

## Building trust on Zoom: A workflow for language documentation via videoconferencing software

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The COVID-19 pandemic affected the capacity to conduct linguistic fieldwork in person. For many fieldworkers, this meant they needed to adapt, and do so urgently. This paper discusses a language documentation workflow based entirely on the online conferencing software Zoom, in which a linguist, external to the community, establishes a new project together with a native-speaker community member. The paper describes how such a working relationship can be built online, and accounts for all the steps of the authors' Zoom-mediated workflow in detail allowing for their replication. It also offers a critical appraisal of this workflow from the perspectives of both the native speaker and the researcher. To conclude, the authors summarise all the conditions necessary for a workflow like this one to be successful.

**1. Introduction<sup>1</sup>** This paper describes the methodology for a language documentation project conducted through videoconferencing software. The case study discussed here concerns the documentation of Chibuleo Kichwa, a Quechuan variety spoken in Ecuador, in the Andean province of Tungurahua. The paper focuses on two main issues. Firstly, it discusses the relationship between a community-external linguist (in this case, the first author) and a language expert/collaborator who is a member of the speech community (the second author). Secondly, it provides a detailed description of the workflow of the project.

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A distinctive feature of the case study described in this paper is the relationship between the linguist and the native-speaker collaborator, built entirely through videoconference meetings. Under COVID-19 conditions, many researchers have continued working on pre-established projects using Zoom and similar tools. However, cases like ours, where new relationships are successfully established online, are less frequent. This makes them worthy of in-depth description, allowing for the replication of the procedures and workflows used to establish such collaborations. The authors are aware that many aspects of a positive relationship between a linguist and a native-speaker consultant are highly personal and thus not easily reproducible. Despite that, the authors hope that their insights will be of use to researchers and speakers looking to establish and foster a mutually beneficial collaboration in remote fieldwork contexts.

The discussion of the project's workflow also aims to be detailed enough to allow for its replication. In this way, the authors hope to contribute to the methodological development of the field of language documentation. While remote fieldwork was imposed on language documenters as a result of the COVID-19 pandemic, some tools and procedures associated with online workflows might be useful and relevant to the work of descriptive linguists and fieldworkers in the long term. Therefore, the workflow described in this paper – as a whole or in some particular aspects – could be useful for researchers looking to conduct language documentation projects online.

The paper is structured as follows: §2 discusses the adjustment of the project from its pre-pandemic format to COVID-19 conditions. §3 provides a detailed description of how the relationship between the first and the second author was established and developed. §4 is a step-by-step account of the workflow, based on interactions through videoconferencing software. §5 outlines the plans for the second author to conduct limited in-person documentation under COVID-19 conditions. In §6, each author gives her personal perspective on the project. Finally, §7 summarises the main issues covered throughout the paper and presents some conclusions.

**2. Adjusting the project to COVID-19 conditions** The project described in this paper was initially planned for a pre-pandemic reality. It was meant to be a two-year postdoctoral fellowship funded by the Endangered Languages Documentation Programme (ELDP, grant no. IPF0301), scheduled to start in September 2020. Over the course of the project, the first author was to undertake three field trips to Ecuador to document and describe the Chibuleo variety of Ecuadorian Kichwa (ISO 639-3: qxl). The main thematic foci of the planned documentation were the basic grammar of the language and the verbal art of the Chibuleo Kichwa community.

The province of Tungurahua, where Chibuleo Kichwa is spoken, is home to three different Kichwa-speaking *pueblos* (speaker/cultural communities): the Salasaca, the Kisapincha, and the Chibuleo (cf. Haboud 2018). The extent of cultural and linguistic variation between them is not well described, and the Kichwa spoken in the province is widely associated with just one of these communities, the Salasaca. Salasaca Kichwa has a brief grammar sketch (Adelaar with Muysken 2004: 237–242) and a phonological sketch (Masaquiza & Marlett 2008). The other varieties

ies spoken in the province – including Chibuleo Kichwa – are described to an even lesser extent.

In its original shape, the project was meant to be a collaborative language documentation endeavour. The interested native speakers were going to participate in the selection of topics and speakers, recording and transcription of the data, and production of research outputs. The work plan included training the interested speakers in conducting interviews, making audiovisual recordings, transcribing, and translating. The pre-pandemic project proposal comprised two types of capacity-building activities. The first author of this paper was going to facilitate the basic training related to data collection, transcription, and translation. The more specialised training, for example in advanced use of audiovisual recording equipment, was to be provided through workshops led by invited experts (e.g., Dr. Patricia Bermúdez, a visual anthropologist from FLACSO Ecuador). These workshops were also envisaged as an occasion for the Chibuleo Kichwa collaborators to forge new relationships with more experienced native-speaker language documenters. The first author had previously worked on documenting Upper Napo Kichwa, a Quechuan variety spoken in the Ecuadorian Amazon, around 200 kilometres east of Chibuleo. The speakers of Upper Napo Kichwa who worked on the previous project (ELDP grant no. IGS0166) to document their language with the first author's support were going to be invited to participate in the workshops in Chibuleo, so as to lead some of the training sessions and share their perspectives on documenting their language and culture. The Chibuleo and Upper Napo Kichwa varieties are closely related, although it is not clear to what extent they are mutually intelligible. Nonetheless, virtually all Chibuleo and Upper Napo Kichwa speakers are bilingual in Spanish. Consequently, the workshops could have been conducted in a combination of Spanish and the two Kichwa varieties.

