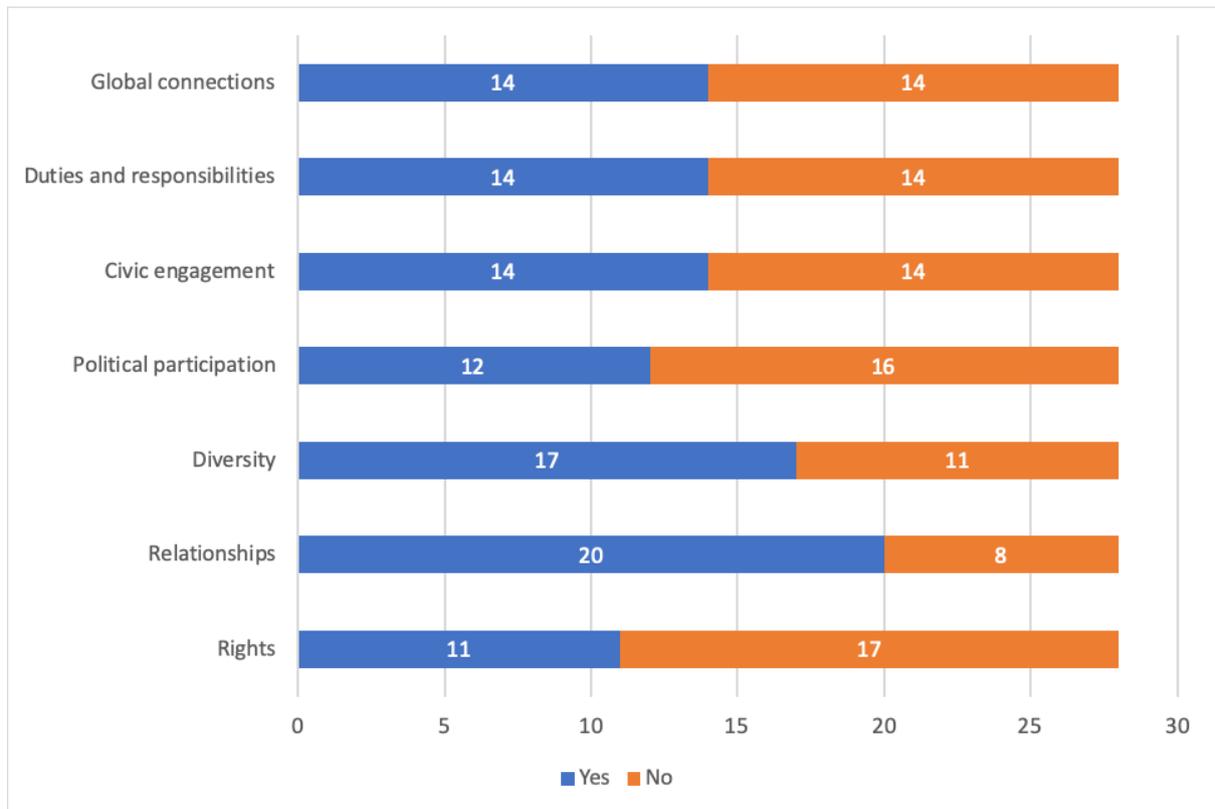
**Figure 3. Age-groups of students taught by respondents**

There is a predominance in relation to the types of technology used in the classroom by the respondents. Almost all the respondents (27/28) use videos and most of them (24/28) use presentations on a regular basis in the classroom. Less common where the use of social networks (11/28) or podcasts (9/28). Only half of the respondents used games in the classroom (14/28) despite the advantages these technologies can have as experts in the elite interviews explained. It is worth noting that emergent technologies such as Virtual Reality or Augmented Reality or GIS (Geographic Information Systems) were mentioned by the responses despite the challenges such technologies pose (Wu et al 2013, Tabor & Harrington, 2014). The total number of responses for each type of technology is shown in Figure 4.



**Figure 4. Types of technology used by respondents**

When asked about the use of technology specifically to address GCE topics, there were mixed results. Digital technologies were mostly used to teach about relationships among individuals and groups around the world (20/28) or to teach about identities, diversity or multiculturalism (17/28). It was less common to use technology when teaching about rights (11/28) or political participation (12/28). For topics such as decision-making on economic, civic, political or cultural matters as well as duties and responsibilities or global connections with individuals or communities outside the school, only half of the respondents reported using technology (14/28).



