

# Report on 2020 Research Trip

## Collaboration with Bodo and Dimasa on Development of Community-Based Archive

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## **Acknowledgements**

*By Christina Wasson*

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- Prafulla Basumatary, Post-Doc Fellow in Linguistics, Gauhati University
- Dhrubajit Langthasa, Research Assistant, Institute of Linguistics, Academia Sinica, Taipei
- Monali Longmailai, Assistant Professor of Linguistics, Assam University

As described in the next section, this trip was one piece of a longer collaborative process to develop a community-based archive. I have greatly enjoyed working with everyone, and look forward to continued interactions.

I would also like to express gratitude to CIT-Kokrajhar for supporting this project in a variety of ways. And I would like to thank Ashok Kumer Langthasa for his fast work creating new research opportunities in Maibang when our trip to Haflong was temporarily diverted to Maibang because of a bandh.

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# 1. The Project

By Christina Wasson

## Purpose of Report

The purpose of this report is to capture findings from the 2020 research trip Shannon Cronin and I made to the Bodo and Dimasa communities in Assam. The 2020 trip was part of a longer-term collaboration with partners in Northeast India to develop a community-based archive for Indigenous groups in Northeast India (Wasson 2020).

In addition to presenting research findings from this trip, the report also offers design implications based on those findings. Drawing on the perspective of participatory design, we take a broad view of what “design” can mean. It includes not only the design of technologies, but also imagining new practices and social arrangements which might evolve to take advantage of the technologies (DS4SI 2020). How might a technology – in this case an archive – become embedded in the life of a community?

The design implications presented in our report are not intended as prescriptions, but rather as communication tools in a continued dialogue with our collaborators. This report is one step in a long-term collaborative process of imagining and working to build the future.

The report is intended for three overlapping audiences:

- Our Bodo and Dimasa collaborators on the archive
- Other people in Northeast India who may be interested in archives as a tool for language and culture preservation and revitalization
- Anyone, anywhere, who is interested in Indigenous heritage platforms.

## Development of Report

This report was prepared by students in my ANTH 5700 class, Analysis and the Segue to Design. I created and taught this course for the first time in summer 2020. The course was an opportunity for students to explore ethnographic analysis methods in depth, and to practice the arc from analysis to findings to applications.

In order to gain practice with analysis techniques, students analyzed data collected by me and my research assistant Shannon Cronin during our trip to India in February 2020. Shannon and I video recorded most of our fieldwork, and Shannon transcribed the recordings after our return.

## Research Context: Community-Based Archives

Online archives are a tool for Indigenous communities to address concerns about ongoing loss of linguistic and cultural knowledge. Most if not all Indigenous groups around the world are struggling to maintain traditional linguistic and cultural practices, due to globalization, modernization, legacies of colonialism, and so forth. Communities are engaging in a variety of

activities to preserve, revitalize and reclaim their heritage. Online archives are a way to store such information and make it accessible to community members (Wasson 2020).

Historically, traditional archives have not always had good relationships with Indigenous groups. In the past, they were associated with colonial practices of extracting information from these groups and then placing the information in locations that were inaccessible to the communities. Sometimes information was made public that should have remained private (Wasson et al. 2016; Wasson et al. 2018).

More recently, though, the concept of “community-based archives” has emerged. These are archives that are designed to target the needs of Indigenous communities, rather than the needs of governments or geographically remote scholars. Community members make the decisions about how the archive should be designed and managed. A free and open source platform called Mukurtu has been created specifically to house community-based Indigenous heritage archives (Mukurtu 2019). The goal of the collaboration we are engaging in is to develop a community-based archive using Mukurtu.

I first visited Northeast India in 2018, along with two research assistants. This research trip laid the groundwork for the collaboration that emerged with various partners. In 2019, Shannon Cronin and I developed a prototype of an archive for the Bodo and Dimasa using Mukurtu. While we engaged in extensive virtual communication with our Indian collaborators about how to customize the archive, using email and WhatsApp, we really looked forward to the advantages of face-to-face interaction that the 2020 research trip made possible.

## Research Questions

The overarching research question for the 2020 research trip was: How can we make the archive as useful as possible to the Bodo and Dimasa communities?

Within this overarching question, we explored a number of subquestions:

1. What are concerns of Bodo and Dimasa community members regarding linguistic and cultural heritage?
2. What are ongoing activities in these communities related to preservation and revitalization of language and culture?
3. How do Bodo and Dimasa community members see the archive as a tool for language and culture preservation and revitalization? What uses and benefits do they envision?
4. What features/platform customizations do Bodo and Dimasa community members want?
5. Do collaborators prefer long-term vision of having a separate archive for their community only?
6. What are technology resources and expertise in the community to support an archive?
7. What did we learn about possible funding sources for the archive in each community?

