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Resilience and language teacher development in challenging contexts: Supporting teachers through social media

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Abstract

This collaborative research project between the University of Manchester and three English language teacher associations in sub-Saharan, francophone Africa aimed to explore the use of social media to support English language teacher development through establishing communities of practice based around WhatsApp groups in remote and challenging contexts. It looked at how such communities of practice, organised around the WhatsApp groups, might contribute to individual and collective resilience, strengthening the quality of teaching and learning in these challenging contexts. We describe our collaborative research methodology, which foregrounds the sharing of knowledge across the three language teacher associations, and explore how this learning shaped the design and delivery of

a workshop to establish the communities of practice. We discuss findings from the different phases of the project in relation to different aspects of teacher resilience, including the shaping influence of the wider and more local context, the importance of building relationships and also a teacher's commitment to their role. We conclude by looking at some of the implications and recommendations from this project, which show that social media can have an important part to play in the professional development of teachers in more remote and challenging contexts, but that there is a need to consider workload for the moderators and establish realistic expectations for the groups, particularly where internet connections are sporadic.

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1

Context and background

This project links to Sustainable Development Target (SDT¹) 4c, which recognises that quality, trained teachers are vital to achieving the goal to ‘ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’ by 2030. The focus of SDT4c is on increasing the supply of qualified teachers. For the three countries at the core of this project, Cameroon, Côte d’Ivoire and Rwanda, it is a major challenge to find the resources to train and equip a sufficient number of teachers to ensure inclusive, equitable and quality education for all. There is not only a strain on training pre-service teachers, but also there is very little in the way of ongoing development opportunities for those teachers who have been through the state training system, or who have entered the profession without training. Even where in-service provision exists, opportunities to engage in continuing professional development (CPD) vary greatly according to a teacher’s geographical location in a country, with the more remote and rural areas often having no or very few opportunities available. The challenge then is how to support all teachers at every stage of their teaching career across the diverse and challenging contexts within these countries in order to provide quality education for all. One potentially powerful way of delivering support and CPD is to use readily accessible mobile phones, and social media, which is the focus of this project.

This paper describes how we have built on previous activities which started with an IATEFL (International Association of Teachers of English as a Foreign Language) project in 2015–16, where a WhatsApp group was set up to support the exchange of ideas and materials following unsuccessful attempts to use other social media. The current project was run in conjunction with the Côte d’Ivoire Association of Teachers of English as a Foreign Language

(CI-ATEFL), who more recently merged with two other teacher associations to become CINELTA (Côte d’Ivoire National English Language Teacher Association). The initial knowledge and skills generated were translated into a project supporting teachers who are refugees in the Zaatari refugee camp, where WhatsApp was used to remotely support a face-to-face course run in the camp (see Al-Masri et al., 2020).

Building on past activities, we worked with three teacher associations: Association of Teachers of English in Rwanda (ATER), Cameroon English Language and Literature Teacher Association (CAMELTA) and CINELTA. Each of the associations was at a different stage of developing online communities. ATER in Rwanda had quite a developed system of what they have termed communities of practice (CoPs) based around WhatsApp groups, which was the result of a locally appropriate response by the ATER community to the introduction of English medium education in Rwanda in 2008. CAMELTA in Cameroon had made some use of WhatsApp to support a research network² and we later made a link with an individual who had explored the use of WhatsApp in rural and remote communities for teacher development purposes (Mbeudeu, 2019). CAMELTA at the beginning of the project was not, however, using WhatsApp actively for teacher development. CINELTA in Côte d’Ivoire had a growing and thriving WhatsApp group, which was the development of the IATEFL project cited above. The overall aim was to encourage and facilitate the sharing of good practice in using social media for teacher professional development purposes between the three communities. In doing so, we also wanted to look at how the building of CoPs in remote areas might help build individual and collective teacher resilience.

1. 4c is one of the targets of Sustainable Development Goal 4, which is about education.

2. See articles from Richard Smith and Harry Kuchah for the origins of this research network: <https://warwick.ac.uk/fac/soc/al/research/groups/llta/research/trdc/tar/>

1.1 Resilience

A focus on resilience in this project was important for three reasons.

- All three countries manifest varying degrees of fragility³ and are thus vulnerable to shocks and crises, and education inevitably suffers. Resilience aids the ability to cope with, and recover from, such shocks (UNHCR, 2016).
- The development and retention of quality teachers, which correspond to the targets of SDT4c, have been linked to notions of resilience (Day and Gu, 2013; Mansfield et al., 2016).
- Any technological system that is introduced to help support teacher development must be able to do the job in the community that it has been chosen to support, ideally over the long term. This report takes as its starting point the Information and Communications and Technology for Development (ICT4D) focus that is summarised as ‘wider systems impacted by ICT [rather] than ... the resilience of ICT4D systems themselves’ (Heeks and Ospina, 2018: 4).

1.1.1 The potential shocks and challenges

According to the Fund for Peace Fragile States Index,³ which uses multiple economic, social, political and cohesion indicators to identify the extent of a country’s fragility, Cameroon ranks 16th, Côte d’Ivoire 29th and Rwanda 37th of 179 countries. Fragile states are those that exhibit varying degrees of vulnerability to violence, natural, economic and social shocks, lack justice for all, and lack effective and inclusive institutions (OECD, 2015). In Cameroon, for example, dissent between the anglophone population in the East and the majority francophone population is causing unrest and conflict and even abductions and killings of English language teachers.⁴ In Côte d’Ivoire, violence in schools is cited as a particular problem in the 2017 Education Sector Plan.⁵ Frequent teacher and pupil strikes also disrupt education for thousands each year: *School Statistics 2016–2017* (2017),⁶ produced by the Ministry of Education, states that 66,121 hours were lost in 2015–16 due to strikes by both teachers and pupils. The need to build resilient systems as well as individual teacher resilience is thus paramount.

Well-documented challenges to education in fragile states, and which are confirmed by this project (see *Findings* section below), include a general lack of resources, overcrowding and few or no opportunities for development (see, for example, Burns and Lawrie, 2015; Mendenhall et al., 2016; Reeves Ring and West, 2015). Our premise was that CoPs organised around a WhatsApp group could help teachers share ideas and resources and, above all, support each other in the daily challenges they face.