**Figure 5. Use of technology for GCE topics**

Respondents used different technologies to teach a wide range of themes within each of the identified GCE topics. From democracy, voting systems, and climate change, to world religions and cultural diversity, the results of the consultation show that digital technologies for GCE can be implemented beyond specific subjects. This result was corroborated by the fact that very few of the respondents (6/28) specifically taught Citizenship Studies. Almost half of them were teaching Languages (13/28) and/or Social Sciences (12/28) and some were also teaching Sciences (12/28) and/or Mathematics (8/28).

#### **4. Discussion of findings and recommendations**

I believe that not only is it [digital technology] a medium but it's a space (expert focus group)

Whilst digital technologies are already established as tools to support GCE teaching and learning, this study has identified the potential of digital technologies to be a space for and experience of GCE. It is this core feature that has the potential to overcome the challenges of time and technical

ability and to highlight the unique contributions digital technology can make to GCE beyond non-technical or non-digital tools. However, there are several caveats. This section explores some of the broader findings and implications of the key themes presented in this report and concludes with a number of recommendations.

#### **4.1 The central role of teachers**

This report identifies the central role of teachers in mediating students' experiences in the use of DTs for GCE. This is important as it makes the distinction between the use of digital technology in everyday life and situates it within the context of teaching and learning. Within this, it is crucial to acknowledge the need to debunk the idea of students or teachers as digital natives. Our research established that while new generations of teachers may be familiar with the use of technology in their everyday lives, one research participant suggested that the distance between knowing technology and using it as a pedagogical strategy is significant. This raises questions as to the technical skills and abilities of teachers and of the support that is available and accessible. As demonstrated in this report, the time and dedication required on the part of teachers to address these gaps may deter the uptake of DTs for GCE, regardless of their value or availability.

Nevertheless, where digital technologies are used to advance GCE, teachers have a central role to play in determining the meaning and intentionality that underpins the use of the technology. Technology can help to change perceptions about the Global South and what development education entails, but that requires a critical engagement from both teacher and students. Such engagement is not possible without intentionality from teachers to use technology for this particular purpose. Within this, digital technologies can be useful for GCE only if strong links and connections are made between the topic and the media, games, apps and so on. For example, one of the risks identified in this report is the unmediated use of

DT for GCE and a resultant overemphasis on the technology without any meaning or context. Furthermore, there is a risk that global justice issues become trivialised or that engagement through technology gives a false sense of understanding. In other words, teaching and instructional interventions that are underpinned by critical questions and spaces for reflection are crucial. Without them, there is a risk that softer forms of GCE prevail. Indeed, some of the uses of DT analysed in the literature were characterised by paternalism and cultural superiority. However, we argue that teachers' intentions and pedagogical approaches can shift this emphasis through critical dialogue and reflection. Although the digital technologies that students engage with may or may not encourage them to critically analyse a situation or topic, teachers as mediators can support them to do that.

[Technology] if it's not set in a context of a process of education and agency and action; so if it's used in isolation it can trivialise what is enormously serious issues (expert focus group).

[...] it can give people a sense of understanding when they don't understand. So what can happen with technology is that people can see something on You Tube and feel that this explains the injustice of global trade and it has done it in 5 minutes. And this becomes the basis upon which they understand and act. It doesn't encourage them to critically analyse the complexity associated with the issue.

It is not the technology but how you use it that matters. (expert focus group)

In addition, technologies can provide very emotional and extreme experiences for students. As a result, teachers need to be prepared to manage not only the technical use of the technology but also those emotive experiences, helping students to process them and move from awareness to understanding. They can also act as a conduit for students from the

online world to the offline world. Teachers can serve as translators of digital engagement through into offline participation in the real world through civic or political engagement and activism.

#### **4.2 Professional development and the creation of communities of practice**

The uneven knowledge base related to technologies amongst teachers and students has implications for any GCE project or initiative that wishes to incorporate technology. It requires considerations related to the added benefit of using technology to advance GCE, in addition to the range of practical technical knowledge that is required across multiple tools, apps and technologies. In addition, given the importance of a critical approach, professional development also needs to support teachers to apply this lens when using digital technologies to explore issues of social justice, inequality and development.