8. What more did we learn about our existing collaborators – their organizational roles and community-based research visions (individuals and organizations)
9. What potential new collaborators did we meet, and what did we learn about them and what their roles might be? (individuals and organizations)
10. What did we learn about possible ways to further publicize the archive and its possibilities in the Bodo and Dimasa communities? (both upload and download)

## **Analysis Process**

The students in my class analyzed the field notes (annotated transcripts) produced by Shannon Cronin and me, following these steps:

- Development of code list, based on review of field notes and relevant literature
- Field notes coded using Dedoose, an online qualitative analysis program
- Identification of patterns in the data
- Creation of an overarching model that encompassed all the patterns
- Development of design implications
- Creation of graphics to visually represent the patterns, models, and design implications
- Writing of report

During the semester, students also communicated with four NE Indian collaborators using WhatsApp. They asked questions and checked whether their preliminary interpretations of data made sense. As mentioned in the acknowledgements, these collaborators were:

- Bihung Brahma, Assistant Professor in H.S.S. Department and Coordinator, Centre for Linguistics and Cultural Studies, CIT-Kokrajhar
- Prafulla Basumatary, Post-Doc Fellow in Linguistics, Gauhati University
- Dhruvajit Langthasa, Research Assistant, Research Assistant, Institute of Linguistics, Academia Sinica, Taipei
- Monali Longmailai, Assistant Professor of Linguistics, Assam University

The students and I are most grateful to these collaborators for their readiness to interact and their helpful insights. The conversations were a valuable part of the analysis process.

## **The Students**

The nine students who enrolled in this class brought a wonderful mix of expertise and skills that benefited this project tremendously. While most were living somewhere in Texas, two were in Korea. We collaborated using a variety of online tools, including Canvas, Google Docs, Dedoose, and Miro. We also had a weekly video call using Zoom, shown in Figure 1.1.

Figure 1.1. Screen Shot of Class Video Call



## 2. Our Model

By Christina Wasson

We developed an overarching model that offers a potential vision for how individuals and organizations might interact with the archive once it is further developed. The model is based on findings from the 2020 research trip as well as the 2018 trip. This chapter provides an overview of the model. The remaining chapters will each focus on particular aspects of the model.

We want to be clear that this is a model of an imagined future. It is not a representation of the current situation. While it includes many activities that are already taking place, it also adds future activities and weaves them all together.

The model is intended as a tool for discussion with our collaborators. It is not intended as a blueprint or prescription for the future. We expect that it will evolve over the course of our continued conversations.

Furthermore, this model is tailored to what we have learned about the situation of Indigenous communities in Northeast India. Some aspects of the model may be generalizable to other parts of the world, but we have not tried to investigate issues of generalizability. We believe such an effort would need to come much later in our collaboration process.

### The Archive as Sociotechnical Field

Our model is a map of the archive as a “sociotechnical field.” What we mean by “sociotechnical field” is the broad set of interactions between the archive as a technological object and the people who engage with it. We are drawing on the work of Rob Kling and others who have theorized sociotechnical interaction networks, and Bourdieu’s concept of “field” (Kling et al. 2003, Bourdieu 1990).

Our model envisions the sociotechnical field of the archive as a series of concentric circles of interaction (see Figure 2.1). The innermost circle represents the archive technology, which mainly consists of two parts: the Mukurtu platform and the content that is uploaded into the archive.

The next circle out represents the activities of curators and managers of the archive. These are people who manage the technology, develop policies for the archive, and approve “authenticated users,” community members who have permission to upload materials.

The circle after that represents the activities of different user groups who may want to use the archive. They can engage with it in two ways:

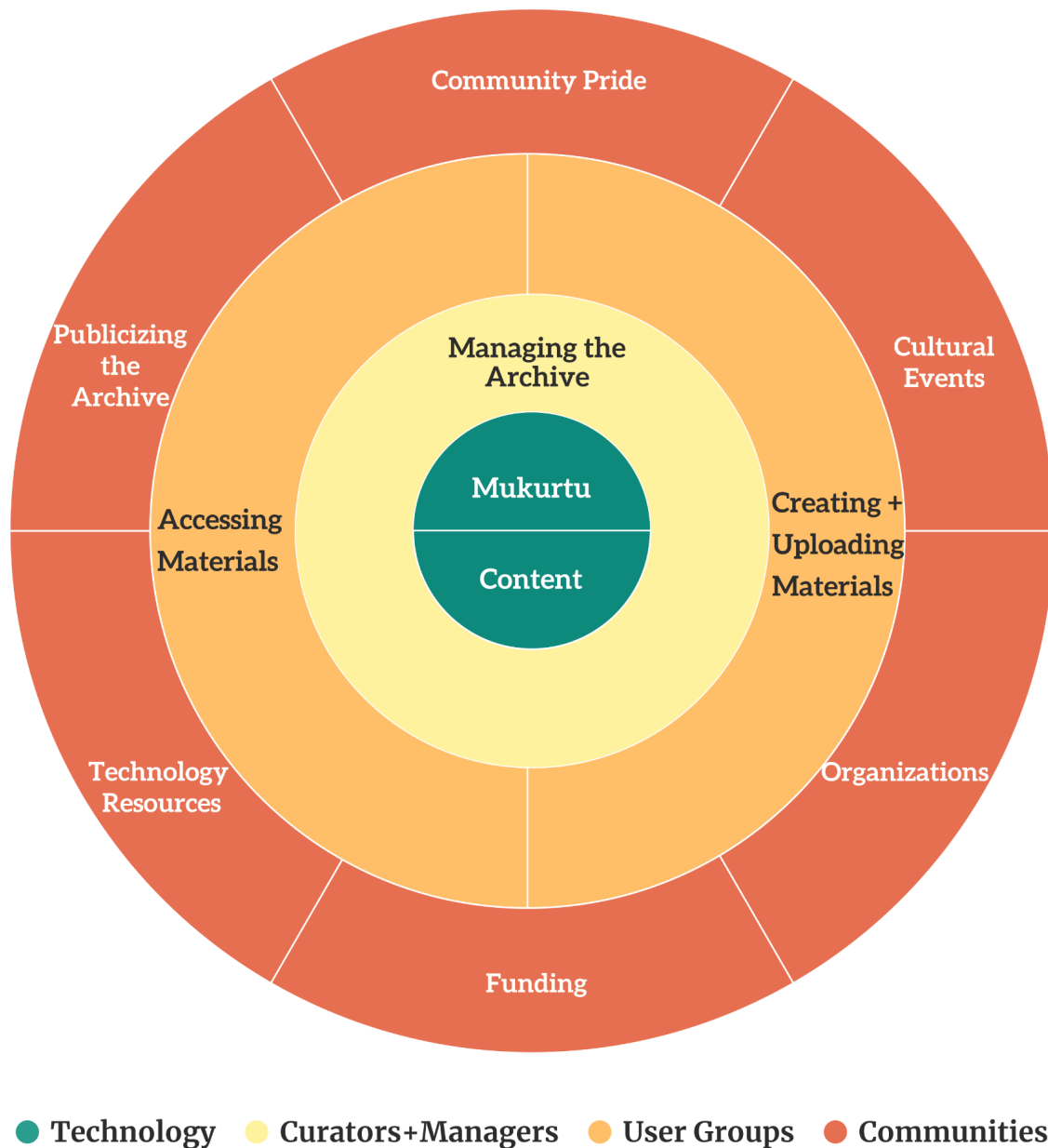
- They can access materials – for instance, look at videos or read articles that have been uploaded



- They can create and upload materials – for instance, record a traditional music performance and upload it

The same people may engage in both activities, of course.

Figure 2.1. The Archive as Sociotechnical Field



The outermost circle represents the archive in relationship with communities. It includes cultural values and concerns about preserving and revitalizing communities' languages and

cultures, the performance of traditional cultural practices, and organizations that may support the archive in various ways.

### **Archive Interaction Scenarios**

In the remaining chapters, we explore each of these circles in detail. We also map more detailed interaction scenarios that pertain to a particular circle. These scenarios are visually illustrated with white “sticky notes” and arrows placed on top of the circles.

### 3. The Archive as Technological Object: Mukurtu and Content

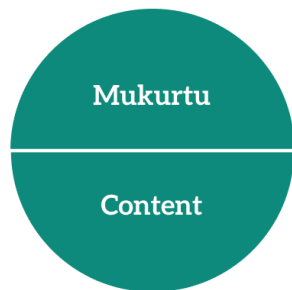
By Sally Darling and Jessica N. Keller

#### Introduction

This chapter focuses on the innermost circle of our model, as shown in Figure 3.1. This circle represents the technology that forms the infrastructure of the archive. It includes both the Mukurtu platform, and the content that may be uploaded into the archive. Research findings concerning Mukurtu and content will be presented first, followed by the design implications that emerge from these findings.

The archive we are working on can be accessed at <http://bododimasaarchive.org>.

*Figure 3.1. Archive as Technological Object*



#### What Does "Community-Based Archive" Mean to the Communities?

A community-based archive is a space for communities to preserve aspects of their culture that they feel are in danger of being lost. Community members we talked to imagined the archive as a key to a future where traditional practices survive because they are incorporated into community knowledge, instead of being discarded or overpowered by cultural forces from outside the community. The archive, as imagined by the people of the Bodo and Dimasa communities, is not a passive receptacle; it is a living space. It performs the essential function of preserving the past, and in doing so, it also engages with the present lives of community members and influences the future of the communities. In the same way that the archive will enable community members to share artifacts like books and photographs among community members, it will also allow practices that may exist now only in the minds of a few individuals to again be in the custody of the community at large. Community members mentioned music and dance, ceremonies, weaving, oral stories, and cooking as essential practices that are in danger of disappearing without preservation efforts (Figure 3.2).

