

SCALING EDUCATION TECHNOLOGY INNOVATIONS

**A POLICY NETWORK
ANALYSIS CASE STUDY
IN CHAD**

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Final Report
June 2023

In partnership with

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LIST OF ACRONYMS

AFD	French Development Agency
Airtel	Bharti Airtel Limited
ARS	Regional Health Agency
AUF	Francophone University Agency
CAR	Central African Republic
CIEP	International Centre for Educational Studies
CIFGG	Carey Institute for Global Good
CIO	Chadian Internet Organisation
CNC	National Curriculum Centre
EAAF	Education Above All Foundation
EdTech	Education Technology
ESCAU	Economic and Social Council of the African Union
FCDO	Foreign, Commonwealth and Development Office of United Kingdom
GPE	Global Partnership for Education
ICESCO	Islamic World Educational, Scientific and Cultural Organisation
ICESCOREC	ICE Regional Education Centre
IETF	Internet Engineering Task Force
(I)NGO	(International) Non-Governmental Organisation
IOF	International Organisation of Francophonie
JRS	Jesuit Refugee Service
JWL	Jesuit Worldwide Learning
MAN	Markas al Nour
MoE	Ministry of Education
MoNECP	Ministry of National Education and Civic Promotion
MPNTIC	Ministry of Posts and New Information and Communication Technologies
NADT	National Agency for Developing Technology
OPA	Open Programming Association
SMS	Short Message/Messaging Service
SN Chad	School Net Chad
TBHF	The Big Heart Foundation
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
UNFPA	United Nations Population Fund
US	United States
USAID	United States Agency for International Development
VUC	Virtual University of Chad
WCH	War Child
WVI	World Vision International

EXECUTIVE SUMMARY

This report presents the results of an Education Technology (EdTech) Policy Network Analysis conducted in Chad as part of War Child’s research agenda on how to scale up EdTech in countries affected by conflict, funded by the Global Partnership for Education Knowledge and Innovation Exchange (KIX), a joint endeavor of the International Development Research Centre and the Global Partnership for Education. It aims to identify key actors and relationships in the EdTech sector in Chad to understand how EdTech can be better utilised to accelerate progress towards SDG4, with a particular focus on how EdTech programmes, such as War Child’s Can’t Wait to Learn, can be effectively scaled up. The study consists of three methods: semi-structured interviews with six key informants in the EdTech sector, an analysis of relevant policy documents, and a social network analysis of relationships between EdTech actors.

The study shows that Chad presents a challenging environment for EdTech, with respondents reporting high data costs, a lack of basic prerequisites for much information technology (i.e. electricity to charge devices) and the high costs of hardware relative to other educational expenditures. Interview respondents further cited political instability and the lack of a clear policy framework as main challenges towards scaling EdTech, but also identified that the COVID-19 pandemic had demonstrated possibilities, a general openness in the government and that the large nomadic population in Chad might benefit from EdTech innovations. Although local NGOs have provided some limited EdTech programming in the country, respondents cited the aforementioned challenges as limiting their progress. The social network analysis supported this overall analysis by showing a relatively small number of actors (n=16) who are actively engaged in the EdTech networks, with international organisations (e.g. UNHCR and UNICEF) and international NGOs (e.g. Jesuit Refugee Service and War Child) holding the most central roles in the sparse and rather limited network that does exist.



Key Recommendations

The Policy Network Analysis suggests that opportunities for EdTech scale-up in Chad are likely to be limited, however creating a favourable environment for scaling up EdTech in the country is possible through advocacy work for establishing an EdTech policy framework, developing relationships with government agencies, and working on teacher training programmes. We present our key recommendations to EdTech actors, including international organisations, policy-makers, practitioners, and private sector actors below:

1. Developing a digital learning policy

Prior to any consideration of scaling up EdTech in Chad, a policy dedicated to digital learning should be developed, incorporating the perspectives of a range of educational stakeholders and the government.

2. Capitalising on the post-COVID moment for further advocacy and awareness raising on EdTech

Capitalise on the post-COVID moment, in particular in advocacy work and awareness raising on EdTech in public and private sectors, including with the Ministry of Education and NGOs in order to broaden understanding of what EdTech might entail and examples of successful implementations in other contexts with similar challenges.

3. Facilitating partnerships and increasing collaborations on EdTech

Expanding EdTech in Chad would benefit from facilitating partnerships and increasing collaborations, including public-private partnerships. There may be long-term opportunities that arise through such partnerships, expanding the country's EdTech network.

4. Integrating EdTech into teacher training programmes

Teacher training programmes would benefit from further integrating an understanding of STEM and EdTech skills so that new teachers enter schools with a base minimum technological knowledge and ability to teach using EdTech.

5. Focusing efforts on education access and quality

Given the extremely high number of out-of-school children and the very low quality of education within the current system, consider focusing efforts on expanding access and quality rather than EdTech at this time. EdTech-related initiatives might focus on awareness and advocacy campaigns rather than implementing new interventions.



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1. INTRODUCTION

1.1 KIX Project Overview

The education systems of conflict-affected countries are under enormous pressure and face serious challenges concerning equitable access to quality education, such as overcrowded classrooms, overburdened and unqualified teachers, and a lack of adequate financing for education (Burde et al. 2015; Burde et al. 2017). In 2020, War Child was awarded the Global Partnership for Education Knowledge and Innovation Exchange (KIX) grant to generate knowledge and evidence on how education technology (EdTech) innovations can be adapted and scaled to improve education access and quality for refugee and displaced children in conflict-affected countries. KIX is a joint endeavour of the [International Development Research Centre](#) and the [Global Partnership for Education](#) to connect expertise, innovation, and knowledge to support GPE-partner countries to strengthen education systems and accelerate progress toward SDG 4. War Child's KIX research programme is taking place in Chad, Uganda, and Sudan, and is centred on its innovative education programme, [Can't Wait to Learn](#).

While the use of EdTech in classrooms continued to increase drastically over the past decade, the COVID-19 pandemic laid bare its importance in providing children with access to equitable and quality education when in-person education is no longer possible. The pandemic has had a devastating impact on children's learning and caused significant learning loss globally, affecting 90 per cent of learners worldwide at its peak (UNICEF, UNESCO, The World Bank, 2022). It is simply not enough for schools to be re-opened as children will need tailored and sustained support to help them catch up after the pandemic. This situation threw EdTech to the forefront of education sector dialogues, strengthening the case for increased investment and scale-up. Despite the momentum surrounding EdTech catalysed by COVID-19, there is still a lack of evidence on its effectiveness,

especially the medium-to-long-term effects on learning (Global Education Evidence Advisory Panel, 2020; Major et al., 2021). In addition to the evidence on effectiveness, data on cost-effectiveness and assessment of the policy environment are needed to inform decisions surrounding EdTech's inclusion in national education systems and contribute to the progress towards SDG 4. To tackle the question of how to achieve impact at scale and holistically strengthen the evidence base for EdTech in EiE, War Child developed a comprehensive portfolio of research studies and focused on five complementary areas of 'research for scale': 1) effectiveness, 2) coverage, 3) quality assurance, 4) value for money, and 5) policy. The specific studies under each area of research help War Child achieve its objective and generate knowledge and evidence on how to adapt and scale up an EdTech programme in conflict-affected countries.