1.1.2 WhatsApp for teacher development

WhatsApp began life in 2009, and in 2019 is reported to have 1.5 billion users in over 180 countries. It is one of Android’s most downloaded apps.⁷ In combination with the widely reported statistics about mobile use in the developing world, i.e. that mobiles have significant penetration even in some of the poorest parts of the world (see GSMA, 2019 for specifics on mobile use and Porter et al., 2016 for a literature review on mobile use in education), it seems, therefore, a good starting point as an alternative method of communicating with teachers in the countries that form a part of this project.

We had learned from earlier projects that while more high-tech tools like video conferencing applications are attractive (Motteram, 2019), they need a higher bandwidth than social media tools like WhatsApp, and we found that on many occasions when we tried to make use of the video conferencing tool Zoom we had less success (see the role that Zoom did play as a part of the final multi-country workshop). However, WhatsApp and similar tools, such as WeChat, Viber or Telegram, are multimodal devices able to handle text, pictures, sound files and video as well as voice calls. It was for these reasons, alongside the high reported use of WhatsApp (primarily for social reasons) in all three countries by our partners, that we chose to use WhatsApp.

3. Fund for Peace Fragile States Index (2019). Available online at: <https://fragilestatesindex.org>

4. See a recent news report: <https://www.voanews.com/africa/cameroon-teachers-protest-escalating-violence-separatist-areas>

5. Ministry of Education, Cote d’Ivoire (2017). Plan Sectoriel Education/Formation 2016 – 2025. Available online at: <http://planipolis.iiep.unesco.org/en/2017/plan-sectoriel-educationformation-2016-2025-6416> (last accessed 21 February 2019).

6. Department of Strategies, Planning and Statistics (2017). *School Statistics (2016-2017)*. Abidjan: MNETE-VT.

7. <https://99firms.com/blog/whatsapp-statistics/>

1.1.3 Resilience and communities of practice

‘Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly’ (Wenger and Trayner-Wenger, 2015: 1).

In low-resource and fragile contexts, such as the ones that are the focus of this study, teachers are often the most important resource available to students (Ebersöhn, 2014), and CPD for teachers is increasingly recognised as an essential and integral part of successful educational systems (Borg, 2015). CPD may be described as ‘teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students’ growth’ (Avalos, 2011: 10).

The aim of establishing CoPs in areas where there were few opportunities for transformational teacher learning was to encourage teachers to come together and support each other in learning how to do what they do better despite the challenges that they face. In turn, we wanted to see what forms of resilience might emerge from and within these groups.

In order to explore resilience in this project, we focus primarily on the RABIT model proposed by Heeks and Ospina (2018), which looks at community resilience in developing countries and how ICT can contribute to community resilience. We also look at the more general literature on teacher resilience, which mostly derives from the global north with a general focus on individual rather than community resilience.

Both the teacher resilience literature (Day and Gu, 2013; Ebersöhn, 2014; Wosnitza et al., 2014) and the RABIT model adopt a socio-ecological perspective on resilience where resilience is both a process and outcome of the interactivity between an individual and/or group and their environment. Although for the purposes of this paper we look at the CoPs as a bounded system, we recognise that the boundaries of any system are porous, and understanding the wider context and how that might shape (and in turn be shaped by) the CoPs is important.

The RABIT model (Heeks and Ospina, 2018: 21) consists of three ‘foundational attributes’ of resilience and five ‘enabling attributes’:

- **foundational attributes:** robustness, self-organisation and learning
- **enabling attributes:** redundancy, rapidity, scale, diversity and flexibility, and equality.

Heeks and Ospina provide a definition for each attribute and a series of ‘illustrative markers’. For example, the markers for ‘self-organisation’ include evidence of collaboration and consensus building, social networks and trust and local leadership. This attribute seems particularly relevant to CoPs, as does the foundational attribute of ‘learning’. ‘Learning’ is about knowledge creation and developing the skills and capacities necessary to innovate, and the illustrative markers include capacity building, the use of new and traditional knowledge, and reflective thinking. Enabling attributes that seem particularly relevant to the CoPs are ‘equality’, or the ability of the CoP to give equal access to opportunities and resources for all its members, and ‘diversity and flexibility’, which focuses on the system’s ability to manage difference and respond well to changing circumstances.

Teacher resilience has been linked to quality teaching and learning (Mansfield et al., 2016), and much of this body of literature derives from the global north (for exceptions see, for example, Ebersöhn, 2014). It mainly focuses on the attributes and characteristics of resilient teachers; what keeps them in the profession and growing in their capacity to teach well despite the challenges and pressures inherent in the teaching profession (Day and Gu, 2013). However, from the literature, we can identify important dimensions of teacher resilience. The most pertinent for our current work are:

- **Relational resilience** (Day and Gu, 2013; Ebersöhn, 2014), which recognises that a teacher’s professional (and private) world is relational and that supportive relationships help sustain a teacher’s sense of wellbeing and commitment to their work and profession. It also recognises a collective responsibility to each other as teachers collaborate together and grow in trust and respect for each other (Day and Gu, 2013: 11). There are strong connections between ideas of relational resilience in the teacher resilience literature and the foundational attribute of ‘self-organisation’ in the RABIT framework above.
- **Everyday resilience**, part of which is the agency that individual and groups of teachers have to exercise choice and pursue their goals, the things that they value and are important to them (Day and Gu, 2013: 53; Gu, 2018), despite potential challenges and shocks.

2

Research methodology

2.1 Aims and research questions

The main aim of this project was to explore how low-tech, low-cost, readily available forms of social media might contribute to language teacher development in challenging contexts. In doing so, we also sought to explore how such low-tech digital communities might contribute to building teacher resilience and capabilities. The project was intentionally collaborative with a particular emphasis on the sharing of knowledge, thinking and practice across the three teacher associations as well as with the University of Manchester team. We had three research questions.

1. How can 'low-tech' forms of digital communication contribute to language teacher development in challenging contexts?
2. What forms of practice emerge as more established mobile communities collaborate with teachers across borders to establish new mobile communities?
3. What forms of resilience emerge through the 'low-tech' digital communities?

2.2 Research design

The research design evolved as we worked together, and prioritised the sharing of knowledge, thinking and practice across the three countries, with the University of Manchester colleagues functioning as brokers of the research process (Wenger, 1998). This rationale stems from our collective belief that any teacher development initiatives should be locally situated and appropriate, and also our desire for the principal knowledge flows and sharing of expertise to be between colleagues in Cameroon, Côte d'Ivoire and Rwanda.