Figure 3.2. Quotes from Community Members on Reasons to Develop an Archive



## What Kinds of Content Do Community Members Want to Include in the Archive?

For some community members, the archive is a space to preserve and share community texts, images, and sounds from the past. Agnes Gorlosa, speaking for the Dimasa community, noted:

*We still have elders past 100 also. Already past 100. But still he was weaving this basket, no? So they are still living legends, old people. So I think that kind of people should be here. Their pictures should be seen by all.*

Members of the Bodo and Dimasa communities also spoke about the importance of preserving folk songs and stories from the past. There was a particular emphasis on preserving the complexity of music and dance. Discussing how the folk songs have changed over time, Zangila Basumatary of the Bodo community said:

*Earlier, the folk tales used to be deeper, more meaningful. Nowadays, more folk songs are mostly love based (translated by Prafulla Basumatary, Bodo community).*

Dhrubajit Langthasa (Dimasa community, archive project collaborator) shared a similar sentiment about the loss of complexity in the dance that is performed now.

*Also, I've seen in my lifetime, where I've seen when my mom used to dance, there were traditional types of forms they used to dance earlier. And then, those dances are not being performed now. Similar, easier ones are being performed. And because also the fact that there are few players who can play the tune.*

Both communities spoke about their desire to use the archive to pass this kind of historical community knowledge from the older generations to the youth.

While the preservation of history is of primary importance for some community members, for others, they imagine it as a space where they can see and share video that preserves the past but also informs daily life. As Dhrubajit Langthasa noted,

*There's always a way to keep your modern and traditional way of life...parallel. We need to learn that.*

Cooking was mentioned several times and is an example of community knowledge that is important for more than a preservation of history – while related to heritage and history, it is also present in everyone's day-to-day practices. Sharing knowledge about traditional cooking practices already takes place in the Bodo and Dimasa communities. Community members shared their hope that these and other existing efforts will be incorporated into the archive, as expressed in this conversation between Agnes Gorlosa, Dhrubajit Langthasa, and Christina Wasson:

*Dhrubajit Langthasa: So there is this person called [inaudible]. His wife, his wife. Very good cook. And she uploads recipes and pictures.*

*Christina Wasson: Oh, I see. Oh, okay. Yeah. On Facebook?*

*Dhrubajit Langthasa: Yeah, Facebook.*

*Agnes Gorlosa : She has her own vlog also.*

*Dhrubajit Langthasa: Yeah, she has her own vlog. Yeah. But if all those vlogs come over here, then she can have more viewers.*

*Agnes Gorlosa: She keeps on researching in this language we don't know. We may know the kind of leaves in our language but we cannot find it in English. So we don't know how to even put up the recipe also. So like that, she keeps on researching but -- She has so much ideas and-- yeah. She could do the cookery part. And more people will be there to see.*

Dhrubajit Langthasa also noted in our August, 2020 conversation on WhatsApp that the communities are also concerned that, “different herbal medicines that have been passed from generations using leaves ...and roots need to be documented as well.”

## **Imagining the Future of the Archive**

One topic discussed during the February 2020 trip was the possibility that, in the long run, this archive might evolve into several separate archives. For instance, the Bodo community might want to have an archive for Bodo materials only. In addition, other NE Indian Indigenous communities may wish to add their materials to the archive in the future. Christina held some exploratory conversations with members of such communities at the North East Indian Linguistics Society (NEILS) meeting.

In light of this discussion, one way to look at the archive is that it is a learning tool. It provides a context for both the UNT team and NE Indian Indigenous communities to acquire skills in community-based archiving, and to develop policies and practices that are appropriately customized to each community and the NE Indian context more broadly. Once communities develop internal expertise, and if they have adequate resources, they may choose to set up an archive for their community only. Part of the February 2020 fieldwork involved working with collaborators in the Bodo and Dimasa communities on a model of a shared archive (see Figure 3.3). This model was built on Mukurtu, a platform built specifically for community-based archives.

## **Archive Platform: What is Mukurtu?**

Mukurtu (MOOK-oo-too) is a content management system designed for the preservation of Indigenous heritage (Mukurtu 2019). Mukurtu was created as a digital heritage archive with and for Warumungu community members in Central Australia. It has since been developed into a free, open-source platform for digital preservation by Indigenous communities. As a platform for interactive, rather than passive, preservation, Mukurtu meets the need for a space that is both for preservation of community life and for active participation in shaping the content of the platform and the experience of other community members who use it.

Many community members will access the Mukurtu platform through mobile devices. Mukurtu Mobile offers the same access, content upload, and data categorization as the web version. Mukurtu Mobile also allows users to save content for offline access, vital for areas with unreliable or intermittent internet access.