When it became apparent that travel would not be possible, the original work plan had to be adjusted. In the project plan adjusted to COVID-19 conditions, the plans to recruit a team of several native-speaker researchers had to be abandoned. Instead, for as long as the COVID-19 restrictions were in place, the community-external linguist (the first author) would work closely with one key collaborator (the second author). The collaboration would consist of online fieldwork conducted through videoconferencing software (see §4). Furthermore, the adjusted project plan included limited on-site fieldwork carried out by the second author, in keeping with regulations related to COVID-19 (see §5). Given the reduction of the core research team and the impossibility of travel, the training workshops were cancelled, at least until travel becomes possible again. Instead, the native-speaker collaborator would receive online training, focusing on the use of ELAN<sup>2</sup> and other aspects of language documentation relevant to the project.

In order to accommodate to the restrictions related to COVID-19, the thematic scope of the planned documentation also had to be adjusted. Rather than focusing on verbal art, the project now aims to document the speech of the members of the

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<sup>2</sup> For more information on the ELAN software, see Wittenburg et al. 2006.

second author's immediate social network, focusing on cultural topics that the second author considers salient and important. The one goal of the project that remains unchanged is the documentation and description of the basic grammar of Chibuleo Kichwa – now to be achieved through elicitation sessions conducted via Zoom.

**3. Establishing new relationships in online fieldwork** The project's successful adjustment to the COVID-19 situation depended on one key factor: finding a native-speaker collaborator interested in – and capable of – working on the project. In the workflow described in this paper, the role of the native-speaker collaborator combines several different capacities.

In working with the linguist via online conferencing software (see §4), the native-speaker collaborator plays the roles of a language consultant and co-investigator. She participates in online elicitation sessions facilitated by the linguist, transcribes and translates the data, and is actively involved in archiving them.

The second project-related role of the native-speaker collaborator, as envisaged in the described workflow, is related to expanding the project to limited in-person fieldwork in Ecuador (see §5). In this context, the native speaker acts as a 'gate-keeper' for the speech community (cf. Sallabank 2020) and as a language documenter. She is the point of contact between the linguist and the community members interested in taking part in documentation activities, as well as the main local agent organising these activities. She plans and conducts in-person fieldwork in accordance with what is possible and safe under COVID-19 conditions. This involves identifying speakers to be recorded, obtaining informed consent, and recording the speakers. In this workflow, the linguist and the speaker also work together via videoconferencing software. They establish protocols for data and metadata collection in keeping with current COVID-19 regulations, coordinate the workflow, ensure that ethical norms are being adhered to, and finally process and archive the recorded materials.

Given the multiple tasks in which the native-speaker collaborator is involved in this workflow, finding a speaker with the right skill set without being able to visit the country and the community was not a trivial task. The first author of this paper has worked in Ecuador since 2013. However, her work took place in the Amazon rather than in the Andean province of Tungurahua, where the project described here was to take place. What proved crucial for the successful planning of the Tungurahua project was the network of connections the first author had established in Ecuador during her previous visits. It is through local contacts that she was able to obtain reliable information about the COVID-19 situation in the country, as well as feedback on what activities would be feasible without putting the collaborators or participants at risk. Most importantly, it is through this local network that the first and the second author were introduced.

The second author is a native speaker of Chibuleo Kichwa. She was born and raised in San Francisco de Chibuleo. Already at the primary-school level, she was mostly taught in Spanish. Education in her mother tongue, Kichwa, was limited to a few hours per week, and the Kichwa grammar and orthography the second author was taught were those of Unified Kichwa, a government-endorsed standard for all Ecuadorian Kichwa varieties. Given that most of the students at the second author's

primary school were local children whose mother tongue was Kichwa, social life was carried out in the local Kichwa variety. This changed when she attended secondary school in Ambato, the capital of Tungurahua. At that institution, Spanish was the only language for both the curriculum and social life. In 2015, the second author moved to Quito to study at the University of San Francisco of Quito (USFQ). She is currently finishing her undergraduate studies in archaeology, with a focus on anthropology. In March 2020, when all university courses were moved to an online mode because of COVID-19, the second author moved from Quito to her home community, where she has been staying since.

During her university studies, the second author became interested in reclaiming, preserving, and revitalising her own culture and language. At the same time, her awareness of sociolinguistic issues dates back to her primary-school education, when, as mentioned above, she studied the normalised Quechuan variety, Unified Kichwa (cf., e.g., Grzech et al. 2019). Since that experience, she has felt that the local, oral variety is wrongly perceived as less valid and unworthy of being preserved. This was a key factor that influenced her decision to participate in the project described in this paper.

Unified Kichwa was introduced in Ecuador in the 1980s. The promotion and use of the standard variety in administration and education negatively affected the intergenerational transmission of some varieties of Kichwa (cf. Hornberger & King 1996). It has also led to the emergence of two opposed ideological orientations in Kichwa-speaking communities. The first values Unified Kichwa as a language of modern indigenous activism (cf. Wroblewski 2014) and pan-Kichwa unity. The second – represented by the second author of this paper – values the authenticity of local Kichwa varieties and sees Unified Kichwa as imposed and artificial (cf. Ennis 2020). Many speakers of the local Kichwa varieties might be uninterested in documenting them, as they see Unified Kichwa – and not the local Kichwa variants – as the correct prestige variety. In this context, the fact that the second author is committed to documenting and preserving the local Kichwa variety should not be taken for granted.