To facilitate this collaborative endeavour, we held fortnightly meetings on Zoom which continued from the beginning of the project (the first meeting was on 17 October 2018) until the end of June 2019. Although we initially used Skype, as this was, at the time, a more familiar tool, we switched to Zoom because of its stated ability to function with a lower bandwidth for larger groups. There was also a project WhatsApp group where summaries were posted and ideas shared, and Google Drive and Google Forms were used for collaborative work on documents and questionnaires.

2.2.1 Phases of activity

As outlined above, each of the three teacher associations was at a different stage in setting up digital communities at the beginning of the project. In order to facilitate the sharing of learning in the three countries we carried out the following phases of activity, each of which involved different data generation tools.

Phase 1: Gathering background information

An initial questionnaire was designed to collect background information in all three countries. This had multiple aims: to understand more about the English language teachers themselves (teaching experience, the age and level of their learners, and their employment situation); to understand the types of technology they had access to personally and in school, and to know how they generally connect to the internet and how reliable that connection is; and to gauge their interest in taking part in online teacher development activities and to discover the sorts of areas they would like to explore. The questionnaire was designed in Google Forms and distributed via the official WhatsApp groups for each teacher association. Google Forms was chosen because it was more accessible to colleagues in the three teacher associations and worked well on the Android mobile phones that predominate in these and other global south countries.

Phase 2: Exploratory interviews

The CINELTA partners designed an interview schedule to discover how ATER had developed its COPs and the challenges and opportunities that had emerged from them. They also designed an interview schedule to learn about the setting up of WhatsApp groups in Cameroon to help novice English language teachers in remote and rural contexts with one of the CAMELTA partners. Because of internet connectivity problems (this colleague was in China at the time), the interview was eventually carried out via email.

Phase 3: Designing and delivering the workshop in Côte d'Ivoire

Based on their learning from the two interviews and on their own understanding of their context, CINELTA partners designed a four-hour workshop⁸ to be delivered in two remote regions of Côte d'Ivoire. The aim of the workshop was to introduce teachers living in more remote areas of the country to the possibilities of setting up their own CoP, using WhatsApp for teacher development and sharing within that localised CoP. The materials produced for the workshop were then passed on to the CAMELTA partners. The CINELTA partners were also interviewed by the University of Manchester researchers to explore their experiences of designing and delivering the workshop.

Phase 4: Adapting and delivering the workshop in Cameroon (ongoing)

CAMELTA partners discussed the workshop design and delivery with CINELTA partners, learning from their experiences. These discussions were also audio recorded and form part of the data set. They adapted the workshop for delivery in their own context.⁹

Phase 5: Ongoing support of the CoPs through the WhatsApp groups

CINELTA and CAMELTA partners worked online with the communities they set up in WhatsApp to support them in their initial stages of development. This report includes data from the new CoP WhatsApp groups in Côte d'Ivoire.

Phase 6: Impact event

A one-day international virtual event brought together a team of people from Rwanda, Cameroon and Côte d'Ivoire as the three countries directly involved in this ELTRA project, along with teams from Senegal, Mali and Benin. These countries were chosen because we had developed links with Mali and Senegal as a part of the English Connects project and the Benin team had independently set up and was running a very successful WhatsApp group of its own. The event enabled further sharing of knowledge and good practice from countries beyond the immediate scope of the project itself. It will be reported in a separate paper, but see <https://tateproject.wordpress.com/> for more details.

Phase 7: Reflecting across borders on the process (ongoing)

Reflection gave all partners an opportunity to share their experiences and learning from the process.

2.3 Scope of this report

In this report we focus primarily on the experiences of CINELTA in Côte d'Ivoire as they interviewed their colleagues in ATER and CAMELTA, designed and delivered workshops in remote areas of Côte d'Ivoire and supported the CoPs through the WhatsApp groups over the following weeks. The focus on CINELTA is mainly due to the fact that the workshops in Cameroon were delayed due to various issues and are currently ongoing. In fact, the whole project was delayed for various reasons, including teacher strikes in Côte d'Ivoire and difficulties of transferring funds from the north to the south.

2.4 Choosing the workshop locations

In Côte d'Ivoire, the geographical location of the workplace impacts on the opportunities and possibilities you have to attend face-to-face CPD opportunities. The aim of this project was to bring opportunities to some of the more remote areas of the country, increasing the agency teachers might have to take their development into their own hands and in turn contribute to their growth as resilient teachers who could develop in a way which increased their capacity to offer quality teaching.

The two locations chosen for the delivery of the workshop and the setting up of the first CoPs were Daloa in the central west of the country and Abengourou in the central east (Figure 1). Daloa is about 380 km from Abidjan, and it takes approximately six hours to drive there. Abengourou is about 210 km from Abidjan and it takes approximately three hours to travel there by car.

8. The materials used can be found here: <https://tateproject.wordpress.com/2019/07/26/workshop-for-developing-technology-assisted-communities-of-practice-in-remote-areas-of-cote-divoire/>

9. At the time of writing this report this work was still ongoing due to various local and contextual issues, with workshops due to take place in August 2019.

Figure 1: Map showing the location of Daloa and Abengourou in relation to Abidjan¹⁰



These two places were chosen by the CINELTA workshop organisers for several reasons, including:

- the teachers there do not have access to the same training opportunities as those in Abidjan
- they are both big centres, but also rural, agricultural communities, and so very different from Abidjan
- both places are in regions with many English language teachers (Daloa has 393, Abengourou 104) and so there is the potential for dissemination of good practice throughout the region.

The teachers in Daloa and Abengourou reported a lack of professional development activity in the region, and so this project was one attempt to address the situation.

2.5 Data analysis

The questionnaire data was imported to Excel and analysed using descriptive statistics. The qualitative data generated through the questionnaires was analysed thematically, looking for similarities and differences between the three countries. The analysis enabled us to establish background data for each country.

The interviews were also analysed thematically, using the attributes from the RABIT model and the dimensions from the teacher resilience literature cited above as *a priori* themes. We also looked for emergent data-driven themes that were not easily described by the *a priori* ones.

The chat histories from the new WhatsApp groups were exported as .txt files. Coding of the Daloa chat history started deductively, using codes from an initial list based on our ethnographic observations of a range of WhatsApp groups from a number of projects with teacher trainers in these and other sub-Saharan countries:

- exchanging ideas on a variety of topics
- asking for help in, for example, designing a lesson plan, preparing a test, getting model answers and getting a listening text
- sharing information and resources
- designing materials collaboratively
- practising language
- running training/development sessions
- sharing training/development materials
- forum for debate

10. Map from the public domain available at: https://fr.wikiversity.org/wiki/Dialectes_français_d%27Afrique/Français_local_ivoirien#/media/Fichier:Côte_d'Ivoire-carte.png

- gathering feedback on new initiatives
- problem solving
- developing intercultural understanding
- demonstrating impact.