Digital technologies can also support teacher professional development. This study found that the use of social media and other apps has the potential to open up professional development opportunities for teachers that are both teacher-led and generative. Furthermore, these technologies can support the organic creation of teacher professional learning communities which are recognised as important supports to teachers, in order to make changes and introduce new pedagogical approaches (Smith, 2015). Such opportunities can also connect teachers beyond geographical boundaries and contribute a diversity of voices, ideas and experiences. Moreover, as a professional development tool, digital technologies offer teachers access as they need it, marking the pace that works best for them and learning about what they really want to learn.

#### **4.3 Connecting classrooms to the outside world**

The impulse to connect with the wider world in a direct and tangible way is a long established and at times problematic practice within GCE approaches. Indeed, the power and value the participants of this study

placed on this aspect of GCE should not be over-looked. There was a strong argument made that if well used, digital technologies can help connect students more directly with the issues and places they are learning about and also learn from these encounters. One participant stated that “technologies are enormously powerful in terms of exposing people to an experience that they wouldn’t otherwise have”. In this sense, the use of digital technologies for GCE can provide unique experiences and opportunities for learning about rights and the wider world, that they may not otherwise have.

In addition, digital technologies for GCE were found to have the potential to empower children and young people and to contribute to their agency as citizens. This is particularly the case where critical media literacy is explored and a participatory approach to media adopted. Such uses of digital technology position students as not only consumers of media but also as creators of media. In this sense, they can develop an understanding of how media operates and also determine the issues they believe need to be profiled.

To conclude, digital technology is very much part of children and young peoples’ lives. As educators, we have an obligation to work with them in technology. For teachers and schools to make the most out of the potential that technology has to offer GCE, good infrastructure in terms of internet connections and access to reliable broadband is a prerequisite. This is a problem not only for schools in the Global South but also for some schools here in Ireland.

#### **4.4 Added value of technologies for GCE**

A cost-benefit analysis when considering whether to use digital technology for GCE is important. The implementation of any technology requires resources (time, infrastructure, teacher education etc.) and the results that are obtained are not necessarily too distant from what could

be achieved without the investment of such resources, that is without a digital component. As a result, it is important for teachers and schools to be able to recognise when digital technologies are worthwhile and if they add something different to the classroom that could not be achieved otherwise. As one interviewee explained, it is important to avoid becoming “over reliant on technology as providing the solutions when really it is a medium to enable relationships and enable understanding.” Furthermore, the practice of incorporating technology in order to increase student engagement, might derive from the assumption that because children like to use technology in their everyday lives, they will also like to use it in the classroom. That is not necessarily the case.

#### **4.5 Risks and challenges of using digital technologies**

Many risks emerge from the use of any digital technology by children and these require awareness and skills on the part of adults, in order to assess and mitigate against them. Some of these risks include data privacy, exposure to inadequate or inappropriate content, harassment and grooming. Teachers and schools alike need to be aware of these risks, research the specific technologies they wish to incorporate into the classroom and have concrete plans to mitigate, react and respond in case of unexpected problems. Considering a key element to ensure a meaningful incorporation of technology for GCE in the classroom is the capacity teachers have to engage with technology. Further efforts need to focus on helping them develop such capacity so they can better understand not only the possibilities but also the limitations of certain technologies as well as being prepared to manage their risks.

In addition, there is a risk that technology can reproduce inequalities and power structures rather than democratize learning opportunities or exchanges. Though less attention was given to this in the literature, it is nonetheless an important consideration for those offering GCE programmes and initiatives to schools. There is a false assumption that the integration

of digital technologies will automatically address issues of accessibility and cultural diversity. However, there are some groups and initiatives that seek to address this.

Having presented the findings of this research project and consider their collective implications, we now make a number of recommendations based on these. They draw on key themes we identified across the project and also a number of the advantages. These recommendations are made with GCE practitioners in mind, who seek to support teachers and advance GCE in schools in meaningful and creative ways.