The person who introduced the two authors of this paper is Dr. Simeon Floyd, a lecturer and researcher at USFQ. Dr. Floyd has previously worked in Chibuleo and has kept in touch with speakers interested in documenting the language, including the second author. He is a colleague of the first author and the anthropology lecturer with whom the second author had taken classes. Thus, when introductions were made, it was easier for both authors to trust one another, knowing that they had a trusted professional connection in common.

After Dr. Floyd's initial introductions via email, the two authors scheduled a Zoom meeting to establish contact. This first meeting took place when the first author was in the process of adjusting the project to COVID-19 conditions. The funder requested a specific work plan that could confirm the feasibility of the project, including the names of possible collaborators. Thus, the first meeting was dedicated to gauging the second author's interest in working on the project and establishing the details of potential joint work. Once the second author confirmed that she was interested in becoming the project's main native-speaker collaborator, the first author

was able to finalise the adjusted work plan and present it to the funder for approval. After this approval was granted, the authors began planning the exact shape their collaboration would take.

**4. The workflow of online language work** This section describes the workflow using videoconferencing software to conduct linguistic fieldwork on an under-described language: Chibuleo Kichwa. The section discusses the practical and technical prerequisites for the proposed workflow (§4.1). It also covers the structure and organisation of the elicitation sessions (§4.2) and online training (§4.3). Finally, it describes the processing, transcription, and storage of the project data (§4.4).

**4.1 Practical and technical requirements** The main medium of the authors' work is the online conferencing software Zoom. However, the same workflow could be replicated with other programmes with similar functionality: allowing for video calls, screen sharing, and recording meetings. In the case of the project described here, both the linguist and the native speaker have personal computers, as well as a good Internet connection at their homes. Still, a similar workflow would have been possible using a shared computer, for example, in an Internet café (Rice 2021). The authors meet on Zoom once a week, always using both audio and video. On several occasions, the quality of the call was not very good, and the video 'froze' for a few seconds at a time. However, connection-related issues have never been serious enough to force a meeting to an early end.

Most of the Zoom sessions are recorded (see §4.2 for details). Initially, the authors only used the recording functionality of the Zoom software. However, the quality of such recordings was not always satisfactory if connection problems occurred. Because of this, the second author started making backup recordings on her mobile phone. She places the phone on the desk near her at the start of the session and uses the phone's default audio-recording software so as to capture her speech well. This solution allows for a better recording of the second author's speech. However, it also has an important disadvantage: When the second author is recording the session on her phone, she cannot wear a headset. This reduces the quality of the Zoom-mediated recording. If she did wear a headset, the backup recording would have only captured her voice and would have been extremely hard to use afterwards.

As mentioned above, the quality of the Zoom-mediated recordings could have been improved if the second author had a professional headset or an external microphone. Regrettably, that was not attainable when the project started. Buying equipment over the Internet is not straightforward in Ecuador, and in-person purchase of equipment was not possible at the time due to COVID-19-related mobility restrictions. The process of purchasing the equipment – including a headset for the second author – was more complicated than initially expected. All in all, solving all the administrative issues and ordering and waiting for the delivery of the equipment took over seven months (see §5).

The issues described above did not hinder the effectiveness of the current work for several reasons. Most importantly, the focus of this particular project is not on phonetics or phonology but rather on morphology, syntax, and discourse, and the



quality of the recordings is sufficient for these purposes. Describing the details of the phonemic inventory of the language would not have been attainable on the basis of Zoom-mediated recordings. However, this was not a necessary first step, as such a description already exists for Salasaca Kichwa (Masaquiza & Marlett 2008), a very closely related variety that is mutually intelligible with Chibuleo Kichwa (see §2).

What also contributes to the project's feasibility is that the second author's home community, San Francisco de Chibuleo, is not far from Ambato, the capital of the Tungurahua province. This is important because several money transfer companies have offices in Ambato, and they are the quickest and simplest way to pay consultants in Ecuador from overseas.

**4.2 Working sessions: Elicitation and sociolinguistics** The initial online meetings, dedicated to establishing rapport, were not recorded. These sessions had an introductory character: The first author explained in detail what the project objectives were, how she saw the role of the second author, and what kind of outcomes the project plan stipulated. The second author was also introduced to key concepts related to language documentation. Together, they talked about the archive where the data will be deposited (ELAR) and visited the archive's website. It was very helpful that the first author had worked with the same archive before and was able to show the second author a finished deposit of Upper Napo Kichwa (Grzech 2020). This way, the second author could get a clearer idea about the contents of a typical language documentation collection. The meetings also covered informed consent, both in general terms and in relation to this specific project.

These initial sessions were followed by grammatical elicitation. The elicitation sessions are usually about 1 to 1.5 hours long – shorter if one of the authors cannot concentrate or longer if the topic is complex. These sessions began with translating words and sentences from Spanish to Kichwa and have since incorporated work based on visual stimuli. The visual and nonvisual elicitation materials and stimuli used so far include the TAM questionnaire (Dahl 1985; distributed over several sessions), the Topological Relations picture set (Bowerman & Pederson 1992), and some tasks from the QUIS stimuli set (Skopeteas et al. 2006). Online elicitation works especially well for visual stimuli: It is easy to share them on the screen, and the software automatically records both speakers and the stimulus.