1.2 Can't Wait to Learn Programme Overview

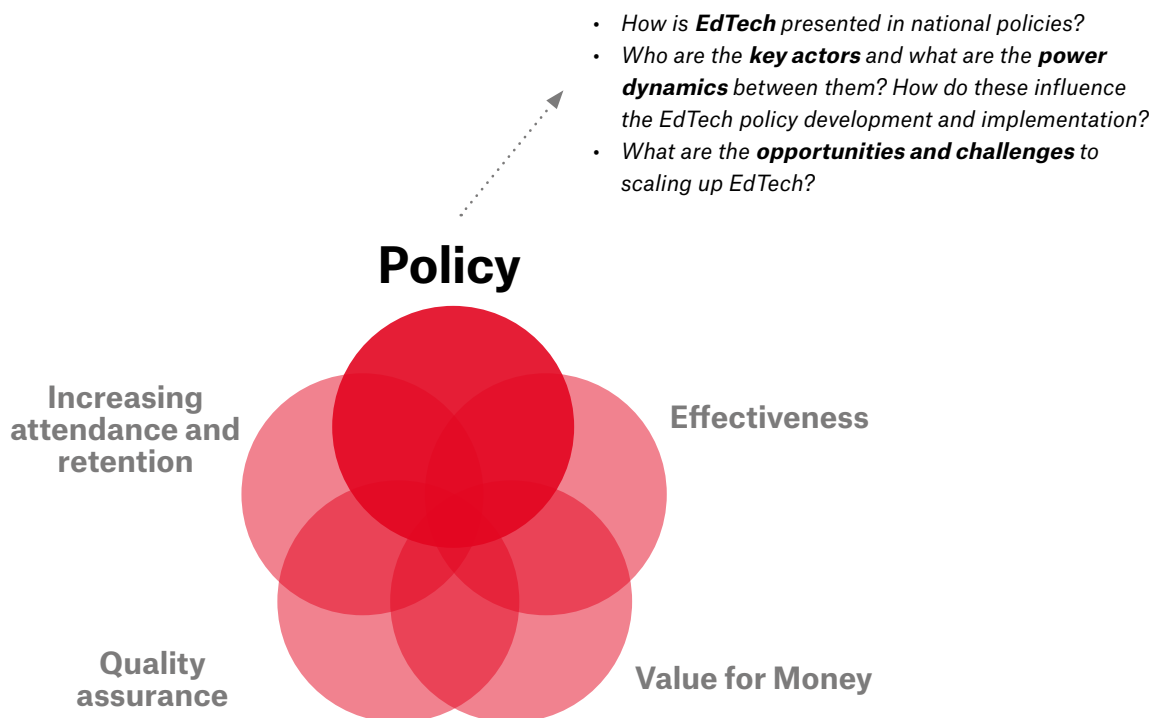
The innovation focus of War Child's research is the Can't Wait to Learn programme, a promising solution to close the education gap for millions of children around the world affected by conflict. Can't Wait to Learn is a curriculum aligned EdTech programme which aims to provide children access to quality education at home, in the formal school setting and the community in non-traditional school settings. It offers children the opportunity to (continue to) learn to read, write, and practice maths through self-paced games, which are co-created to reflect their world and context. The programme can be accessed on dedicated, preloaded, low-cost tablets and through a mobile application on personal iOS and Android devices, played on and offline. War Child works with the Ministries of Education to ensure that learning objectives are based on the national curricula. Children's progress is monitored and used for further improvements of the programme. Can't Wait to Learn is currently operational in Chad, Jordan, Lebanon, South Sudan, Uganda, and Ukraine.

Can't Wait to Learn was launched in Chad in 2019 in partnership with the Ministry of Education and Civic Promotion and Jesuit Refugee Service. In Chad, the Can't Wait to Learn game covers the mathematics curriculum of the first three years of primary school and serves to build and solidify children's foundational mathematical competencies and knowledge. All game content has been approved by the National Curricula Centre (CNC). The programme was mentioned in the Chadian Refugee Education Strategy as a remarkable success in the education sector in 2018-2019 and puts emphasis on the importance of the use of EdTech programmes in Chad.

1.3 Aim of the Study

The Can't Wait to Learn programme has entered a new phase on its scaling journey with War Child's KIX-supported research programme, which is focused on five complementary areas of 'research for scale': 1) effectiveness, 2) value for money, 3) quality assurance, 4) increasing attendance and retention, and 5) policy (see Figure 1 below). An assessment of the policy environment is crucial to understand the context and conditions to effectively scale up EdTech and accelerate progress towards SDG 4. It is pivotal to understand the education sector priorities of the Ministry of Education and other education stakeholders in conflict-affected countries to facilitate EdTech's integration into education policies and planning and promote its use by the Education in Emergencies (EiE) actors.

Figure 1: War Child’s five complementary areas of research for scale with a focus on policy



To achieve this objective and support the Can’t Wait to Learn programme in its scaling journey, we developed and conducted a Policy Network Analysis to identify influencing factors in EdTech policy and programme development and implementation processes, actors in the EdTech field and relationships between them. Through a case study in Chad, this research investigates country-specific opportunities and challenges for the inclusion and scale-up of EdTech in national education systems of conflict-affected countries. Thus, it investigates the following questions:

1. How is EdTech presented in national policies?
2. Who are the key actors in EdTech sector, and what are the power dynamics between them? How do these influence EdTech policy development and implementation?
3. What are the opportunities and challenges to scaling up EdTech?



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2. METHODOLOGY

In order to uncover pivotal actors, relationships, and policies that shape EdTech in Chad, we used a mixed-methods research design that combined key informant interviews, analysis of policy and organisational documents, and social network analysis of relationships between actors working in EdTech. Qualitative data from interviews and documents were analysed together using methods of open coding and thematic analysis in Dedoose software, while quantitative data on social networks were analysed by computing methods of network structure and creating visualisations (i.e. network sociograms) using the R statistical programming language. Together, these methods offer a holistic insight into the national environment for EdTech, with particular emphasis on policy contexts, challenges, and opportunities. Findings from these methods are presented and discussed separately below, and then integrated and synthesized in the discussion section, which is followed by recommendations.

2.1 Key Informant Interviews

Interviews were conducted with leaders and senior staff who worked in roles related to EdTech in government, international organisations, and the private sector, including the Ministry of Education and Civic Promotion, telecom industry, the formal education sector, and UN agencies. Interviews lasted between 45 minutes and 1 hour and covered topics such as relevant or influential policies for EdTech within Chad, opportunities for and barriers to the growth of EdTech, and key actors and relationships in the field of EdTech. Respondents were also asked for information about their role and current activities relating to EdTech. Interviews were conducted in either Arabic or French using online platforms (e.g. Zoom, WhatsApp), recordings of the interviews were then translated to English where relevant and transcribed for analysis. A total of six interviews were conducted from October 2021 to February 2022.

2.2 Documents

The dataset included policy documents, meaning government-produced publications detailing policies, agendas, and/or strategies relating to education, information, and communication technology, and/or digital learning. In total, five documents were analysed. Documents were written in English and French and were compiled from web searches and information provided in key informant interviews.

2.3 Thematic Analysis

Interview transcripts and documents were analysed using methods of open coding and thematic analysis using Dedoose software, a common coding scheme was used for documents and interview transcripts to allow identification of cross-cutting themes. A total of 18 parent (top-level) codes were used in the analysis, with nested codes for some categories. For example, the parent code of “barriers/challenges” to EdTech uptake and scale-up included within it such sub-codes as “electricity,” “connectivity,” and “financial.”

2.4 Social Network Analysis

Using data from the interviews, documents, and additional web searches, we constructed a social network dataset that contains key actors working in EdTech or related fields and the relationships between them. For each actor in the dataset, we collected data on the type of organisation (e.g. NGO, private sector, government), location and website (where available). For relationships between actors, we collected information on the type of relationships (e.g. finance, advising, collaboration). Results of our social network analysis are presented below.

2.5 Challenges and Limitations

While our methods provide a robust and triangulated perspective of the EdTech policy environment in Chad, it is important to document the challenges that we encountered in data collection and the limitations they entail. First, the participant recruitment process for key informant interviews was challenging as the response rate was low. We focused on medium to high-ranking officials, whose views are useful; however, not all of them were sufficiently immersed in the day-to-day ground-level activities and experiences of organisations working on EdTech. Although interviews with implementers would have enabled a different perspective, interviews with actors implementing activities were not possible due to connectivity limitations in the country. The focus on high-ranking officials also meant that the response rate was low and slow, since communication with the official required that we go through multiple actors first before we establish direct contact with the official of interest. Ideally, future research might seek to collect data from a wider range of actors and stakeholders and in-person to avoid connectivity issues.