As not many of the codes on the trainer list appeared to be in evidence in these teacher groups, we developed new data-driven codes based on our reading of the Daloa WhatsApp conversation. Rather than code each individual post, we coded groups of posts (exchanges) around a particular theme. In some cases, a theme covered a large number of posts; in other cases, fewer posts. The Abengourou chat was then analysed using the codes from the Daloa list and other codes were added as necessary. We checked back to see if these new codes were

relevant to the Daloa conversations but found no instances where they applied. The final list of codes for the teacher groups is as follows:

- socialising
- suggesting teaching materials: lesson examples and videos
- notices of information related to professional events
- methodology discussion (including testing)
- organisational
- irrelevant postings
- discussion about language
- topic-based discussion.

3

Findings and discussion

Our main aim was to understand how building a CoP around low-cost, easily accessible mobile technologies for teacher development purposes could build resilience for teachers working in challenging contexts, and how practices changed and emerged through the sharing of knowledge across the communities. Firstly, we look at the findings from the initial questionnaire (Phase 1), which gives insight into the general teaching context and also technology use. Then we look at how practices and understandings were shaped as the three teacher association communities shared their experiences with each other. Following a presentation of the different forms of resilience

evidenced in our data in two different phases of the project – the design and delivery of the workshops and the newly created WhatsApp groups – we discuss some of the implications of this project for other groups who may wish to develop similar activity in their own contexts.

3.1 General teaching context

The aim of gathering background information was to understand more about the teaching context of the English language teachers in the different countries and their access to different types of technology and the internet. Table 1 shows the respondents from each country.

Table 1: General questionnaire respondents

Country	Participation	Gender		
		Male	Female	Prefer not to say
Cameroon	20	9	11	-
Côte d'Ivoire	54	36	18	-
Rwanda	26	21	4	1
Total	100	66	33	1

Many of the teachers worked across multiple age groups, particularly in secondary and further education.

3.1.1 Facilities and resources

We argued above that understanding the wider context is central to a socio-ecological perspective on teacher resilience, and the initial questionnaire enabled us to understand the school and classroom teaching and learning context more fully. There were many similarities between the three countries in terms of the teaching context. Large classes with overcrowded classrooms were common in all three countries, as was a general lack of resources. However, there also seemed to be a marked difference in conditions *within* each country. Teachers from all three countries reported varying class sizes from relatively small to relatively large, with classes of 15 to 120 reported in Côte d'Ivoire, 25 to 150 in Cameroon, and 30 to 120 in Rwanda.

Many classes had just blackboard and chalk, while others had whiteboards and access to projectors and laptops.

Each country had some better resourced schools. A university English for academic purposes lecturer in Rwanda, for example, reported a variety of resources: 'We use different teaching materials such as whiteboards, projectors, laptops, some softwares for listening and speaking, etc. Our classes are large (about 80 students per class)'.¹¹

A teacher in Côte d'Ivoire teaching in a school of ICT said: 'I have access to facilities such as computers, internet, video project. The number of students per class is 25.'

In Cameroon, a secondary teacher talked about a variety of facilities in her school: 'Apart from the regular classroom and library, my school has a multimedia centre where sometimes these learners receive online lessons (audiovisual).'

11. These are verbatim quotations from the questionnaire. Some small additions in square brackets have been added to aid understanding.

Equally, there were teachers in each country who reported poor facilities. A teacher from Côte d'Ivoire who has average class sizes of 75 (16- to 21-year-olds) stated:

The classrooms are poorly equipped: insufficient and inadequate benches for students, blackboards in a state of disrepair. There are some whiteboards, but markers are not always available.

A teacher in Rwanda also reported on context-related challenges:

The teaching most often takes place in traditional classroom sitting arrangement with chalkboard in front of learners. I normally deal with large classes and thus [it is] difficult to attend to each learner appropriately. In brief, I face challenges to run an inclusive class at all levels.

A smaller class size (25) in Cameroon was seen as an advantage, but this contrasted with the challenge of no electricity:

My school is located in a rural area deprived of electricity and thus the school has very limited facilities. Most of the work is manual. However, it's easier to follow up on task given class sizes are very manageable – an average of 25 students per class.

This was not explicitly reported in the other countries, although one teacher from Côte d'Ivoire made the following comment: 'I am lucky to have

electricity sockets that work in my classroom along with lightbulbs. So, I can afford to use my personal computer with a slide projector.'

The implication seems to be that not all teachers have the luxury of electricity (or lightbulbs) in their classrooms, but where this does exist, a teacher can potentially use their personal equipment for teaching purposes. A teacher educator from Cameroon who delivers pre-service training reported having 600 students in a room with no projector and no microphone.

What is clear is that there is great variety within each country and therefore teacher development initiatives need to account for the specific local, as well as national, context.

3.1.2 Access to technology and the internet

As one of the main aims of this project was to explore the use of low-tech forms of technology for teacher development, it was important to understand the sort of access teachers had to the internet, how they accessed it and the equipment they had.

Table 2 shows the personal access teachers had to technology (in percentages). This confirmed our hunch that the mobile phone is the most accessible and frequently owned technology for teachers in the region, although access to laptops is also high.

Table 2: Teachers' access to technology

(n=100)	Desktop (%)	Laptop (%)	Tablet (%)	Mobile phone (%)
Cameroon (n=20)	30	85	40	95
Côte d'Ivoire (n=54)	26	69	17	91
Rwanda (n=26)	15	81	12	96
Total across countries (%)	24	75	20	93

Mobile data also represented the most frequent way of connecting to the internet (86 per cent across the three countries), while connecting to Wi-Fi at home is the least frequent method (36 per cent). Data connection was deemed reliable by 75 per cent of the respondents, with just two per cent saying that it was not reliable. The final 23 per cent stated it was sometimes reliable, but not always.

When asked if they would like to take part in CPD activities via social media, 95 teachers said 'yes', with one 'no' and four 'maybe's.

3.2 Sharing knowledge and emerging practices

One of the principles underpinning our project was for the teacher associations to share knowledge and expertise across borders. Our CINELTA partners reflected on what they had learned and subsequently incorporated into their workshop design from their conversations with their ATER and CAMELTA colleagues. Three main areas of learning emerged: CoPs as a democratic process, the ideal size of a CoP and the need for basic skills training.