The elicitation sessions are transcribed within several weeks of being recorded (for details on transcription and data-sharing processes, see §4.4). When the initial transcription and translation are ready, the first author analyses them and makes notes – either in a notebook or directly in the note tier of the .eaf file containing the transcription and translation. These annotated .eaf files serve as the basis for further elicitation sessions. In those, the authors review transcription and translation files, using them as the basis for new questions, grammaticality judgements, and so forth. Zoom allows for joint viewing of the transcription from the previous session in ELAN and listening/viewing the recordings to which the transcription corresponds. The software records the shared screen, the sound of both the original and the current session, and the video of the authors as session participants (see Figure 1). This allows for a very rewarding recursive working pattern, which would have been hard

to capture in on-site fieldwork. If these sessions were held in person, making an analogous recording would require using two cameras – or a camera and screen-capturing software – which would subsequently have to be edited into one.

In addition to elicitation sessions, occasional non-elicitation sessions are necessary for housekeeping, such as updates on the administrative side of the project, and enjoying informal conversation. These sessions are not recorded. At other times, the authors met for training (see §4.3) or to talk about the Chibuleo culture, the second author’s experience as a member of the Chibuleo speech community, or the sociolinguistic situation of the language and its speakers. These sessions are recorded and will be included in the archived corpus despite the fact that they are conducted almost entirely in Spanish. It should also be mentioned that the sessions are not recorded from start to finish. The first few minutes of each session, dedicated to catching up and personal conversation, and the last few minutes, spent on planning for future sessions, are not captured. This gives the authors’ interactions a more personal feeling and allows for private conversations to be excluded from the corpus.

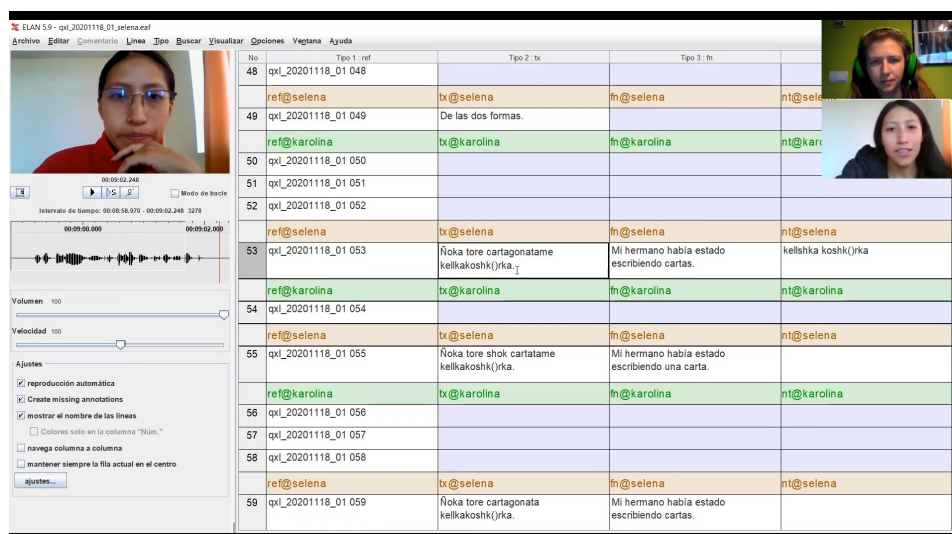


Figure 1. Screenshot from a Zoom session in which a previous transcription is discussed

**4.3 Zoom-mediated training** The initial Zoom sessions, including those used for elicitation, were also an opportunity for the authors to get to know each other and to start feeling comfortable working together. After six sessions, once a good working relationship was established, ELAN training could begin. It spanned four sessions (about four hours and twelve minutes in total), all of which were recorded and are included in the corpus (Grzech & Tisalema Shaca 2021). Throughout the training,



the authors used an ELAN template file (.etf) with pre-established linguistic types and tier dependencies, including four tiers per speaker. The template was originally created by Connie Dickinson, and the first author has also been using it in her previous documentation work. The tiers included in the template are (1) the reference tier, (2) the transcription tier, (3) the Spanish translation tier, and (4) the notes tier (see Figure 1). The first author will also add the English translation tier at a later stage. It was initially not included in the template, but in retrospect, including it from the start would have minimised the subsequent workload.

Thanks to the template, the ELAN training did not need to involve an explanation of complex concepts such as linguistic types, tier hierarchies, and stereotypes. Instead, the first training session focused on configuring ELAN and creating a new .eaf file, as well as on using the .etf template with video (.mp4) and audio (.wav) files. This initial session also covered the file-naming conventions and addition of new participants and annotators once an .eaf file is created. The second session covered the segmentation functionality of the software and associating new media files with an existing .eaf document. A recording of one of the previous sessions was used to practise transcription and translation. After session two, the second author segmented and transcribed several minutes of audio and video, and sessions three and four were dedicated to discussing and improving the transcription.

Reviewing the segmented and transcribed recording provided an opportunity to discuss the orthographic convention to be used throughout the project. The authors both felt strongly that the Unified Kichwa orthography should not be used. The orthography-related discussion included a brief introduction of concepts such as phonemic contrasts, so as to decide how certain problematic sounds could be represented. In the end, it was decided that the second author should use an orthographic convention that comes intuitively to her, as this was the best way to ensure consistency across transcriptions. This meant that certain sounds could be represented in an idiosyncratic manner, as long as their representations were consistent. For instance, the second author felt that [i] should be represented as ‘e’. These conventions will eventually be explained in the corpus guide.