The Mukurtu platform is a customization of Drupal. It can be run on a local server or on a hosted site. Though Mukurtu itself is free, there are different associated costs and required support for using a local server or a hosted site. The Mukurtu developers offer limited set-up and troubleshooting support. Still, the individual communities who support the site will be responsible for the majority of technical support for setup and upkeep of their archive. For more on existing technical support for the archive, see Chapter 6 of this report.

Figure 3.3. Home Page of Archive We Are Developing



### Design Implications: Archive Contents

Bodo and Dimasa community members spoke about a variety of content types that they would like to upload and access through the archive. Content types mentioned in the February 2020 conversations were:

- Literary content, including current books and articles, as well as historical texts
- Content specifically for preservation of language, including a dictionary and grammar book. Community members specifically mentioned wanting to preserve words for traditional foods and medicinal herbs.
- Video recordings of traditional dances
- Audio and video of folk stories and songs. As Dhrubajit Langthasa said, *“What we are seeing nowadays is that people are very much concerned about certain folk tales and folk songs being missed out.”*
- Photographs and video recordings of traditional clothing and crafts. Basket weaving and cloth weaving were specifically mentioned
- Educational and child-oriented content, including animations and cartoons made by members of the community.
- Video recordings of traditional cooking.
- Festivals, celebrations, and rituals. Dhrubajit Langthasa specifically mentioned documenting wedding rituals, saying, *“In Dimasa community, when you get married,*

*you tie a turban around head for the groom. So maybe what we can do is make a video, upload over here, and we can all learn."*

- Architecture. Agnes Gorlosa specifically mentioned the architecture of the traditional Dimasa kitchen, saying, *"Not only fire, the system, everything. So our children don't know the difference between which community, because we have that kind of gas and that facility now, right? Everyone knows about the gas, how to burn it, but they don't know how the Dimasa kitchen looks like."*

## **Design Implications: Balancing Access with Control**

The design of the Mukurtu platform emphasizes community control of content and allows each community to share and categorize their content according to their own community guidelines. It serves as both an archive for preservation and a community hub where community members can upload their own content. However, maintaining an archive that is a living, changing thing requires constant monitoring. It requires communities to decide how they want to balance ease of access to the archive with consistency across the platform. These concerns are also related to how the Mukurtu platform is hosted, as using a local server versus having a hosted site requires balancing funding and IT support with concerns about access.

### **Server Location: In the Cloud or Local Server**

Community members will have to decide whether they would like to use a local server or a remotely hosted site. This decision will depend on balancing available technical support with financial resources. It is expensive to provide server space, especially considering that much of what individuals in the Bodo and Dimasa communities want to upload will require the use of audio and video files, which take more server space. If the archive is locally hosted, IT support will be required at the start of the project to set up the site and the server (for system requirements, see <https://github.com/MukurtuCMS/mukurtucms#self-hosted>). Mukurtu also sends frequent updates, so IT support will be required to keep the platform up to date and functional. If the community decides it does not have the necessary technical expertise or the financial resources to maintain a local server, they may consider paying for a hosted site and can negotiate the needed level of IT support in the hosting contract.

### **Metadata: Balancing Access and Standardization**

Metadata are the descriptive labels put on materials so they can be categorized and searched by author, type of material, subject, etc. Existing standards for metadata, such as the Dublin Core, were developed outside of the context of communities in NE India (Dublin Core Metadata Initiative 2020). Their standards may not reflect how communities in NE India categorize their own materials and practices. Mukurtu addresses this issue by allowing communities to customize metadata for content uploaded to the platform (Christen 2011, 192). Reimagining the metadata categories to represent the values of a specific community will be a collaborative effort and will require monitoring and adjusting over the life of the archive.



Some community members may feel most comfortable uploading materials in the same way they are accustomed to on other social media platforms. That is, they simply upload, and content descriptions are optional and often personalized. However, this makes the information harder to search. The community may decide to require all metadata categories to be filled in by the person who uploads the data. However, introducing this formality not only adds friction in the uploading process, but it also introduces another layer of complexity to the archive's organizational structure. If community-supplied metadata categories are to be searchable, they must be consistent, which may be very hard to achieve. For an example to illustrate this concern, the following is a description by Prafulla Basumatary, of a song recorded in the Bodo community:

*Every song has its own story to tell. The first one regarding festival... It's a harvesting festival. When, after their harvest, people celebrate. They drink. They eat. They dance. They perform. So from house to house, groups of people, children, women, adults, whoever, old generation. They move from house to house and they ask for something. The song says "You there or not, sister in law? If you are there, give us a hen or an egg. Oh, I think you are not there. Doesn't matter. We will go to the next house."*

If multiple performances of the song Prafulla describes were uploaded to the archive by community members, it is unlikely that all community members would put the same metadata labels on this media excerpt. For example, it could be categorized under "festival," or "music," or another completely different metadata category that is more in line with the way one member of the community thinks about or experiences the song. This thought or experience may not be shared by other members who are uploading similar songs, resulting in a variety of metadata categories that may not adhere to the same conventions. As the archive must meet the needs of a variety of users, it will be necessary to balance the needs of community users who would like to be able to easily upload content with the needs of other community users, scholars, and institutions who would like to search the archive. In addition, collaboration with other archive efforts or academic institutions who use existing standardized metadata categories such as Dublin Core will require what Kimberly Christen (2011) calls "reciprocal curation," or "a set of practices through which both tribes and scholars annotate item-level records within specific collections with the aim of producing a rich, layered, dynamic set of knowledge" (193).