3.2.1 CoPs as a democratic process

In a previous project, the CINELTA colleagues had trained two potential leaders from each region in the country as trainers of teachers (ToTs). They identified the people they thought could be leaders, brought them to Abidjan for a week of training, and then sent them back to their regions to implement their vision: ‘When we first planned ... the ToT programme we thought let’s train people and then they’ll become leaders in their regions’¹² (Goma-Bi, Interview (I) 1).

However, learning from the experience of their colleagues in Rwanda helped them to rethink this approach:

During the interview F said that you might think that somebody will become a leader, but probably he doesn’t meet the teachers’ expectations. People don’t want him as a leader so he will fail. So now for us, it’s no more ‘we have to build CoP for them’, but having them make their own decisions ... and then inside there we found some other leaders (Goma-Bi, I1).

It was not just the wisdom of allowing leaders to emerge naturally from within each group rather than imposing them themselves, but also their approach to their own leadership in relation to the workshops which changed:

... making it more democratic, like now we’re becoming the top down people, no, no. Making it more democratic, having them make their own decisions, that’s what I really learnt from the interviews (Goma-Bi, I1).

The democratic approach was contrary to current leadership models usually employed in the country, as Goma-Bi explained when talking to his CAMELTA colleagues:

The existing method is like people will go as the decision makers or as the people who are superior to the teachers, and it’s like you’re taking things to them. But we go as teachers ourselves, as colleagues, as friends, so building relationships with them. This was really, really effective (Goma-Bi, I2).

Rather than presenting themselves as powerful and superior knowers transmitting their expertise, the workshop facilitators went as colleagues, as teachers, as equals. Their approach was perhaps influenced by the fact that they also saw the project process as part of their own professional development. As Boahia remarked, being involved in the project has also been ‘for my personal development and my professional development. It’s a great chance for me’ (I2). The focus here on building relationships, which as we have seen above is an important element of teacher resilience, is a recurring theme throughout the data.

3.2.2 The size of a CoP

Linked to this developing thinking around leadership and training styles was rethinking the number of people needed for a CoP:

Seriously before I was thinking it should be many people, like 50 you know. But C said even ten or 15 is enough [this was] one reason even we just focus on 20 ... we don’t need many, many people (Goma-Bi, I1).

Previous thinking had been the more the better, perhaps in order to reach as many teachers as possible and make visiting a distant region worthwhile. However, learning from their CAMELTA colleague, they decided to focus on a smaller group and not attempt to reach every teacher in the region.

3.2.3 Basic skills training

The final key area of learning was the need to be prepared to help teachers with basic technological skills. Boahia said that he ‘could not imagine that a teacher of English could not use WhatsApp’. His assumption was that all teachers would be familiar with the tool. However, his CAMELTA colleague had stated that teachers would need training in how to use the basic features of WhatsApp, and perhaps even need instruction in how to download the app and create an account, so he ‘got prepared before going for the training, so when I reached the place and I realised we had three or four people who [didn’t have WhatsApp], I mean it was not so difficult for me to tell them because I was prepared for that.’

In fact, one of the key parts of the final workshop was a hands-on session where the participants practised using the different features of WhatsApp.

12. The interviews have been transcribed to reflect the nature of spoken language. Punctuation has been added to support understanding.

3.3 Building resilience through communities of practice

We noted above that one of the aims of this project was to understand how low-tech forms of social media such as WhatsApp might help build teacher resilience in a community of practice. To explore this, we look firstly at the data which relates to the design and delivery of the workshop (the interviews from Phase 3 of the project) and secondly at the WhatsApp groups themselves (Phase 5 of the project). We organise our findings here around the foundational and enabling attributes of the RABIT model (see above, Heeks and Ospina 2018), referring to other specific dimensions of teacher resilience also cited above where this deepens our understanding.

3.3.1 Designing and delivering the workshop: Learning

Learning is a foundational attribute in the RABIT model that refers to a system's capacity to create new knowledge, generate feedback and build capacity, for example through skill building, in order to strengthen the system and encourage innovation (Heeks and Ospina, 2018: 21). Perhaps it is not surprising that in a community of teachers, learning would be one of the dominant attributes, particularly as teachers' 'learning and learning how to learn is central to CPD' (Avalos, 2011: 10).

Challenging traditional ways of thinking

Based on their understanding of the CPD in their country, the Côte d'Ivoire workshop organisers decided that one of the principal aims of the workshop would be to challenge the way in which teachers in these remote regions thought about their professional development; to unearth current understandings of professional development and offer alternative ways of thinking. 'So the workshop was designed, first of all to change minds, change beliefs, to challenge pre-established beliefs of professional development' (Goma-Bi, I1).

Goma-Bi goes on to explain that traditionally it has been the role of the government to deliver CPD activity and teachers' expectation is that the government takes the initiative:

It's very common in Côte d'Ivoire that teachers don't take their own professional development in hand. We always expect the government to come and tell us what to do. If there's no action from the government the teachers are there. So, the teachers can spend 30 years, even retire, without any professional development activity, if there's no government representative in the region. So, changing the mind of the teachers to try to understand that professional development can also be bottom-up and not always expecting the government to come (Goma-Bi, I1).

A reliance on the government to 'decide what training we need or what we have to do' (Goma-Bi, I2) reduces the freedom a teacher has to develop in a way that they value and decreases their agency and choice in terms of their own development. Cameroon reported similar issues: CPD opportunities provided in the hard-to-reach areas were seen as not being context-appropriate. This had been one reason for setting up WhatsApp groups there (CM, I1).

The way in which the CINELTA trainers tried to challenge this traditional mindset was by referring to what they call the 'new trends of professional development, like joining associations, joining communities, virtual communities and all this' (Goma-Bi, I1).

This new trend of professional development enables teachers to 'take [their] training, take [their] profession in [their] own hands' (Goma-Bi, I1). Agency and choice, the ability to network with others and to critically examine the status quo is central to building teacher resilience. It may also enable the community to create new knowledge and innovate more readily.

Capacity building

Although both the CINELTA trainers were from Côte d'Ivoire and therefore had an understanding of the national context, they needed to adapt the content of the workshop to the local needs and context. As one aim of the workshop was to ensure that all participants were familiar with WhatsApp and its various features so that they might begin to use it for professional development opportunities, a large part of the time was dedicated to this. To understand what preferences teachers had in terms of social media, the trainers organised an icebreaker – see the downloadable workshop materials available on <https://tateproject.wordpress.com/> They also set up a Google Form which had two objectives:

One objective is to understand them, to know their needs. The other objective is to see who can manipulate a cell phone, go on the internet and answer a question on the internet, and believe me you'll be surprised. So that's a sort of evaluation assessment (Goma-Bi, I1).