**4.4 Data processing, sharing, and storage** After each session, the Zoom recording is stored on the first author’s computer, and the backup audio recording — on the second author’s mobile phone. Immediately after each session, the first author renames the files. She also converts the Zoom audio file (.m4a) into a 16-bit .wav file compatible with ELAN, using the software Audacity. She then writes a short note about each session with her impression of how it went and language-related issues that need a follow-up. This note is stored as a .txt file in the session folder.

The files are named according to a key, including the Chibuleo Kichwa ISO 693-3 code (qxl), the date (yyyymmdd format), and an ordering number. For instance, a video session recorded on January 20, 2021, would be named qxl\_20210120\_01.mp4. If a second recording was made on that day, it would be named qxl\_20210120\_02.mp4. The sound files have the same name as the video they correspond to, only differing in the file type extension. The backup recordings made on the mobile phone usually span the whole session and therefore do not have an ordering number (e.g.,

the backup from the session described above would be `qxl_20210120.wav`). In this system, clarity is most important: All the files of a given type are given the same name, using the same number of characters. This convention also complies with ELAR guidelines, stating that the names of the files deposited in the archive should not be longer than twenty characters. The first author keeps an Excel database where she notes down all the metadata, including the duration of each recording, keywords related to the session, a description of its content, the genre to which each session belongs, the participants, the languages used, and so forth.

All the recordings and transcriptions are shared between the authors. As mentioned above, the first author is in charge of recording and renaming the files. After doing that, she sends the audio and video recordings to the second author using an online transfer tool, WeTransfer. The files recorded on Zoom are relatively small, which makes this task easy. The second author sends the backup audio recording from her phone, also using WeTransfer. After receiving it, the first author creates a backup of all the session files on an external hard drive. This way, the session recordings, as well as the transcription and translation `.eaf` files, are stored by both authors on their respective computers. More recently, the first author created a shared Dropbox folder with copies of all project-related files, including the session recordings, the elicitation materials, the `.eaf` files, and the Excel database. However, the authors have become so accustomed to sending the files to each other that using WeTransfer remains the preferred way for sharing data.

The process of transcription and translation has several steps: (1) The first author segments the session recording and emails the segmented `.eaf` to the second author. (2) The second author transcribes and translates the Kichwa parts of the recording and sends this preliminary transcription back to the first author. (3) The first author reviews the transcription, checks for consistency and accuracy, and notes down questions, interesting constructions, and so on. (4) After that, the file is reviewed by both authors during a Zoom session (see §4.2). (5) Subsequently, the first author completes the transcription of the Spanish parts of the recording and translates the file into English. (6) Finally, the first author sends the finished `.eaf` file to the second author for her records. Focusing only on Kichwa at the initial stage of the work – covered by steps (1) to (4) – allows the authors to review the transcriptions of the Kichwa text relatively quickly and incorporate insights from previous sessions into their subsequent work.

Thus far, the data have not been archived, but this process will begin shortly. It will be preceded by training dedicated to the Lameta software<sup>3</sup> currently used by ELAR for metadata storage and for the creation of IMDI files. The second author has already written a text about the Chibuleo community for the starting page of the ELAR archive deposit.

**5. Beyond online: Plans for the future** As mentioned in §2, when the project described in this paper was adapted to COVID-19 conditions, two complementary workflows were planned: (1) the Zoom-based collaboration between the authors

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<sup>3</sup> See [www.lameta.org](http://www.lameta.org) (accessed 2021-05-18).

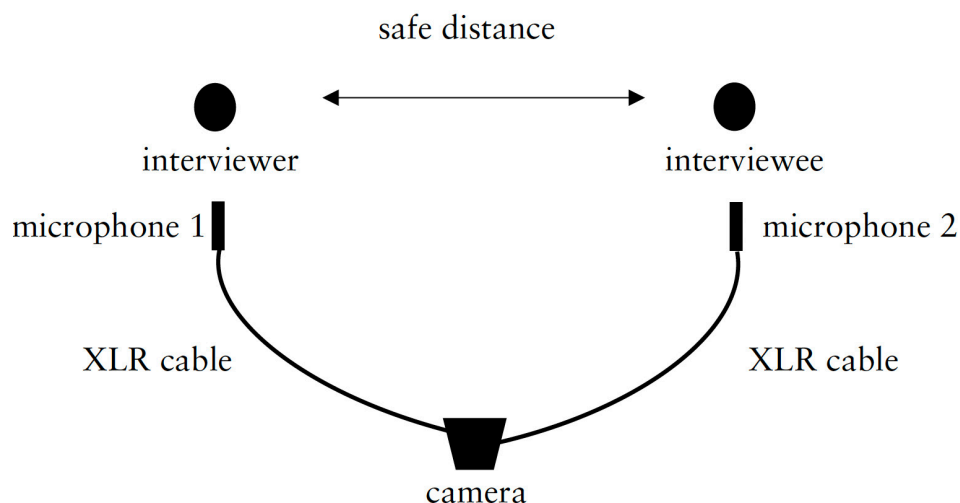
of this paper and (2) limited in-person fieldwork conducted by the second author. The Zoom-based workflow has already been implemented, as described in the previous section. At the time of writing this paper, the in-person fieldwork is still at a very early stage. This section describes how the authors plan to carry out in-person fieldwork under COVID-19 conditions. It discusses the practical and ethical considerations involved in such work, accounting for the particularities of the local context and challenges related to the logistics of the project.