For social network analysis, clear or publicly available information on relationships was often scarce, with websites using ambiguous terminology (e.g. “friends” or “supporters”) to describe their ties to other organisations; however, they do not clarify the role and contributions of that actor in relation to the organisation’s activities. We often coded these links as “collaboration” lacking any more specific information, posing a limitation for the social network analysis, and further understanding of power dynamics. Other types of collaborations, such as the use of resources, co-membership, capacity building, information sharing, etc. received fewer specific mentions in websites, interviews, and documents.



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3. COUNTRY CONTEXT

Figure 2: Map of Chad



Chad, a landlocked country located in North-Central Africa, shares its borders with Libya to the North, Sudan to the East, Central African Republic (CAR) to the South, Cameroon, Nigeria, and Niger to the West. Surrounded by political conflicts and instability in the region for more than a decade, Chad continues to deal with the consequences of tensions in the neighbouring countries and hosts thousands of refugees and internally displaced people. The country currently hosts an estimated 390 thousand refugees from Sudan, 125 thousand refugees from CAR, 42 thousand refugees from Cameroon, 20 thousand refugees from Nigeria, and some 380 thousand internally displaced people (UNHCR, 2022). In addition to the security challenges in the region, Chad is also struggling with the impact of the climate crisis, especially the desertification and the drying up of Lake Chad. The reduction in Lake Chad's surface area has led to lower fisheries production, degradation of land and pastures, lower agricultural capacity, reduction in livestock and biodiversity and thus exacerbates poverty (African Development Bank Group, 2022). Although Chad has made progress in poverty reduction during the last decade, from 47 per cent in 2011 to 42 per cent in 2018, the country fell back into recession in 2020 due to the COVID-19 pandemic (Tchana, Savadogo, & Noumedem Temgoua, 2021).

Political instability, regional conflicts, limited resources, and the climate crisis are some of the factors that challenge the education sector in Chad. Although the country suffers from political and economic insecurity, the Chadian government remains committed to including refugees in local and national development plans. In 2018, the Chadian government launched its Comprehensive Refugee Response Framework (CRRF) and began the integration of all refugee camp schools into the national education system (UNHCR, 2019). The government also announced Chad's Interim Education Plan (PIET), covering the period between 2018-2020, which aims to preserve and broaden access to primary education, improve the quality of learning, and increase literacy and completion rates across the country. The education sector in Chad faces various challenges including lack of funding, the unavailability of education data, disparities between the rural and urban areas regarding access to quality education, the influx of refugees fleeing conflict in their countries, and the fragile situation in the Lake Chad region, which has resulted in a significant number of internally displaced children (GPE, 2022). The outbreak of COVID-19 pandemic has exacerbated the already existing challenges in the country and heightened the economic needs and impacted on the livelihoods and productivity. The school closures due to COVID-19 affected children's education outcomes, as estimated 90 per cent of students were at home without any engagement with educational activities (Tchana, Savadogo, & Noumedem Temgoua, 2021). This situation increased children's dropout rates and the gender gap in education.

In 2021, Chad's political stability was challenged following the sudden death of President Idriss Déby on the front lines of the conflict with the rebel forces in the north of the country, which was announced on 20 April 2021. A group of military officers seized power on behalf of the Transitional Military Council (CMT), which was led by the late president's son, Mahamat Idriss Deby (World Bank, 2022). The country has entered an 18-month-long transition period with a promise to hold free and democratic elections at the end. During this study (2021-2022), the Chadian transition government struggled with a weakening capacity to provide public services due to the economic downturn and recession while trying to recover from the COVID-19 pandemic. The education sector was challenged by school closures and lockdowns due to the spread of the COVID-19 pandemic, in addition to teacher strikes in the refugee and host-community settlements. Although the political and economic instability in Chad affected the lives of our research participants, we received high interest from education stakeholders in the country to participate in this study, including government officials, leaders and senior staff of international and national organisations, and the private sector.



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4. RESULTS

4.1 The Education Technology Network in Chad

4.1.1 Key Actors and Relationships

Based on key informant interviews, documents, and further website analysis, we identified 44 actors currently engaged in EdTech within Chad, of which 16 have links to other organisations and therefore are included in our social network analysis (see Table 1 below). We coded the resulting dataset for descriptors, such as type of actors, for instance, bilateral agency, government, INGO, NGO, a private company, and their connections to each other (see Table 2 for actor types and definitions).

Of those actors classified by type, international organisations and government entities are most numerous, with six actors each, followed by NGOs (n=5). However, a high proportion (n=7) of actors in Chad were classified as “Other” as they did not fit easily within a single category. For example, online education providers EduClick Africa and EduTchad are both classified as other, partly because their status as a for profit or non-profit company is not known, as is the Islamic World Educational, Scientific, and Cultural Organisation (ICESCO), and the national state-owned telecommunications company Sotel. However, only one of these – EduTchad – has connections to other actors.

As a case study, Chad is therefore unique in that the number of connected actors is very low in relation to the total number of actors. This theme is explored further in this report, and it is compared to Uganda and Sudan, both of which have higher levels of connections between EdTech actors, in the overall report.

Table 1: Actors in Chad EdTech Environment and Network

Actor Type	N (All Actors)	N (Connected Actors)
Bilateral Agency	1	1
Embassy	2	1
Government	6	2
INGO	4	2
Intl Org	6	4
NGO	5	1
Other	7	1
Philanthropic Fund	2	1
Private Company	4	1
Religious Org	3	1
School	1	0
University/Research	3	1
Total	44	16

Table 2: Type of Actors and Definitions

Actor Type/Descriptor	Definition
Bilateral Agency	High-income country donors (e.g. USAID, FCDO)
Government	National government bodies including ministries and local government agencies
INGO	International non-governmental organisation (e.g. Save the Children, War Child)
NGO	Non-governmental organisation headquartered within the country (e.g. TECHNIDEV in Chad)
International Organisation	Intergovernmental organisation or an international institution, with stable set of norms and rules meant to govern the behaviour of states and other actors in the international system (e.g. UNICEF, UNHCR)
Philanthropic Fund	Non-profit, non-governmental organisations with principal funds established by wealthy individuals, groups, corporations, or companies to make grants to charitable organisations. (e.g. Bill and Melinda Gates Foundation, LEGO Foundation)
Private Company	For-profit company excluding its foundation, if applicable
Religious Organisation	International and national religious organisation with an explicit religious mandate and affiliation
University/Research	Higher education institutions, including universities and research centres
School	Public or private school
Embassy	Embassy of a foreign country
Other	Any other type of organisation that does not readily fit within any of the other classifications

These 13 connected actors are engaged in 11 different links, which are classified by the link type in Table 3. The number of links is low in comparison to other countries, and in relation to the number of actors, as one would generally expect to see more relationships than the number of actors in the network (with many actors having multiple ties). Most of these relationships are simply identified as “collaboration,” meaning that actors are working together in some way but that any evidence of funding, for example, a partnership between EduTchad, an online learning platform, and Tigo, a private telecommunications company, to allow students to connect to EduTchad’s website for free. Other “collaborations” were identified by interviewees without giving details that would allow for more specific classifications, and online information or documents often did not specify the exact nature of the relationship.