### ***Where to Store Recordings: Balancing Access and Intellectual Property/Privacy Concerns***

Whether using a hosted or local server, video and audio files take a lot of space. It could be expensive to buy enough cloud space or server space to host a lot of recordings on the archive. One solution would be to have users put their recordings on a social media platform like YouTube or Vimeo. The archive could then link to the recordings or embed them. This may also be convenient for users who are already creating content on social media platforms. However, despite various options for privacy and limiting distribution on platforms like

YouTube and Vimeo, there are still grey areas in the protection of intellectual property rights for media uploaded through these platforms. It is possible to use YouTube's and Vimeo's services without making an uploaded video public. While both platforms have settings for privacy, including password protection, restrictions on downloading, and restrictions on embedding on other sites, this does not solve intellectual property concerns. Both Vimeo and YouTube are granted specific rights when a user uploads content to their services. Using such services also does not fully address privacy concerns, as it is difficult to fully limit distribution of uploaded content. For example, if the community only wants people with a link to be able to view content, there is nothing to prevent that link from falling into another person's hands - intentionally or unintentionally.

It will be necessary to weigh the advantages of putting recordings on social media platforms with the desire to limit distribution. Communities will have to balance their concern for intellectual property rights with their desire to make uploading and sharing easy and cost efficient for community members.

## 4. Customizing and Managing the Archive

By Crispin Reedy

### Introduction

In this chapter, we focus on the activities of archive managers and curators in customizing and managing the archive. The first part of the chapter provides an overview of these activities. The second part describes particular features and customization options of the archive that the curators might want to consider.

*Figure 4.1. Shannon Cronin working with Bihung Brahma and Prafulla Basumatary*



### Curator and Manager Activities

On the 2020 research trip, Christina and Shannon had valuable conversations with our Indian collaborators on various issues relating to the curator and manager roles. Most of our closest collaborators had agreed to take on the curator role. So we talked about areas where the curators may eventually want to develop policies and guidelines. In addition, Shannon Cronin provided training to several of the curators on how to navigate Mukurtu. In Kokrajhar she

worked with Bihung Brahma, Prafulla Basumatary, and sometimes Dwihung Brahma. In Haflong she worked with Dhrubajit Langthasa. Figure 4.1 shows one of these sessions.

Since we have developed manuals for the curators and managers, we will only provide a short overview of their roles here. One thing to note is that Mukurtu allows these roles to be customized. So we are describing the way we have set up the roles for this particular archive. Our decisions were based on the wishes of our collaborators, and our own desire to make things as simple as possible. Mukurtu can become overwhelmingly complex.

### **Curators**

We suggest that the activities of the curators include:

- Making decisions about how they want to customize the archive, given the many options Mukurtu provides
- Developing policies on issues like what languages to use and in what order; how to address Indigenous data sovereignty; how materials should be grouped into categories; and what kinds of metadata information should be included about uploaded items.
- Working with organizations on funding and technology support for the archive
- Publicizing the archive to potential users
- Developing and updating the community home pages
- Approving or denying applications for “authenticated user” status. Authenticated users are community members who have the power to upload materials to the archive. They can also add comments about items uploaded by other people.
- Helping users add information about materials they upload

As of the writing of this report, curators include Prafulla Basumatary, Bihung Brahma, Dhrubajit Langthasa, Christina Wasson, and Wasson’s research assistants. We expect more community members to be added, and the role of the UNT participants to diminish over time.

### **Managers**

The manager focuses on managing the technology. This person should know Drupal, the content management system that Mukurtu is based on. We suggest that their responsibilities include:

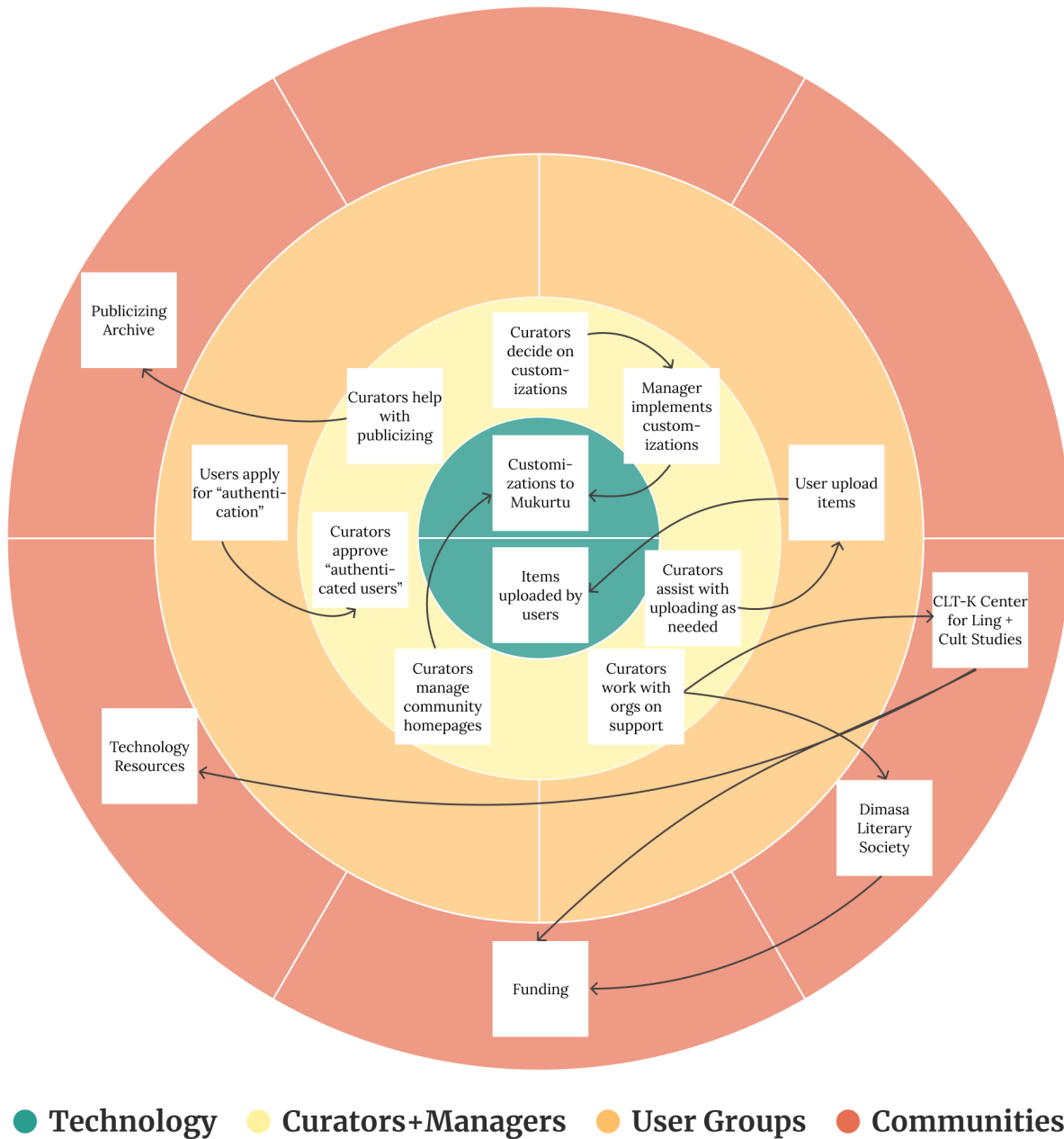
- Carrying out curators’ requests for customizations and other changes to the site that require some technical knowledge, for instance changing the footer or the logo
- Trouble-shooting any bugs that may develop
- Updating the system as needed, when Mukurtu releases new versions

Right now, the archive is in the cloud – we have purchased storage space from Reclaim Hosting. If a community decided to house the archive on a local server, it would be useful if the manager were able to take care of the server as well.

As of the writing of this report, the manager work is being done by Wasson and her research assistants, with help from Michael Wynne at Mukurtu. We expect this role to shift to people in India over time.

Figure 4.2. illustrates selected curator and manager activities by mapping them onto our model.