The community of San Francisco de Chibuleo, where the second author is based, is located about fifteen kilometres from Ambato, the capital of the Tungurahua province in the Ecuadorian Andes. San Francisco de Chibuleo is immediately adjacent to other small communities that belong together both culturally and administratively (e.g., San Alfonso de Chibuleo, San Luis de Chibuleo, and San Pedro de Chibuleo). At the outset of the pandemic, each of these communities decided to restrict the access of people and vehicles from the outside, including those providing basic services (e.g., distributing gas cylinders). At the same time, the local inhabitants were prohibited from going to Ambato to sell their agricultural produce, which revitalised the small-scale commerce at the local level. Access to health care was also restricted: San Francisco de Chibuleo has one local health centre, but it closed early in the pandemic. Like in other rural areas in Ecuador, people resorted to traditional medicine for treating their symptoms, although – due to the lack of adequate diagnostics – it was mostly impossible to state if what people were suffering from was indeed COVID-19. At the time of writing this article, access to San Francisco de Chibuleo is no longer restricted and the incidence of COVID-19 cases is low. However, the authorities have been monitoring the situation, and when COVID-19 cases go up, limitations on public transport to and from Ambato and other nearby towns are being imposed on an ad hoc basis.

All of the above is relevant for how in-person fieldwork can be conducted at the moment. The second author lives with her parents and is maintaining a limited social life by regularly seeing a small number of close friends and relatives. The proposed fieldwork plan stipulates making the first recordings with the second author's parents, who are native speakers of Chibuleo Kichwa. The subsequent interviewees would be people in the second author's immediate social network, whom she sees regularly even in the current situation. The recordings with people other than the members of the second author's household will be conducted outside. Needless to say, if more restrictions are imposed at any point, the recording sessions with participants other than the members of the second author's household will be postponed until it is safe enough to conduct them. Recording other members of the community – or adjacent communities – will be postponed until the situation returns to the (new) normal.

There are multiple practical issues associated with this way of conducting fieldwork. The most obvious one is the need to set up the recording situation in a way that will accommodate a safe distance between the participants of the recording. This required making adjustments to the equipment purchased for the project. The authors acquired two unidirectional microphones, which were not foreseen in the original equipment budget, each with its own stand and XLR cables of sufficient

length to ensure that a safe distance can be respected at all times. The recording setup, designed to ensure a safe distance between the interviewer and the interviewee, is shown in Figure 2.



**Figure 2.** Recording setup with a safe distance between speakers

One of the challenges to the proposed workflow was delivering the necessary equipment to Chibuleo. The possibilities of buying the equipment locally in Ambato, or even in Quito, are quite limited, and electronic goods are very expensive in Ecuador. The availability of online sales platforms is also limited, and buying on international ones, like Amazon.com, requires dealing with customs – a process that is neither simple nor straightforward and where no positive outcome is guaranteed. Moreover, purchasing equipment in Ecuador, rather than in Spain, required special administrative permissions since the project is managed by a Spanish university. In the end, the purchase of the equipment was managed through a procurement agency working with one of the universities in Quito. Like many other practical aspects of this project, this was only possible due to the first author’s network of personal contacts and their willingness to help solve issues associated with the project. The equipment was preordered in May 2020 and arrived in Quito in July. In order to securely transport it to Chibuleo, the second author ordered a long-distance taxi and went to Quito herself. A return trip from Chibuleo to Quito takes about five hours.

The Zoom-mediated training carried out so far, covered in §4.3, has mostly been dedicated to the transcription and translation of audiovisual recordings in ELAN. The workflow described in this section requires more training in three key areas: (1) the use of recording equipment, (2) informed consent, and (3) the collection of

metadata. The authors covered all these topics in Zoom-mediated training. Although the first author already owns a camera identical to the one purchased for the project (Zoom Q8), and the camera is relatively easy to use, the training related to the use of equipment proved to be particularly challenging. After the second author brought the equipment to Chibuleo, the authors spent an entire session going over the functions and instructions for use of each item. The authors did not anticipate how complicated this would be. For instance, they needed to watch a YouTube tutorial together to learn how to use the camera tripod purchased for the project. The equipment training was made easier by the fact that the second author has a cousin who is knowledgeable about audio and video recording and was able to help her operate all the equipment. Online training provided by the first author also helped, but an expert able to provide in-person help turned out to be instrumental to the process.

The training regarding informed content was more theoretical and therefore relatively easy to conduct over Zoom. The second author is a trained anthropologist and is thus already familiar with basic issues related to informed consent thanks to her university studies. Moreover, the authors have already covered some related issues when first starting to work together, due to the fact that the second author's informed consent was needed to record the Zoom-based sessions conducted so far. At this stage, the second author was already familiar with the project and the ELAR archive, which would allow her to explain the objectives and scope of the project to prospective interviewees. The more specific training related to consent involved looking at the draft consent form provided by the first author and adjusting the procedure of gaining informed consent to the specifics of the project and the local situation in Chibuleo. The authors also discussed the possibility of granting consent orally and the rights of the potential interviewees to remain anonymous and to withdraw their consent after they already participated in a recording session.