### **Recommendation 1. Focus on pedagogical strategies rather than specific technologies**

We want to make the point that it is important to take a step back from the technologies and recognise that in one sense, they are just tools. As a result, what becomes essential is the necessity to consider why and how these tools might be used to advance GCE. Intentionality and purpose should inform the overall organising framework that underpins the use of these tools, in addition to the particular pedagogical strategies that accompany them. This focus can then make evident the educational value of a particular technology for GCE, in addition to the type of learning trajectory and experience you want for students. For example, purpose and intention can inform specific learning outcomes that relate to deeper or more critical understanding of a global justice issue or technology can be leveraged to increase student agency and participation.

### **Recommendation 2. Focus on professional development**

An untapped opportunity for digital technologies to advance GCE relates to teachers' professional development. Digital technologies open up different types of means of CPD beyond traditional formats (face-to-face seminars, teach-meets or conferences). There are a myriad of possibilities that technology can facilitate to develop teachers' knowledge on global

citizenship and their pedagogical skills, from blended programmes combining face-to-face with online instruction, to teacher led initiatives for peer-learning including virtual teach-meets, chats and conferences. Looking into low-cost technologies (for instance social media) to conduct professional development initiatives is an opportunity that could not only increase the reach but also maximise the efforts of any professional development programme. Moreover, literature suggests that it can be a more flexible and ongoing form of support that teachers can benefit from.

### **Recommendation 3: Making connections**

There continues to be a strong desire to make GCE more tangible by connecting with communities around the world. The use of digital technologies for GCE is one way to support this without the need to travel. In addition, this study found that well designed initiatives that include aspects of connecting with others using digital technology can enhance a more nuanced understanding of the world, in addition to developing aspects of cultural sensitivity. For this to manifest, it is crucial that a critical, dialogical and reciprocal approach is also integrated into these initiatives.

Development NGOs are well placed to serve as key connectors in this area. Given their programmatic work overseas and their work with schools in Ireland, we recommend they consider what role or programme they could offer schools and teachers that can allow them to connect with others around the world, who are also studying global justice issues. Whilst also recognising technical challenges that do exist, digital tools are available and in use (see Digital directory for more). NGOs could leverage these tools in order to offer digital experiences of GCE that are grounded in GCE values.

### **Recommendation 4: Collaboration and partnership**

This study has brought together two dynamic and diffuse fields that are integrated areas of formal education, rather than discrete subject areas. Moreover, it has established certain demands and needs for teachers that

cross over the two areas. Whilst both areas share a number of key tenets, separately they are distinct fields that embody specialist knowledge and skill. As a result, we recommend that those working within GCE who seek to embrace digital technologies to advance and enhance their area, work in collaboration and partnership with those who seek to progress the use and uptake of digital technologies in schools and with young people. Over the course of this study, we found an appetite amongst a number of DT providers who argued that GCE can give meaning and context to a technology and connect it to real world issues.

### **Recommendation 5: Participatory media**

Digital technologies provide children and young people with a wide range of possibilities to exercise their citizenship and foster their agency through participation, both civic and political. Citizen journalism is an example of an initiative that can enable and foster participation due to their oftentimes inclusive and egalitarian nature and by empowering children and young people to play active roles as citizens and political agents. The focus is on young people being content creators and not just consumers of content. Digital technologies allow children and young people to get involved in public debates and influence decision-making despite not being able to access traditional forms of civic and political participation such as voting or affiliation to a political party. Findings from this study suggest that these technologies can play an important role as pedagogical tools for GCE, in particular, as they provide experiential learning opportunities to foster children's and young people's political agency. Thus, we recommend that GCE educators consider the potential of digital technologies for this purpose and think of relevant and meaningful uses rather than limiting the role of digital technology to information tools (i.e. accessing information or resources).