Table 3: Types of Relationships in Chad EdTech Network

Link Type	N (Links)	Percent
Capacity building	0	0.0%
Co-Membership	0	0.0%
Collaboration	6	46.2%
Funding	2	15.4%
Implementation	2	15.4%
Information Sharing	0	0.0%
Other	1	7.7%
Use of Resource	2	15.4%
Total	13	100.0%

4.1.2 The Network of Actors and Relationships

The network sociogram (Figure 3) shows the EdTech network in Chad, in which all organisations that are connected in the network represented as coloured dots and their relationships to other actors are shown by lines. The position of point markers is determined by their connections: actors with more connections tend to be placed towards the centre of the network, and those with fewer connections towards the periphery (Fruchterman and Reingold, 1991). The colours and shapes of the point marker indicate each type of organisation, corresponding to our data collection methods coding 12 types of organisations (with definitions given in the legend below the plot). The figure makes clear that the network is relatively sparse and fragmented, with only a few actors connected to others, and low levels of integration across the field. This is likely to have implications for the sharing of information, for example, dissemination of good practice or circulation of opportunities for funding.

Figure 3: Connected Actors in the Chad EdTech Policy Environment

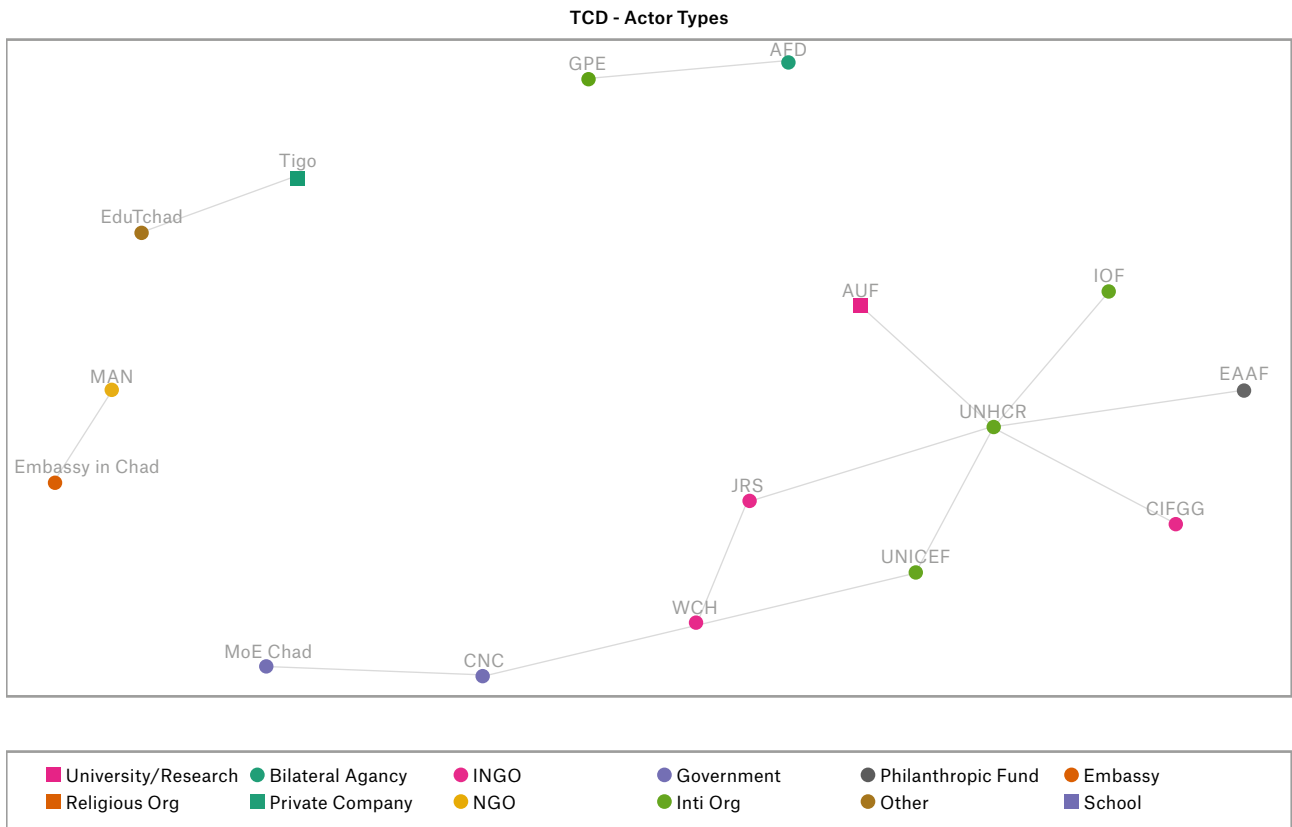


Figure 4 below adds further context by showing adding isolates – those actors that are active in EdTech network but not connected to others – to the network sociogram. It highlights the minimal level of collaboration in the sector and shows that actors with significant national importance (e.g. the Ministry of Education and Civic Promotion and national telecommunications company Sotel) are not actively collaborating on EdTech in Chad, based on the data we have collected. Furthermore, some prominent global actors – for example UNESCO and the European Union, are not connected to the EdTech network in Chad based upon our data collection.

Figure 4: Chad EdTech Policy Network with All Actors and Isolates Labelled



4.1.3 Measures of Network Structure

Sociograms are useful for providing a holistic and cross-cutting interpretation of the network, but measures of network structure can be more useful in providing objective measurements of key network properties. We primarily utilize two measures of network structure: centrality and brokerage. Centrality measures the extent to which an actor is embedded within the network: while many ways of measuring centrality are defined in the social network analysis literature (Borgatti et al, 2018), we use the relatively simple measurement of degree centrality here, which is simply the number of ties to each actor. Brokerage measures the extent to which an actor connects different types of networks, for example whether the government connects an international organisation with local NGOs. An actor’s brokerage is simply the count of the number of brokered ties it is involved in.¹ The brokers may connect separate areas and actors of the network economically, socially, or politically; therefore,

¹ Brokerage counts can be higher than centrality because it will involve counting ties multiple times. For example, if organisation A (an international organisation) is connected to B (a government actor), C (an NGO) and D (a private company) then the brokerage count from three ties will be four (ABC, ABD, BCD, BAD). This increases exponentially for actors with more connections.

they are the ones to access both valued information and resources (Stovel, Golub & Milgrom, 2011). Brokerage is important because it creates a more varied and less segregated network: actors of different types (and likely with different resources, expertise, capacities, etc.) are working together. Centrality and brokerage are related but distinct: an actor can be highly central but have low brokerage if it is working with only one or two types of actors. Similarly, an actor might have relatively low centrality but be working with many types of organisations and therefore have high brokerage. However, actors with very low centrality (e.g. only one tie) cannot act as brokers.

We analyse brokerage and centrality by aggregating the average for each of 12 types of actors described in the methodology – to identify how different types of actors are positioned differently – and by identifying key individual actors (see Table 4 below). However, results show the limited extent of EdTech policy network in Chad, with most types of actors having only one connection and therefore no brokerage. International Organisations are the most central, which is clearly evident in the position of UNHCR and UNICEF in Figure 2. In comparison to other networks (i.e. case studies conducted in Uganda and Sudan as part of this study) levels of centrality are low for all actors. Furthermore, international organisations – and UNHCR in particular – are the only organisations that connect other types of organisations, which is evident in their brokerage values, which are the only ones above zero.

Table 4: Measures of Chad EdTech Network Structure

Actor Type	Centrality		
	Degree	Brokerage	Count
Intl Org	2.5	7.5	4
INGO	2	2.7	3
Government	1.5	1	2
Bilateral Agency	1	0	1
Embassy	1	0	1
NGO	1	0	1
Other	1	0	1
Philanthropic Fund	1	0	1
Private Company	1	0	1
University/Research	1	0	1

Measures of centrality and brokerage for each actor (Table 5) further identify the limited scope of centrality and brokerage in EdTech policy networks in Chad. UNHCR is by far the largest broker among different types of organisations with the highest brokerage measure, followed by War Child.