It was important to understand the skills the teachers already had with regards to using WhatsApp, navigating the internet and using mobile phones more generally in order to know which ones they needed to develop. Here the trainers were also able to make use of teachers who were already very proficient: 'In Abengourou we had one of the ladies who was very expert in WhatsApp, so she was helping us' (Boahia, I1).

This approach uses the skills and knowledge of individual members in the community to help build the capacity of all.

3.3.2 Designing and delivering the workshop: Self-organisation

Self-organisation is another of the foundational attributes in the RABIT model. Central to self-organisation are the social networks and support mechanisms that are in place within the system, local leadership, trust (between community members) and how the group collaborate and reach a consensus in order to withstand external challenges and shocks. Here we also see the centrality of relationships within the community, a key dimension in the teacher resilience literature as we have outlined above.

Social networks and trust

Among the aims of the CoPs, the opportunity to build networks for the teachers, develop a community of likeminded practitioners with whom to share ideas, and also potentially to draw people into a wider community of practitioners were all important to the organisers. However, one issue that had arisen in the past with using WhatsApp groups was the tendency for them to become social groups rather than teacher development and support groups. Daloa already had a WhatsApp group, but as Goma-Bi (I2) states:

They were doing some stuff there, but they didn't really know what they were doing or where they were going. It was like a group of friends where they shared meetings, some social things, but not really focused on a clear objective.

Setting clear objectives and expectations for the group was a key part of the training workshops. The organisers also talked about how to behave in a group and also addressed some of the ethical issues surrounding a professional WhatsApp group. Consensus building within the group as to the aims and objectives can help strengthen its resilience.

Goma-Bi recognises that in many of the WhatsApp groups he is involved in there is a 'temptation to socialisation'. However, he is also pragmatic about the use of social postings in the group, especially during the first year or so of a group's life:

It's good, it's not bad for the first year actually to socialise, it's sort of emotional support ... where people will share their pictures, their family pictures and stuff like that, which in the beginning you can accept. It's part of building relationships (Goma-Bi, I2).

Goma-Bi sees emotional support for the teachers as important and also recognises that even in the building of professional relationships, sharing with each other about your life beyond the workplace can be very important. This contributes to the building of relationships and potentially enhances trust between community members, both of which are important for teacher wellbeing and resilience. However, he also recognises that this is a process, where you 'gradually move to more professional things', and that the role of the moderators is to take the lead in this, while at the same time respecting the needs of the individual teachers:

One thing to do is to take actions, not letting social things overwhelm the professional things. So teachers feel alone sometimes, they want to talk to someone so they come and say 'hello everyone' which is perfect. And you can respond hello everyone (Goma-Bi, I2).

Isolation and loneliness are a reality for many teachers working in more remote and rural areas, and one affordance of the CoP WhatsApp group is to facilitate contact with other people. The example Goma-Bi gives is not one of asking for professional advice on how to teach an aspect of grammar, for example, but is a more basic reaching out for community, for contact with their fellow human beings. Without following up the teachers in the group to understand more fully how important this aspect is to them we can merely conjecture, but it seems that the WhatsApp group can contribute to everyday resilience by providing something as simple as someone to say hello to and to receive a hello from in return.

Local leadership

Local leadership is an indicator of a system's ability to self-organise. We discussed above the importance the workshop facilitators gave to modelling democratic forms of leadership themselves, and encouraging leaders to emerge from within the WhatsApp groups. Democratic and local leadership was also connected to the desire for the resulting CoP to be sustainable and functioning in a way that was relevant to the local community. We reflect further on the implications of this in the section on the WhatsApp group and leadership below.

However, the data also illustrates how the current hierarchical leadership systems at country level posed a potential external shock to the delivery of the workshop through an increasingly bureaucratic approach to the organisation of such activities. A recent large project between the UK and the Ivorian Ministry of Education had brought changes to the way in which CINELTA members could now take initiatives in their activities. Whereas in the past CINELTA could make its own arrangements with a regional teacher centre (DREN) to go and deliver a workshop or training session, now they needed authorisation from the central administration:

CINELTA they need to go to the ministry and have authorisation before going to do a workshop up country. Without this authorisation, teachers will not be able attend (Goma-Bi, I1).

Ministry authorisation meant extra work in the form of writing letters and liaising with the central administration, and resulted in a certain amount of frustration for CINELTA. It also resulted in a breakdown in communication with the local DREN as when they arrived, they discovered that the DREN had not been informed by the central administration and they were not expected. The local authorities welcomed them anyway:

The local authorities were very happy, to see us, to come and help them. This is what they say: even if we are not informed legally from the legal procedure, but you're welcome (Boahia, I1).

However, the increased complications with central administration, the impression that they had not communicated with the local DREN because 'they were not happy, but why they were not happy, I don't know this' (Goma-Bi), perhaps illustrate how professional and political context changes can put pressure on the system and the individuals within it. We also see evidence of Goma-Bi's resilience as he responds to this:

So next time, we're going to do this, I'm going to write myself, that's what I'm used to doing, I write myself and I send it directly to the DREN. I use my name, I sign, and if somebody calls me up [laughs], I'm responsible for that. I'm responsible for these things (Goma-Bi, I1).

Building CoPs on WhatsApp and similar social media platforms frees people from the need to be physically present, which enables the work to continue despite restrictions to movement. This in turn contributes to the resilience of the system.

3.3.3 Designing and delivering the workshop: Scale

One of the enabling attributes of the RABIT model is scale, or the ability of the system to access different resources and networks. The workshop organisers wanted to enable the teachers to find relevant and appropriate resources and materials for their classes. One of the ways in which the organisers did this was by incorporating already existing materials (YouTube links and so on) into the workshop. This was to illustrate to the teachers that there is a wealth of information and resources available to them, and that the organisers also make use of those things. They also included a problem-solving activity in the workshop to allow teachers to explore for themselves some of the resources available online, and the different online communities they can access. An example of this is as follows:

If you want to teach something particular on girls' education, how do you, knowing that you have communities around, how do you find the help? (Goma-Bi, I1).