## Digital technologies directory

The fast-paced development of new technologies as well as the limited resources of this project make it difficult to create an exhaustive and comprehensive directory of technologies. However, the idea of having a database of software, apps and platforms available for GCE could benefit teachers and encourage them to use more and better digital technologies. We propose two responses in this respect. Firstly, we have provided a concise digital directory for teachers that gives an overview of different technologies currently being used for GCE and how these relate to the four pedagogical strategies identified in this study. The table aims to serve as an indicative rather than a normative reference, not only due to the rapid development of new technology but because we seek to emphasize the desired learning outcomes and pedagogical intentionality behind the use any particular technology. Secondly, we propose an area for consideration, namely, the creation of a database or directory could be developed through a crowdsourcing campaign that can reach out to teachers and educators in global citizenship, human rights and development education. International agencies such as UNESCO are currently using crowdsourcing or group collaboration as a way to build community-based projects. They state that;

By enabling people with similar interests to collaborate, crowdsourcing initiatives offer an opportunity to help others, learn something, and gain recognition. With these practices, community-based projects become exercises in collective problem-solving.”

(UNESCO, 2012)

## DIGITAL TECHNOLOGIES DIRECTORY FOR GCE IN SCHOOLS

<p><b>PEDAGOGICAL STRATEGIES</b></p> <p><b>ACTIVITIES</b></p> 	 <p style="text-align: center;"><b>CREATION</b></p>	 <p style="text-align: center;"><b>CIRCULATION</b></p>	 <p style="text-align: center;"><b>CONNECTION</b></p>	 <p style="text-align: center;"><b>COLLABORATION</b></p>
Stories	Storybird, Google docs, Microsoft Office	Voices of Youth – UNICEF Google docs	Drawp unlimited, Google docs Microsoft Office	Mural
Visual representations	Prezi, Bubbl.us, Canva	Prezi, Padlet	Drawp unlimited, Google docs	Padlet, Mural, Makers Empire
Timelines	TimelineJS, Smartdraw	Padlet		
Maps	Google Trek, Google My maps, Wikiamaps	Google Trek, Google My maps, Wikiamaps		Google trek, Google My maps, Wikiamaps
Quizzes and games	Kahoot quizzes		Kahoot quizzes global, Minecraft	Minecraft
Podcasts and videos	Tell about this, Tik tok Voice Thread, Animoto, Vocaroo	Tik tok, Voice Thread, Animoto, Vocaroo		Tik tok, Voice Thread
Meetings	Skype, Google Hangout		Skype Guest Speaker, Skype Cultural Exchange, Empatico, debate.org	Skype Mystery Classroom, Skype collaborations
Citizen Journalism	UpWorthy	Upworthy, TakingItGlobal	TakingItGlobal	
Field trips	Skype field trips, Google maps treks	Google maps treks (with or without VR option)	Skype virtual field trips, Google maps treks	Skype virtual field trips, Google maps treks
Campaigns	Change.org	Change.org		The World’s Largest Lesson, Conectando mundos (Oxfam platform)

## List of links

Animoto: <https://animoto.com/>

Bubble.us: <https://bubbl.us/>

Change.org: <https://www.change.org/>

Conectando mundos OXFAM: [www.conectandomundos.org](http://www.conectandomundos.org)

Debate.org: <https://www.debate.org/help/faq/>

Drawp unlimited: <https://apps.apple.com/gb/app/drawp-unlimited/id625439995>

Empatico: <https://empatico.org/>

Google trek: <https://www.google.ie/maps/about/treks>

Google maps My maps: <https://www.google.com/maps/>

Mural: <https://mural.co/>

Makers empire: <https://www.makersempire.com/>

Padlet: <https://padlet.com/>

Prezi: <https://prezi.com/>

Skype Education (Mystery classroom / Guest Speaker / Cultural exchange / Field trips): <https://education.skype.com/>

Smartdraw: <https://www.smartdraw.com/timeline/timeline-software.htm>

Storybird: <https://storybird.com/>

TakingItGlobal: <https://www.tigweb.org/>

Timeline JS: <https://timeline.knightlab.com/>

Upworthy: <https://www.upworthy.com/>

Vocaroo: <https://vocaroo.com/>

Voices of Youth: <http://www.voicesofyouth.org/>

Wikimapia: <https://wikimapia.org/>

World's Largest Lesson: <http://worldslargestlesson.globalgoals.org/>

### List of other relevant resources:

'The Sustainability Shuffle' Minecraft Education Edition

<https://education.minecraft.net/lessons/the-sustainability-shuffle/>

'Beyond the click' A teaching toolkit to exploring Global Digital Citizenship

<https://8020.ie/projects/beyondtheclick-global-digital-citizenship/>

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