Table 5: Network Measures for Each Connected Actor

Actor Name	Degree Centrality	Brokerage
UNHCR	6	28
War Child	3	6
CNC	2	2
JRS	2	2
UNICEF	2	2
AFD	1	0
AUF	1	0
CIFGG	1	0
EAAF	1	0
EduTchad	1	0
French Embassy	1	0
GPE	1	0
IOF	1	0
MAN	1	0
MoE Chad	1	0
Tigo	1	0

4.1.4 Subnetworks and Communities

Given the very limited extent of the network and low levels of interconnections among actors, the scope for identifying subnetworks is limited. Illustrating the findings presented in Table 5, Figure 5 highlights the positions of international organisations amongst other actors. In Chad, international organisations are the only type of organisation that hold multiple connections to other actors in the EdTech network.



Figure 5: Focus on International Organisations in the Network

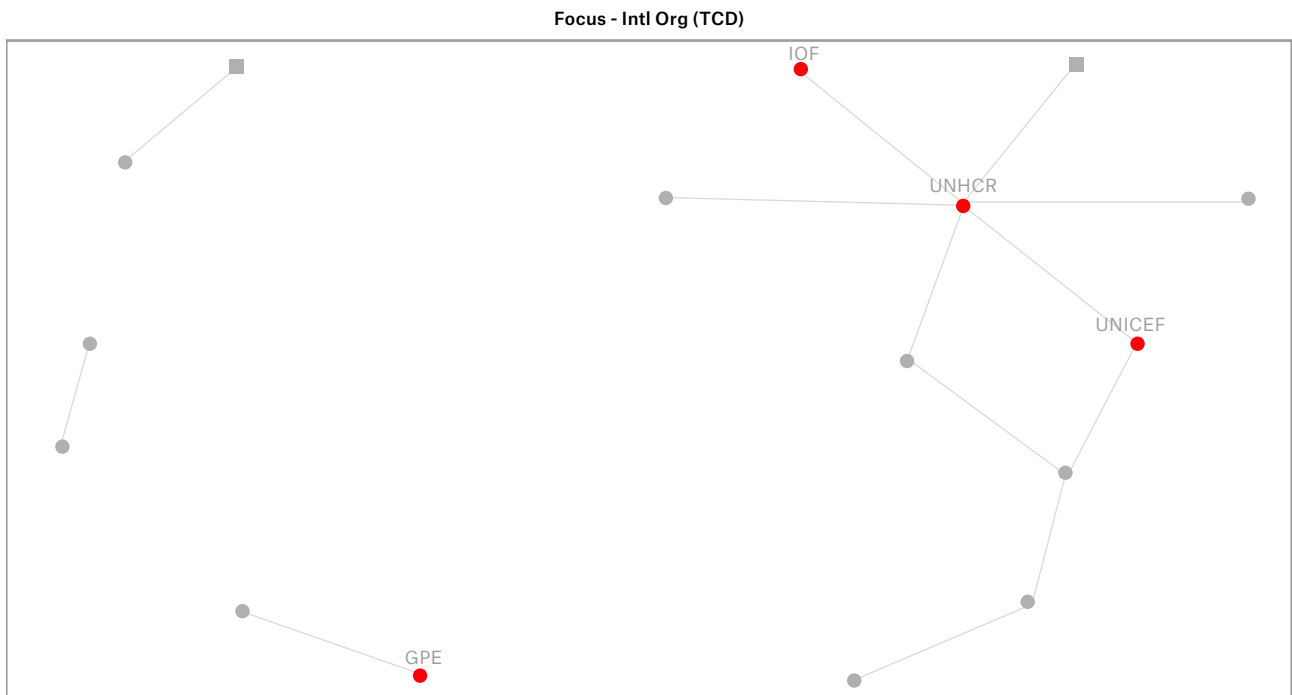
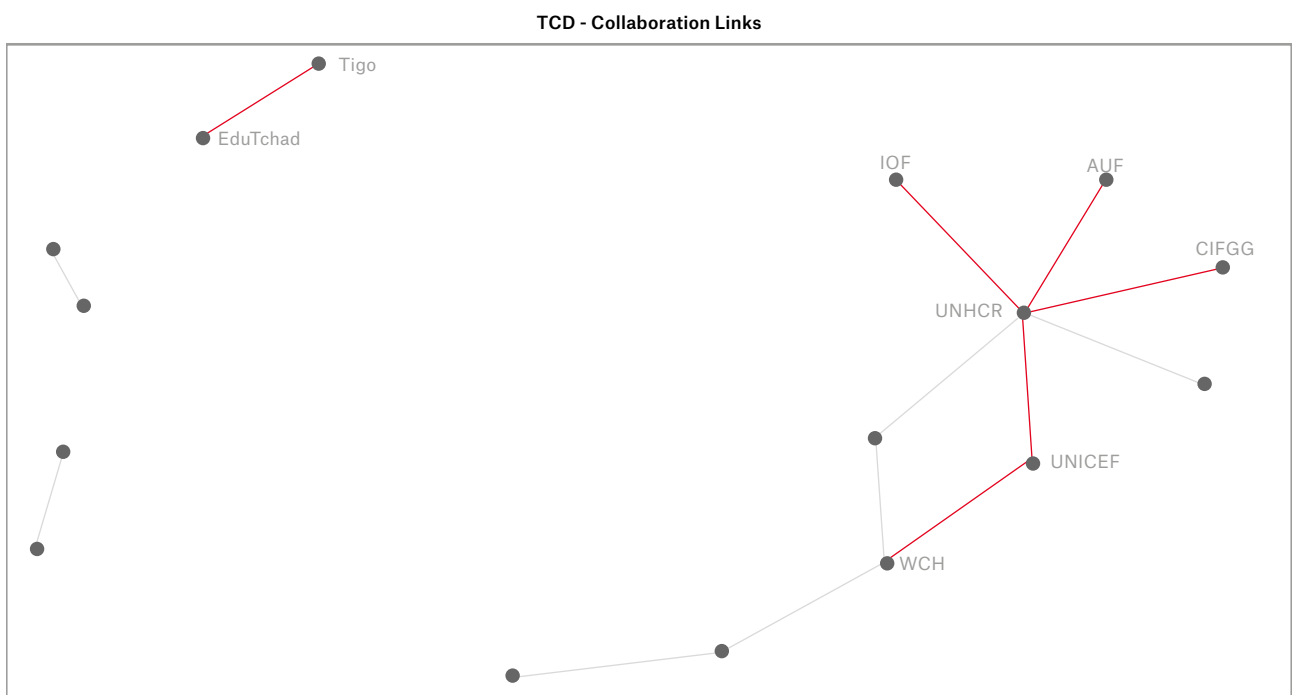


Figure 6 also illustrates the breakdown of relationships provided in Table 3 by showing how most relationships in the network are specified as collaborations, which includes many types of partnerships as well as relationships that could not be more specifically coded (e.g. as funding, etc.) based on the information available.

Figure 6: Focus on Collaboration Links in the Network



4.1.5 Social Network Analysis Synopsis

The social network analysis of EdTech policy actors in Chad highlights the limited and fragmented current state of the EdTech field. The document analysis and interviews provide context that helps to explain this scenario: including barriers such as high data costs, limited access to electricity, competing policy agenda, and educational priorities. The network structure can therefore be interpreted as an outcome of a challenging national context for EdTech.

An additional explanation could be the limited involvement of international actors, which often hold central positions in other countries and create broker connections between different types of organisations. The same is true for government entities, which often play a role mediating connection between different types of organisations. With these actors largely absent from policy networks, connections that might provide better sharing of information are also missing, possibly shaping the fragmented network structure we observe in our data.

4.2 Education Policies in Chad

Of the five documents produced by the Chad government, none focus directly on EdTech, and mentions of EdTech or digital learning are rare, for instance in documents relating to education and COVID-19. For instance, *Plan de Reponse Nationale du Secteur Education a l'Epidemie de COVID-19 au Tchad* (2020) discusses potential plans for continuity of education through distance learning, such as: "Plan and set up mechanisms for disseminating distance learning (radio, tv, internet, SMS, printable media)... Provide teachers and learners with the teaching materials and tools necessary for these alternative approaches (radio, mp3 players, teaching materials)" (p.6). Although *Strategie Education des Refugies au Tchad 2030* does include some discussion of digital learning for refugees, this refers only to the Can't Wait to Learn programme, mentioning the distribution of tablets (p.12).