3.3.4 Designing and delivering the workshop: Equality

The ability of a system to provide equal access to resources and opportunities is one of the enabling attributes of the RABIT framework, and in the current professional hierarchical system in Côte d'Ivoire, women generally have less voice and power than men. This may be partly to do with the significant gender imbalance in English language teachers in the country anyway. Statistics provided by the Ministry of Education state that ten per cent of English language teachers are women. In Daloa, the percentage of women teaching is just 6.1 per cent and in Abengourou 8.6 per cent, lower in both cases than the national average.

Established gender roles are more clearly defined in the remoter areas than in Abidjan. Goma-Bi had initially approached a woman he knew in Abengourou to organise the workshop, but she had refused:

Thank you for offering me this opportunity but I'm a woman, and you need to talk to the man first. So, I'm telling you this because ... if I take this initiative they will kill me (Goma-Bi, I1).

This is the reality of the wider context. As Boahia says: ‘This is Africa [laughs]. It’s not good for ladies to be in the front’. However, she did provide the number of a man who Goma-Bi should contact, but this man did not want to organise the workshop. The woman concerned was keen for the workshop to go ahead and agreed to ‘try to convince the guys’ (Goma-Bi, 11), which she managed to do. Goma-Bi comments that:

She’s naturally, she’s a silent leader because of the culture. She just stands behind the man, but actually making decisions, and making the man believe they are big, but she’s the woman who is making the decisions (Goma-Bi, 11).

Rather than being immobilised by cultural constraints imposed on her by her gender, she has worked within these constraints and employed her own agency in the situation to achieve the outcome she wanted: for the workshop to take place in her local area. One critique of a focus on resilience has been that it can further entrench the status quo, rather than challenge it (Shah, 2015). Although this woman is shaped by her environment in terms of the expectations embedded in the local culture around gender, she is also able to shape that environment, to find the opportunities to exercise her choice and agency, to achieve what she values, perhaps even to change perceptions a little, evidenced by the fact that she is applauded for her contribution at the end of the workshop:

And at the end of the training this lady was very praised by the administrative authority, everybody was grateful to her, what she did, she did a great job (Boahia, 11).

We now move on to look at forms of resilience within the new WhatsApp communities themselves, again using the Heeks and Ospina (2018) RABIT framework to organise the findings.

3.3.5 WhatsApp groups: Robustness

WhatsApp is, of course, not a tool we have had any role in developing, so we have no direct control over its ‘systems robustness’. This aspect is more like the type of resilience that is described in the IT literature, which focuses on the tools per se and their ability to recover from shocks. We are interested in the added value to the CoPs that the technology offers and the way it supports resilience.

At the time of writing this report (July 2019), the two WhatsApp groups in Côte d’Ivoire have been running for about three months. They have been active throughout this time period.

Table 3: New CoP WhatsApp groups

	Côte d’Ivoire	
	Abengourou	Daloa
Number of teachers in group	25	18

The Daloa group has more postings, with ten of the 18 participants making regular postings, whereas in the Abengourou group there are just two or three regular contributors. Boahia’s explanation for the more limited engagement in Abengourou was geographical location and access to mobile data:

[In Abengourou] it’s like big villages. So when they are back to their village, to their area, it is a little bit difficult for them to connect to the internet. Most of the time they are short of data, they have to get the money. Sometimes they have to come to Abegouro before getting the data for being connected, whereas in Daloa this is not the case (Boahia, 12).

In the more remote locations, limited access to data means that WhatsApp might not be considered so robust, something which needs to be taken into consideration when organising CoPs around a WhatsApp group.

3.3.6 WhatsApp groups: Self-organisation

We saw above how important it was to the workshop leaders to model a leadership style that differed from the traditional model, and that they wanted leaders to emerge from within the WhatsApp groups. There is evidence of people staking their claim to the role of leader by ‘struggling to be in the front’ (Boahia, 11). They take initiatives, suggest topics for the group to discuss and generally try to motivate people, often as a function of their professional role in the region. For example, a teacher advisor in Daloa ‘naturally thinks that he is, or he must be, the leader’ (Boahia, 11), which suggests that traditional, hierarchical models of leadership are influencing this thinking/behaviour.

Perhaps an internal threat to self-organisation is related to expectations by group members in relation to their postings, and the immediacy of response they might get from other members:

Because when you send a message, you send it and you need a feedback. Maybe when you are sending the message you are free, you don’t know the other guys if he’s busy, or he’s not connected. So we have to be flexible when we are waiting for feedback (Boahia, 12).

The comment seems to suggest that some people were getting frustrated with others when they did not receive an immediate reply. Slow responses might have the potential to inhibit the building of trusting relationships between members, but as Boahia says, it is a case of understanding that replies might take time, especially in places like Abengourou where people are not constantly connected to the internet.

A key part of building trust is being committed to each other, and taking the initiative in helping to build the community:

They have to [commit] time because it is a responsibility we have taken to work together. We have to collaborate, so each member has to [commit] a certain time to the others. So they should not wait to receive from others, but they have to be first in the front before others come (Boahia, 12).

A resilient system is also one that can organise and reorganise itself in relation to contextual factors.

3.3.7 WhatsApp groups: Learning

We also see learning happening around specific aspects of the curriculum; for example, the Daloa group spend a lot of time discussing the nature of reading texts and how reading should be taught. The trainees offer new texts and they start to design a lesson together, although this process is not completed.

We found that although the CoPs maintained themselves well and exchanged material, there was not much evidence of the creation of new knowledge unless the leaders were nudged to be more adventurous with the group's members. Perhaps this aspect will develop as the groups mature and consolidate.

Table 4: Themes emerging from the WhatsApp exchanges

Activity	Daloa	Abengourou
Socialising	5	3
Suggesting teaching materials: lesson examples and videos	20	9
Notices of information related to professional events	7	6
Methodology discussion (including testing)	5	3
Organisational	1	4
Irrelevant postings	1	2
Discussion about language	1	-
Topic-based discussion	-	2

3.3.8 WhatsApp groups: Redundancy

We would argue that for the purposes of this project WhatsApp was a substitute for other potential tools; in fact, when Zoom failed us during training sessions, or when we tried to 'attend' conferences remotely, we could replace presentations with WhatsApp using PowerPoint pictures and accompanying text either typed or spoken using WhatsApp's recording facility. There is 'redundancy' in the way that we made use of different tools to enable us to complete activities in the CoPs.