The training related to the collection of metadata was also conducted over Zoom. The first step of this training involved familiarising the second author with the Lameta software, mentioned in the previous section. This allowed a discussion on the concept of both speaker and session metadata. It also helped the second author to gain a better understanding of the role the metadata play in the archiving process. As for the metadata collection, at this stage the authors are exploring different options for managing the process. The most basic one would be to prepare metadata sheets for each session, which could then be scanned and stored with the session recordings and transcription files. A more sophisticated solution would be the collection and storage of metadata with the mobile app KoBoToolbox and the online data storage system associated with it. A very useful workflow on metadata collection and sharing based on KoBoToolbox was developed by Griscom (under review). Moreover, a script developed by Griscom (2020) allows the metadata database created with KoBoToolbox to be exported directly into Lameta.

In terms of data processing, storage, and sharing, working with the recordings made on camera will be similar to the workflow related to processing and sharing the Zoom recordings, described in §4.4. The most important challenge in this process is that the recordings of the sessions will be much larger and thus more difficult to share. At the moment, the authors are exploring possible solutions to this issue.

**6. Personal perspectives** This section complements the practical considerations presented above with the authors' personal perspectives. The second author's comments present the point of view of a native speaker of the documented language (§6.1). The first author presents the viewpoint of the community-external researcher (§6.2). We decided to include personal observations in this otherwise methodological paper to make sure that we discuss factors that could have contributed to – or hindered – the success of our workflow but that are not easily quantifiable.

**6.1 Native speaker's perspective<sup>4</sup>** As a native speaker of Kichwa belonging to the Chibuleo community, I was immediately keen to accept the opportunity to collaborate on this project. I was motivated by the project's focus on documentation, conservation, and revitalisation of my own language variety: Chibuleo Kichwa. The local cultural and – above all – linguistic practices were not documented in detail until now, which worries me personally. It was also important that – because I study anthropology – I had previous knowledge of some areas of the study of linguistics. As the work progressed, I also came to ascribe greater value to my own language and to its preservation for future generations. These topics interested me already prior to the project, and I expected that through this work, we would be able to create useful tools to conserve the local language practices. It also appealed to me that the research was intended to focus on the real local language practice.

At the beginning, the process was quite confusing – not because of how the project was managed, but rather due to how we processed the information with ELAN. I only had some basic experience with this software, and it was time-consuming to get more familiar with it. In the end, however, this learning process had a positive outcome, and transcribing and translating got easier from one session to the next. The project's online mode was also a challenge, especially since for anthropologists (including myself) and researchers in related disciplines, it is crucial to engage with the community with which they work. On the other hand, I have been studying online since March 2020, when my university moved away from on-campus teaching. Because of this, I found it relatively easy to work on the project in this manner. We were forced to adapt our lives to the pandemic in many ways. I consider this another necessary adjustment, and I try to engage with the work as best I can. At the same time, as a Kichwa speaker living in the community, I feel the urge to undertake fieldwork. I think it is crucial, as it allows for interacting with more people and for obtaining firsthand information from them. The data collected in the project should not only come from me but also from other community members.

In line with the observations made above, I am very satisfied with the project up till now. This is because we have advanced significantly in the description of the grammar and because it has become a personal challenge for me to reflect on my language in a written form. Oral use of Kichwa was a part of my daily life for as long as I can remember because of intergenerational transmission. At the same time, writing in Kichwa has always been a problematic issue, made more obscure by the

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<sup>4</sup> Originally written in Spanish, translated by the first author.



presence of the Unified Kichwa orthography in our education system. Being involved in this project gave me the liberty to transcribe my thoughts and knowledge of the language freely (see §4.2). I see my work as an effort to improve the perception of this less restricted way of writing by the members of the community and hope that it will become a tool for the reevaluation of our local Kichwa variety.

Finally, I should underline that I found the data collection till now useful and enriching. As I share my knowledge of the language with the first author, I also become aware of my answers to her questions. I begin to pay attention to the analytical problems I was not aware of thus far. What I find most gratifying is that our observations acquire a written form, which I am free to shape as I see fit. In the future, I would very much like to meet the first author in person. While the project has progressed satisfactorily online, the first author's presence in the community would be a unique experience and would allow her to learn about our culture firsthand. I also think her presence would be essential in giving the local community the motivation to preserve our language and culture. Being part of this project would make them understand that our language, Chibuleo Kichwa, is just as valuable as other languages. If this happens, we will be in a position to preserve our culture.

**6.2 External researcher's perspective** As the researcher responsible for adjusting the original, on-site fieldwork project to the online format, I feel that the most significant constraint involved in the process is time. When the funder agreed to fund the project adapted to the COVID-19 conditions (see §2), the project's time span was also adjusted: from two years to one year with the possibility of an extension. At first, that seemed insignificant: After all, the new project plan did not involve time-consuming field trips, and I could focus on data collection from day one.

However, I quickly realised that despite its apparent ease, online fieldwork is a slow process. This is especially true if – like in our project – the entire relationship between the collaborators has to be built via conference calls. In this context, spending time getting to know the other person is crucial. Doing linguistic fieldwork online means that the speaker will discuss their language, culture, and heritage with someone they barely know and whom they only see for a few hours every week. This mode of work, unlike in-person collaborative fieldwork, does not allow for seeing the other person in everyday life situations. Consequently, it also takes longer to build mutual trust. I find it extremely important to adjust the pace of the project taking the above into account and allowing ample time for relationship-building. As a consequence, delivering substantial amounts of data in a short period of time is particularly challenging in online fieldwork.