Within other policies and strategies, any mention of technology merely relates to the development of technical and vocational education, and none relating to EdTech for its use in classrooms, distance learning, devices, software, etc.

When asked about EdTech policies, respondents did not discuss any concrete documents or strategies, but instead the potential for such. For instance, one respondent said: "Well, recently even the President of the Republic, the president of the military to another transitional military, he mentioned something about the good use of technology, of internet, especially. So, he just reiterated the fact that people should be able to use the internet should it be at school levels."

[Respondent #4]

Another explained that "This specific topic [EdTech] was not considered before COVID, but during and after COVID, the government thought of placing a strategy to develop and build a number of centres in the rural areas and in the capital to develop the technological field. The Government has also supported a number of institutions, and it is still exerting an effort to develop this field. For example, they developed the National Agency for Developing Information Technology in Chad. They also built a number of centres in a number of Chadian cities. I don't have the exact numbers, but I will try to know. Also, they developed the National School for Information Technology, it was also built in these Chadian cities, and this was also a part of the strategy... in general, there is a strategy in place by the government..." **[Respondent #6]**. This "strategy," it appears, has not yet been produced as a concrete document.

Another respondent also mentioned the potential for a future strategic plan: "there is an agreement that will be signed between the ministry of education and the institution of educational technology or the

British institute of educational technology... There is an agreement, it is not finalised yet, but there is a strategy to have this project.” [Respondent #6]

“Yes, there is a practical policy to act because we have a national framework of orientation and curriculum by the government... But all this is theoretical.” [Respondent #2]

“The challenge is at the policy level.” [Respondent #3]

When asked why no concrete policy on EdTech yet exists in Chad, a respondent reflected on the political climate and said, *“I think it’s not really in the priority because of all this [political instability].” [Respondent #1]*

4.3 Barriers and Challenges to EdTech in Chad

4.3.1 Political Instability and Security Issues

When areas of Chad face political instability, government actors have blocked internet access in order to stem communications that could lead to security issues. In this way, Chad’s instability has had an indirect impact on some forms of EdTech. As a respondent describes: *“when we have some political insecurity, WhatsApp is blocked, Facebook can be blocked, so this could also affect the willingness. If you rely on some social media for classes, or even on internet, I know when we had political instability in April and the internet was completely cut... I think it was like 3 days or something... it doesn’t happen every day, but it shows that connectivity is not something that is taken lightly here.” [Respondent #1]*

Other respondents echo this experience:

“When there are some protests, they can cut the internet for some time, but then they will release it.” [Respondent #3]

“We had the problem with people protesting against his [the former President’s] sixth mandate as a President of the Republic. So, every weekend, it was like, every week, it was like protest from time to time. So, sometimes the government will just say ‘stop it, stop it,’ they do cut the internet, no access to internet.” [Respondent #5]

A respondent explained the context in detail:

“Because security people say that maybe with internet and social media, it’s very easy for the news to spread in the country. Today, for instance, as I mentioned, like less than three hours ago, people from a region approved that a province of Chad called Massakory protested because there was a killing in that region, there was a conflict, like a conflict between the herders and the farmers. So, people think that the herders are being armed by local authorities, so they give them weapons to go and kill the farmer civilians, so people said okay, this thing has to stop, so they took it to the streets countrywide. So, to avoid this kind of news spreading very fast, sometimes the government can go and shut internet for like the whole day or maybe some few hours to avoid people spreading like videos of people marching or maybe videos of people being attacked by police and this kind of thing, so that’s what I meant by security reasons.” [Respondent #4]

When security problems impact internet access, discussions of EdTech take a backseat: *“Today, for instance, there was a demonstration about some killings in the South of the country, so the demonstration was countrywide, so for security reasons, sometimes the internet will be reduced to the very minimum, so it’s kind of very difficult here in Chad to talk in terms of technology as far as education is concerned.” [Respondent #4]*

And political instability, which connects to poor and interrupted internet access, has potentially impacted donor funding to education, while also exacerbating educational challenges: *“The low accessibility to internet can also be linked to the political climate... I think it’s hard to maybe for some donors to protect themselves in Chad because of how instable it can be common at any time, so we’re still in, you know, when it comes to education, we’re still mostly working on access and a little bit of quality.”* [Respondent #1]

4.3.2 Political Will and Governance

Respondents noted that although some segments of society are ready to embrace EdTech, the government lacks adequate will: *“The general public agrees with the idea of moving education system to the next level using some technology, but mostly, it is a matter of means and its government related as well, because we have the responsibility of the government. Mostly, the people who promote digital trainings, they are like entrepreneurs, like students, like these are the ones mostly engaging in digital training. But the government itself, are mostly focused on... accountability of civil servants... I think in terms of willingness, we don’t know if the government is really willing to do that [support EdTech advancement].”* [Respondent #4]

A respondent observed how the EdTech work in the country has been thus far led from those outside of the national government, with little influence on state planning: *“The French Development Agency and the World Bank and Swiss Cooperation and UNICEF, and UNESCO. They found each other. They appointed a leader. Their action plan and the action of NGOs... It’s a good thing, but it’s too bureaucratic, it’s too long and it’s very complicated.”* [Respondent #2]

The government’s low commitment to education in general may be at the root to its limited attention to EdTech: *“education has not been sufficiently prioritized in Chad’s public budget and the share of general government spending absorbed by the education sector has declined over the last 5 years from over 15.4 percent in 2013 to 13 percent in 2017, reaching its lowest level in 2015 (8.9 percent)”* (GPE, 2020).

4.3.3 Economic Constraints

Chad’s poor economic climate and low commitment to funding education through public budgets has had an impact on the potential for EdTech uptake: *“Education financing in Chad is insufficient and highly inequitable. In 2016, Chad spent 2.4 percent of its GDP on education. This is less than its peer countries and less than the average of 4.3 percent of Sub-Saharan countries... the largest share (87 percent) of Chad’s total education spending is financed by households and parents’ association. This poses major challenges in terms of improving the equity, the efficiency, and the sustainability of the country’s education financing architecture”* (GPE, 2020).

A respondent explains the country’s economic challenges: *“The fact that the country is landlocked, half of it is desert, so it’s not a super attractive country when it comes to private investments, so the economy is not doing very great, it’s not very diversified. So, to me it is a country of a lot of potential, but if people would evaluate their risk, they might decide to go somewhere else, than to go in Chad for those reasons.”* [Respondent #1]

Within this economic environment, the cost of internet is prohibitive to most families and schools: *“One of the challenges is the internet being expensive... one of the main problems that will face the people who rely on educational technology for learning... we only have two companies in Chad, there is no competition to lower the prices. So, this also creates challenges for the development of educational*

technology.” [Respondent #6]

“Not everyone has the financial means to buy data. And while we are in a country where data is the most expensive in the world... much more expensive in Chad than in neighbouring countries.”