3.3.9 WhatsApp groups: Rapidity

We see evidence of 'rapidity' in the quick flow of information in the groups as the project develops and as this project links to other communities both in country and beyond. The 'scale' also grows with some groups, for example, consisting of a small number of trainers and other groups with 200 teachers. (The larger groups occur mostly as a part of other projects like English Connects, but the virtual group that was created for the final event has 84 participants from six sub-Saharan countries.) The number of teachers (and trainers) who have been impacted by all the groups and across a range of countries has been quite significant.

3.3.10 WhatsApp groups: Diversity and flexibility

This is demonstrated through the different ways WhatsApp is being used.

3.3.11 WhatsApp groups: Equality

Equality is evidenced in the fact that most of the teachers we reached out to in the project could have a voice in their development and gain access to a range of new resources. Before we proposed the workshops with follow-up WhatsApp groups, most teachers had very limited access to any form of relevant in-service training. The WhatsApp groups provide a platform for the sharing of ideas and need to be monitored over a longer time period to understand the perceived relevance and benefits for the teachers.

The women seem to be participating in the groups and one in particular in the Daloa group is joining in discussions and sharing resources. More work needs to be done to see how the groups might be fostering agency and equality of opportunity for the female teachers.

3.4 Sustainability

Part of the rationale behind the proposal of using WhatsApp is that because people are using it for social purposes, it is potentially more sustainable to run a CoP around WhatsApp. Sustainability is also a core feature of ICT4D (Heeks and Ospina, 2018). However, as can be the case with all social media, its use can be very time-consuming and this might impact on sustained use over time. Boahia (I2) commented on this aspect of his involvement in not only the current project but in running CPD for CPD and teaching and learning purposes:

The challenge I am going through, because I have so many platforms that I am managing, I have some [professional] WhatsApp groups ... and I have so many classes, around ten classes, and each class we have a platform. Some students are posting exercises, you have to read, you have to send feedback. Sometimes I do not sleep at night.

The time involved in administering and mentoring the WhatsApp groups is a real challenge and is something that needs to be taken into account when setting up a new group. The literature on managing online distance education discusses workload, for example, Bezuidenhout (2015) and Inegbedion (2017), but the use of social media adds a new dimension and needs further research.

3.5 Implications, applications and where appropriate recommendations

3.5.1 WhatsApp for teacher development through CoPs

Even though the new CoPs have been running for a relatively short period of time, the number and nature of the postings on the WhatsApp groups seem to suggest that there is potential for the communities to develop and to contribute to the CPD of teachers in various ways as we have evidenced above: sharing of teaching resources and materials; discussions about different aspects of teaching and learning; and raising awareness of other CPD events that teachers might like to be involved in.

There is also evidence that by giving teachers the opportunity to both participate in a workshop and belong to a CoP around WhatsApp they are being given tools that might enable them to exercise their agency and take responsibility for their own professional development. However, the teachers need to value these opportunities as something important for their own lives and wellbeing. Goma-Bi talked about the need to change mindsets, and Boahia about the need for teachers to have a sense of responsibility to make the group work and a commitment to each other. The teachers can choose to continue in the traditional ways, or they can choose to engage in the 'new trends' of teacher development as Goma-Bi suggested. If this helps build trusting and supportive relationships, and increases access to resources and ideas that are useful for teaching and learning, then teacher resilience and potentially teacher quality might grow.

However, there are context-related challenges that might limit the teachers' agency and choice. The Abengourou group is the most remote and rural of the two locations and despite mobile phone use being widespread – all teachers who attended the workshop had at least one mobile phone – teachers cannot access the network all the time. As we have seen, the impact of this may be a wane in interest in WhatsApp groups and teachers might get frustrated with the lack of interaction and leave. One way to counteract this, as Boahia suggests, is to raise awareness of the need for flexibility during the initial workshop.

3.5.2 Emerging practices and resilience

This project chose a collaborative research design that intentionally foregrounded the voices, expertise and local knowledge of the partners in the teacher associations. The University of Manchester researchers had no input into the design of the interview schedules that the partners used to explore the practices of their colleagues in other countries, or the design of the workshops. Although the Manchester researchers were invited to join the new WhatsApp groups, they have intentionally not engaged with them above a very superficial level. The groups are being supported and encouraged by colleagues in Côte d'Ivoire. The implications of this are several. Firstly, it has meant that the workshops and follow-on groups are contextually appropriate to the contexts they are seeking to serve and that potential problems were generally (although not completely) anticipated before delivery of the workshops. Secondly, there is the potential for continuing in-country follow up and support of the groups, which will hopefully contribute to their sustainability and ability to make a difference to the lives of the teachers who are part of them, and consequently their students too. Thirdly, the Manchester role has been more as brokers, and perhaps also as facilitators, of professional development for our colleagues.

As stated above, the CoPs have been running for a relatively short length of time, and it is therefore too soon to evaluate their contribution to the resilience of the Daloa and Abengourou teachers and the enhancement of the quality of the teaching and learning in those areas. However, we have seen evidence of how building a CoP around a WhatsApp group can potentially contribute to more equal access for teachers to resources and support; it provides opportunities for learning and can also self-organise through the emergence of local, trusted leadership. However, we have also noted that managing WhatsApp groups can be time-consuming, and this has possible implications for the sustainability of the group.

The two new groups are, however, part of a wider practice that is growing in Côte d'Ivoire (from previous projects), as evidenced by a report¹³ written by our partners as a result of the online workshop (Phase 6 above).

3.5.3 Recommendations

Based on our learning from this project we can make the following recommendations.

1. It is of paramount importance to find local, trusted and skilled colleagues who work in and understand the local context and the needs and mindsets of the teachers in order to build a CoP that is relevant to local needs.
2. A face-to-face training workshop is critical for building the foundations of the group, although we recognise that this might not always be possible and alternative ways of setting up at a distance need to be considered, as remote/virtual ways of working become more routine.
3. When working in remote and rural communities where access to the internet is more sporadic, perhaps there is an argument for helping teachers, for example by purchasing some mobile data for the first few months to increase their access to the group and enable them to grasp the potential of the group for their own professional development. This might encourage continued uptake.

Our local partners also made recommendations for those who might want to undertake a similar project in their country.

- Teach the potential members of the CoP how to use social media.
- Encourage teachers to be passionate about their own CPD, because if they are passionate they will find the means to manage the group.
- Be flexible in relation to your expectations of other CoP members.
- Monitoring an online community should take a democratic rather than an autocratic leadership approach.

13. See the report here: <https://tateproject.wordpress.com/2019/07/26/developing-professional-development-through-whatsapp-experiences-from-cote-divoire-english-teaching-communities/>

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