I also did not foresee that adjusting the project to a format compatible with COVID-19 would result in so many administrative difficulties. Online fieldwork is a new way of doing language documentation research. Understandably, my host university needed an assurance that it will work before agreeing to transfer the project funds overseas. This caused significant delay in purchasing the recording equipment and being able to conduct on-site recordings. As a consequence, I felt a lot of pressure to make the project run smoothly, despite having very limited control over the fieldwork circumstances. If the second author of this paper decides that she no longer

wants to work with me, it would be extremely difficult to find another suitable collaborator, train them, and manage to collect data within the stipulated time frame.

As a fieldworker, what I miss while working online is the opportunity to get to know my collaborator and her community, their culture, their customs, and their everyday life routines. The inability to travel removes me further from the object of my study: culturally situated linguistic practice. Working online for several hours a week, I find it much harder to learn the language and to keep providing interesting issues for me and my collaborator to discuss in our weekly sessions. Needless to say, I am also denied the opportunity for participant observation and for picking up analytical cues from everyday language use.

That said, I also see many positive aspects of online fieldwork. What I particularly enjoy is regular, structured work with a committed native speaker. I value the peer-to-peer relationship we were able to develop, due partly to the fact that we are both women and partly to the age difference between us not being too significant (ten years). It also helps that we have similar interests related to language and anthropology. This makes the tasks of leading an online language documentation project much easier from my perspective. That said, I do not intend to claim that a collaboration of this type is in any way dependent on the degree or subject of the native-speaker collaborator's formal education, age, or gender. I merely mean to say that in this particular project, all these factors seem to have worked in our favour.

**7. Summary and conclusions** This paper discussed the workflow of a language documentation project conducted through videoconferencing software. It is noteworthy that the project was successfully initiated online: The linguist and the native-speaker collaborator never met in person and yet were able to establish a good relationship and a successful documentation workflow. This concluding section reviews the conditions and components crucial for the feasibility and success of projects similar to the one described in this paper.

The paper discussed a wide range of factors that facilitated the implementation of this project. Below, these are summarised as a list of points, including the necessary and sufficient conditions for setting up a new language documentation project conducted entirely online.

- The speaker and the linguist both have access to a good-quality Internet connection;
- The speaker and the linguist both have access to a personal computer and a quiet working space;
- The speaker and the linguist share a language in which they can communicate comfortably;
- The speaker and the linguist both have good literacy and computer literacy skills;
- The language under study already has an orthography/transcription system;

- The linguist has previous experience working in the country where the speaker is based and/or has a reasonably good idea about the local social, political, and historical context;
- The relationship between the speaker and the linguist is horizontal rather than vertical;
- No fieldwork on phonetics, phonology, or prosody is involved; and
- The linguist has a basic idea about the structure of the language.

The list provided above covers the material conditions of the project, the participants' skills, the state of documentation/description of the language, and the project's subject matter. It is not meant to be exhaustive, but it does cover the issues that were most relevant to the workflow described in this paper. What is also very important but hard to convey as a succinct point is that the native-speaker collaborator should not have a prescriptive attitude towards their own language. If the speaker involved in the documentation project values the 'language norm' over the actual linguistic practice, the project is unlikely to succeed. This is especially relevant to settings such as Ecuador, where prescriptive attitudes have been demonstrated to hinder language transmission and maintenance (cf., e.g., Hornberger & King 1996; Ennis 2020).

The Zoom-based workflow described in this paper collected linguistic data from just one speaker. This can bias the resulting description of the language towards one idiolect, thus limiting the robustness of the theoretical work resulting from the project and the usefulness of the project's outcomes to the wider speaker community. A similar workflow could potentially be established with more than one speaker. However, this would mean that building and maintaining relationships with speakers would become the linguist's most time-consuming task, leaving less time for the transcription and analysis of the collected data. The Zoom-based workflow is also not well suited for analysing communicative language use. However, as discussed in §5, Zoom-based interactions can serve as the first step towards limited on-site fieldwork to document more interactive language use.

This paper demonstrates that online conferencing can be used to set up new documentation projects. The online mode is also very useful for maintaining relationships forged in person before the pandemic. At the same time, online fieldwork takes away the possibility of real-life interaction and is not suited for work on all areas of language documentation and descriptions. Given its limitations, it is unlikely that language work based on online conferencing will ever become a replacement for in-person fieldwork. However, it could be a very valuable addition to descriptive linguists' toolkit.

It is easy to imagine that, once the pandemic passes, community-external linguists could combine field visits with online work. Up till 2020, many language documentation projects were set up in such a way that language work only happened when/if the external linguist was present in the community. This could change as a result of new tools and models for language work, including the one described in this paper. Linguists should still visit the communities they work with, but their presence could become less crucial. This, in turn, could lead to the speakers assuming greater control over the documentation projects and linguists acting more as consultants

and facilitators for the local teams than as principal investigators. Such a paradigm shift is already underway in many parts of the world. Still, the availability of online workflows could make it more widespread and thus constitute a step towards further decolonising the enterprise of linguistic fieldwork. Descriptive linguists might be at ease with this idea. However, to be possible, this paradigm shift needs institutional support. Universities and funding agencies would need to transfer some of the decision-making capacities from the linguists to the native speakers, even when the pandemic no longer forces them to do so.


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