[Respondent #4]

“It is not really, really attainable because first of all, the internet cost in Chad is very high, the internet cost is very high, one of the most expensive in Africa, we can say that.” [Respondent #5]

The high costs of devices also present barriers: *“the Android telephone or maybe the iPhone they’re very costly, they are very expensive here compared to different countries... so this is one of the reasons why people do not have access to technology, it’s the expensive devices that they can buy.”*

[Respondent #4]

4.3.4 Electricity

Throughout Chad, most schools do not have electricity, particularly in rural areas, presenting a barrier to EdTech scale-up: *“I think one of the big issues would be that we don’t have electricity in most of the schools. For us in the refugee camp, there’s no electricity in any in school, so you would need either to have electricity or to bring electricity through solar, and these are quite high costs.”* [Respondent #1]

A respondent explains: *“Regarding the problems or the challenges of educational technology in Chad, first of all, we have the issue of electricity. All the educational institutions that are present, if we are speaking about the public ones, the vast majority do not have electricity. This is the first challenge facing educational technology.”* [Respondent #6]

In terms of distance learning, many homes do not have electricity: *“most of the students they don’t even have electricity at home, so it’s kind of very challenging to charge the computer all the time.”*

[Respondent #4]

Although solar power might present a viable alternative, this can be an expensive option: *“we are facing many challenges, the first one would be electricity. For this pilot project, we are using solar chargers. But it’s over, it’s quite a big budget if you want to bring it up to scale. So, in some of refugee camps, we have access to internet, and we have a computer centre for students where they can come enrol in online classes, but it’s only in two camps out of all of the 20 camps that we have and it’s still under development.”* [Respondent #1]

4.3.5 Connectivity

Internet access in Chad is very low, with a direct impact on many EdTech activities. An example of connectivity issues in higher education shows the potential difficulties when students need to connect from home: *“[the university] distributed computers for students, small computers to students, but these computers are not really, they don’t, most of the students they don’t even have electricity at home, so it’s kind of very challenging to charge the computer all the time, and even if they charge their computers, they don’t even have internet, they don’t have data on the computers, so it’s very challenging for them to use this technology.”* [Respondent #4]

In practical terms, a respondent working on a refugee education program using technology explains the challenges of connectivity: *“even if you have electricity and you need to go online, you need to have connectivity or network, and in large part of the country there’s no phone network at all.... So, they followed the training on tablets, and we give them routers so they could follow it online. Honestly, it was*

quite challenging because the router they need to have 3G or 4G and it's very limited in the camp to reach actually 3G. So, in some instances we had to take the tablets, bring them to the office to download the document offline, and then give it back to them, because otherwise it would just take forever." [Respondent #1]

4.3.6 Devices

Devices that allow for distance learning and the use of particular EdTech interventions can also be very expensive, and according to a respondent, present a hindrance to EdTech scale-up: *"We cannot speed up equipping the population with a magic wand. Things take time and gradually... Those that need to do distance education need computers or phones."* [Respondent #3]

Respondents explain that most schools don't have devices to enable EdTech use:

"The technology is very, very limited here in Chad. Yeah, I can say that most of the schools they don't use technology in the training systems they're just doing like using the basic things like books like using the basic things like, the blackboard with chalks, and everything, that's what they use." [Respondent #4]

"I also think we lack the appropriate smart devices. For example, right now in Chad, the number of students who have to sit for official exams is more than 80,000 students. If we want to use educational technology in delivering information to these 80,000 students, we need a minimum of 40,000 devices. We have some centres that are helping in developing educational technology and they can be counted by the hand. Although we think that their presence is very important and they played a huge role in introducing people to educational technology or to train students on using it, they are still low in numbers, and this is a major challenge." [Respondent #6]

4.3.7 Out-of-school Children

One of Chad's most acute educational challenges is the *"large numbers of out-of-school children – half of primary school-age children are excluded from the system due to a combination of economic factors and limited availability of classrooms" ... "The net attendance rate in primary education was estimated at 49.8 percent in 2014. This attendance rate means that the coverage level of the group with the official age of schooling is low. Chad has a lower net secondary (lower and upper) attendance rate (12.3 and 7.9 percent respectively) than its peers and other Sub-Saharan African (SSA) countries"* (GPE, 2020).

With such a large access problem to address, some respondents felt that focus on EdTech might not be the best priority at the moment, given that half of the school-aged population is not part of the formal school system: *"it feels like we are bringing the ideas, because I mean it's an education system where half of the kids don't go to school, so it's like what's the priority?... so, we're still in, you know, when it comes to education, we're still mostly working on access and a little bit of quality."* [Respondent #1]

4.3.8 Geography-Urban/Rural

Chad's geography, much of which is rural, contributes to educational inequities that could be exacerbated by the introduction of EdTech, that would more easily reach urban populations: *"there are significant disparities in access to technology between rural and urban populations, as well as across different regions... There are also wide geographical disparities in ownership and access to technology"* (GPE, 2020, p.7).

Respondents explain:

"When you are in an urban area and a peripheral area, there are big disparities that are simply related to

the geography of our country. You take a village that within a radius of can be 50, 60 km there is not another village. Is it [feasible] to invest only for this village, where there may be to be 100 inhabitants?" [Respondent #4]

"The school themselves, they have to try to build something like with grass and everything like trees, they sit under the trees, so it's very challenging to use technology unless they can go from the capital or maybe the economy capital which is Moundou, which is also fine, like in big cities, like in Abéché it's also fine if you go to South it's also fine, but in like remote areas outside of the big cities, it's very, very difficult to use technology in schools." [Respondent #3]

"The internet access rate is so low. So, I think it's definitely a challenge because apart from N'Djamena, from the capital city, and the two other main cities, it's a very rural country. So, it's super hard to think about the traditional technological way with internet and TV." [Respondent #1]

Even in the capital, internet access is not reliable: *"The internet in the capital is very weak and we want to do these projects in other Chadian regions."* [Respondent #6]

4.3.9 Low Technological Skills Capacity

The low technological skills capacities of teachers present another barrier to the implementation of EdTech: *"Chad's education system is internally inefficient and reflects a poor level of teaching"* (GPE, 2020).

Respondents describe the limited skills of educators in using technology in education:

"Because most of the teachers, maybe they are not trained or they don't have these skills... not only they don't have the equipment, but they don't have the skills, you understand?" [Respondent #5]

"Not all trained teachers are capable of using advanced technology in the right way, and this is one of the major issues that we are facing in the field of development of educational technology in Chad... the training of teachers, we need to teach the teacher about technology so the teacher, whether a mathematics teacher or any other subject teacher, should know how to use the technology or the computer to be able to deal with these devices and to deliver the information correctly. Right now, maybe 10 - 15% of the teachers are using the computer, or know the general idea of it, but they cannot work on the platforms that are present in the field." [Respondent #6]

4.3.10 Cultural and Attitudinal Barriers

A respondent felt that traditional attitudes towards education might make acceptance of EdTech scale-up a challenge: *"Information Technology has not yet taken off, as I just said, because people remain opposed... Chad is a traditional society and governed by several social, cultural, and religious aspects as well. And I cannot guarantee you that all these components of societies today are in agreement with the new technologies because there are fears... Today, we have cultures that are moving towards brand new fear of new technologies. So those parents of students who are and are looking for guarantees that in this new technology there will not be other drifts and things that are hidden from losses or attributed to disorientation."* [Respondent #2]

4.4 Opportunities and Key Drivers for EdTech in Chad

Although the majority of comments from respondents detailed the many barriers to EdTech uptake and scale-up in Chad, the interviews elicited some views on opportunities and key drivers behind increased EdTech. However, most of the opportunity areas were only mentioned by one respondent.

4.4.1 COVID-19

A respondent noted that COVID-19 presented an important opportunity for EdTech in Chad: *“Before COVID, people didn’t care about educational technology. Only a few did, and those were university students who use the internet to follow up or receive training in several centres in or out of Chad... both ministries were struggling because there are no programs or plans on how to deal with this kind of crisis. This led them to cooperate with organisations, especially the Civil Society ones, to be able to deal with this crisis and to be able to continue the school year in the right way... The Government of Chad benefited from this experience because it helped it develop this field. Even the name of the ministry changed from the Ministry of Posts and New Information and Communication Technologies to the Ministry of Posts and Digital Economy. The word ‘digital’ added a lot of questions that made us realise that we should develop the digital field. Although now not everyone is seeking the educational technology field, but a lot benefited from it, whether it was educational institutions or students in the research field or the government in developing some programs. Till now, we have 3 new programs that greatly benefited from educational technology.”* [Respondent #6]

4.4.2 Nomadic/Hard to Reach Populations

Given Chad’s low population density, a respondent felt that EdTech might be beneficial for reaching Nomadic populations: *“nomadic people, so people move all the time with the cattle, and they have this program where they would appoint a teacher to the group and the teacher would move with them. So, I discuss a little bit about that, we were calling at the ministry and I said, well, it’s super interesting, but is the teacher from the community? And usually the teacher is not from the nomadic community and you know, it’s hard to find someone who would want to live such a lifestyle because they sleep outside, I mean, and it’s not the same community, sometimes they don’t speak the same language, so also there’s language issue, so having technology that would maybe help to have one person from the community be sort of like education focal point and having a technological tool that then, you know, would cover the program, that could be super interesting for this very specific case scenario that don’t exist in every country, but that would be very great. We have in Lake Chad thousands of small islands where there’s not a school on each island, so I know they did some sort of taxi boating thing so that kids could go to school, but still, it really prevents. So over there look, yeah, definitely looking better how we could use technology so that these children are not left out just because they live on the tiny island, that was super interesting.”* [Respondent #1]

So like mentioned a bit earlier, you have population that live in very remote areas, where it is very difficult to find teachers that are qualified or to send teachers that would be qualified and would want to teach there. So in that case, having access to distance learning could therefore allow kids not to be left out just because they live in a remote area.” [Respondent #1]

4.4.3 Youth Population

A respondent described a willing and open youth population as a potential opportunity for EdTech uptake in the future: *“Yes, I can say that it’s the willingness of the youth now, because there has been like some kind of awareness lately on the importance of using technology in education. Lately, young people, because let me say that one of the key issues that Chad is facing is unemployment, so it has*

developed a sense of entrepreneurship into the youth. The youth they started creating some course depending on what school you attended. Some of our participants in the program led by the US Embassy for example, they created like English language centres. You see, and they know how important it is to have technology for teaching. So, it opens up an opportunity, like it gives the chance to everybody to have access to, and I think that if Chad has the possibility to evolve its education through a system, through a more modern way, I think the Chadian population will embrace this opportunity.”

[Respondent #5]

4.4.4 Readiness of Some Government Actors

A couple of respondents felt that certain government actors are ready to embrace EdTech. For instance, the establishment of an ICT directorate reflects a new commitment: *“at the level even from the State at the level of the Ministry of Education nationally, there is a directorate dealing with ICT. That is a good thing. This directorate did not exist before.”* **[Respondent #3]**

“The governments... the Chadian government, at the level of the political elites and are open and are open to accepting any project and bearing hopes on the people above all, and the only way to achieve technologies in recent months and to accelerate the march towards growth.” **[Respondent #2]**



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4.5 Power Dynamics

The results of the social network analysis and interviews informed the analysis of power dynamics in the EdTech arena in Chad. Based on the social network analysis, UNHCR is by far the largest broker among organisations and likely holds more influence over the EdTech field than any other organisation within the country. A respondent even described UNHCR's work in refugee education in Chad as "sort of a mini-Ministry of Education" because their representatives "oversee everything happening in the camp, from teacher recruitment, incentives, to classroom instruction, to access to national examinations, to access to books, to teacher training" [Respondent #1].

Another interview described those involved in EdTech field as solely international actors: "here in Chad, we have what we call technical and financial partners at different sizes and like UNESCO, UNICEF, the World Bank and African Development Bank and Islamic Development Bank are partners... JRS and World Vision..." [Respondent #2]

Explaining the influence and limitations of those organisations headquartered outside of Chad, a respondent stated: "Obviously, the Chadian people must understand that it is the helping hand that comes from elsewhere... But it's short-term assistance... it's hidden debts and long-term debts of debts, accumulation of debts. This is another aspect determining current needs. The urgency is that educational and health infrastructure and development for the country to pass these difficult stages, the government's efforts are not enough." [Respondent #2]

One respondent noted that French-speaking people within Chad, supported through the role of the French development agency, tend to hold more influence within the education sector: "The Chadian system is bilingual, it's in French and Arabic. I think the initiatives and the motivation tend to favour more the French-speaking parts for online, especially for higher education. The French Embassy is very interested, and there's also the Francophone Tertiary Education Agency, so there seem to be more initiatives starting or brainstorming, but more in French. While a lot of the population is completely Arabic speakers studying Arabic. Hence, we have universities that are teaching everything Arabic, some are bilingual, so this could lead to a gap in offer at some point if all the initiatives continue to be in French. So, I think it will be important to make sure it was for us it was the same thing because most of our refugees come from Sudan. They follow the curriculum in Arabic, so every time we're like well, "but is this available in Arabic?" Just to ensure that whatever is created is accessible to all the kids because officially, the system is supposed to be completely two languages, but in application, it's more one language is dominant and then the other is kind of like the second language. So, it's not really bilingual. So, yeah, I think that can be a challenge." [Respondent #1]

One respondent noted that "there is a number of private educational institutions that have a huge role in the educational technology in Chad." [P6] While the private sector may be a growing presence in the EdTech space in Chad, our network analysis found only four organisations, and suggests that they work independently and their relationships, and thereby influence on others might be limited.



5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The findings from analysing the social network, policy documents, and interviews suggest that EdTech opportunities for scale up in Chad are likely to be limited.

Chad's EdTech network includes very few organisations, and the majority have no relationship with any other organisation. With only a small number of EdTech partnerships, the network is disperse and minimal, reflecting only a nascent EdTech community in the country. This indicates a limited capacity for technological development, design, dissemination, implementation, and training. Although some private actors have become engaged in EdTech, they have yet to form partnerships that could enable the expansion of their work. The limited connections between organisations also prevents knowledge sharing about EdTech, further limiting effective scale-up.

The lack of policies relating to EdTech and strategies for successful implementation further shows a lack of readiness on the part of the government and educational stakeholders. Interviews expressed the very low political will towards scaling EdTech, resulting from budgetary constraints and the impact of political instability.

The geography of Chad, with large numbers of students living in rural and nomadic communities, does not easily allow for the dissemination of EdTech solutions. Given very low access to electricity, internet, technological devices, and the limited skills of teachers, scaling up any form of EdTech in Chad's rural areas would face serious obstacles. Many programmes would likely need to be adapted to the context, particularly the lack of access to internet. For example, apps that utilise mobile data would not be affordable for most of the population, and alternative strategies, such as installing apps abroad and using them offline, might be more successful.

Overall, given only a few opportunities, the large number of deep barriers facing EdTech in Chad, and the high needs in other areas of education (e.g. access, quality), focusing on technology in Chad's education system may be misguided.

5.2 Recommendations



1. Developing a digital learning policy

Prior to any consideration of scaling up EdTech in Chad, a policy dedicated to digital learning should be developed, incorporating the perspectives of a range of educational stakeholders and the government.



2. Capitalising on the post-COVID moment for further advocacy and awareness raising on EdTech

Capitalise on the post-COVID moment, in particular in advocacy work and awareness raising on EdTech in public and private sectors, including with the Ministry of Education and NGOs in order to broaden understanding of what EdTech might entail and examples of successful implementations in other contexts with similar challenges



3. Facilitating partnerships and increasing collaborations on EdTech

Expanding EdTech in Chad would benefit from facilitating partnerships and increasing collaborations, including public-private partnerships. There may be long-term opportunities that arise through such partnerships, expanding the country's EdTech network.



4. Integrating EdTech into teacher training programmes

Teacher training programmes would benefit from further integrating an understanding of STEM and EdTech skills so that new teachers enter schools with a base minimum technological knowledge and ability to teach using EdTech.



5. Focusing efforts on education access and quality

Given the extremely high number of out-of-school children and the very low quality of education within the current system, consider focusing efforts on expanding access and quality rather than EdTech at this time. EdTech-related initiatives might focus on awareness and advocacy campaigns rather than implementing new interventions.

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