Figure 4.2. Archive Interaction Scenarios for Curators and Managers

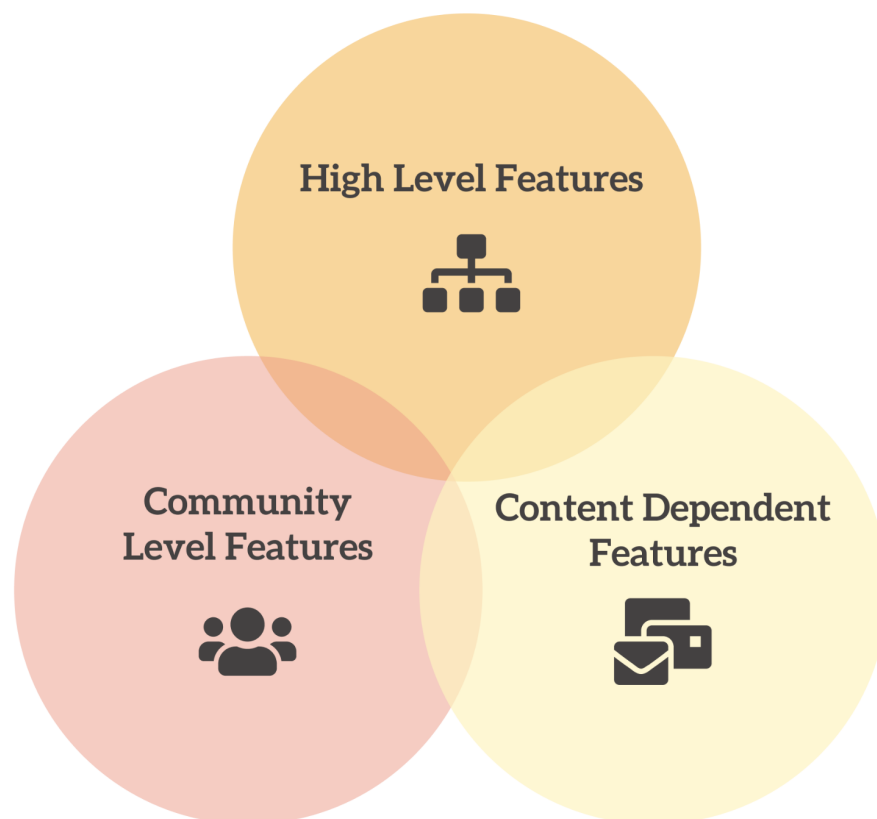


## Features and Customization Options for Curators to Consider

The key research question addressed in this section of the report is: What features/platform customizations do Bodo and Dimasa community members want? Referring back to our high-level circle diagram, Mukurtu customizations and features sit at the center of the circle; the ramifications for decisions made in this center are connected with several of the other circles, as in Figure 4.2.

In general, potential features and possible customizations for the archive fall into three broad categories (see Figure 4.3). Some features may fall into more than one category.

Figure 4. 3. Overview of Potential Archive Customization



### 1. High level or “big picture” features

- These relate to the site as a whole
- For example, should there be a “blog” or “forum” page on the site?
- These features may be on a single page (a blog) or they may apply throughout the site (the ability to upload video, or the account level access controls which come into play on various pages).

## 2. Community level features

- This specifically relates to the community level. For this site specifically the most obvious example would be the Dimasa community vs. the Bodo community
- For instance, the Dimasa community home page could use the Dimasa language and the Bodo community home page could use the Bodo language

## 3. Content dependent features

- These are the features that will be very specific depending on the individual type of media or page.
- For example, when a user is uploading a video of a dance performance, the descriptive fields that the user is asked to fill out might be different than when they are uploading a video of a storyteller.

### Blog / News / Forum

One high-level set of potential features concerned pages such as a blog or a forum. Three excerpts in the data suggested a blog which could feature news and updates. None of these suggestions included much detail as to how these features might be used. There could be potential for a variety of organizations to utilize a blog or forum on the archive, such as:

- Scholarly groups like the Dimasa Scholars' League
- Literary societies
- Student organizations
- Women's organizations
- Poetry organizations
- Other organizations or groups that focus on the language and culture of an Indigenous community

Based on our conversations in February, Shannon added a blog feature to our archive just to see if we could technically do it. It is available now, but we have not tried to use it yet.

In the process of deciding whether or not a blog or forum should become an integral feature of the archive, it might be worthwhile to discuss some of the following questions:

Possible Feature	Considerations
Blog / News	What type of content would this contain?
	Who would create this content?
	Who would approve the content?
	How often would it be updated?

Forum	What kinds of discussions might users want to have?
	Which users will have access to the forum? For example <ul style="list-style-type: none"> <li>• It could be specific for archive administrators to discuss things internally.</li> <li>• It could be for contributors to the archive, for something like tech support.</li> <li>• It could be for the general public.</li> </ul>
	Who would be the administrator of the forum?
	What would the guidelines for the forum be?

Both of these potential features go beyond technical implementation. They require a degree of hands-on management: you can't just "turn it on" and forget it. For blogs or newsletters, very infrequent updates (less than once a month) or updates that are inconsistent (a lot at once and then none at all for several months) can make a website appear unused or unreliable. Similarly, forums that are not administered can be vulnerable to spam or hackers and can likewise reflect poorly on the website. Therefore, if these features are desirable, further discussion on the details of maintenance and updates should also occur.

### **Mobile Support**

One high-level feature to consider is the high number of potential archive users who exclusively have mobile devices and are potentially only using cellular data. Although this was not extensively discussed in the interviews for the 2020 trip to India, it was explored on the 2018 research trip, and is mentioned here in the interest of being thorough. All features which are being considered should be evaluated on different types of devices (tablets, different sizes of mobile phone, different sizes of computer screen) and for different levels of bandwidth.

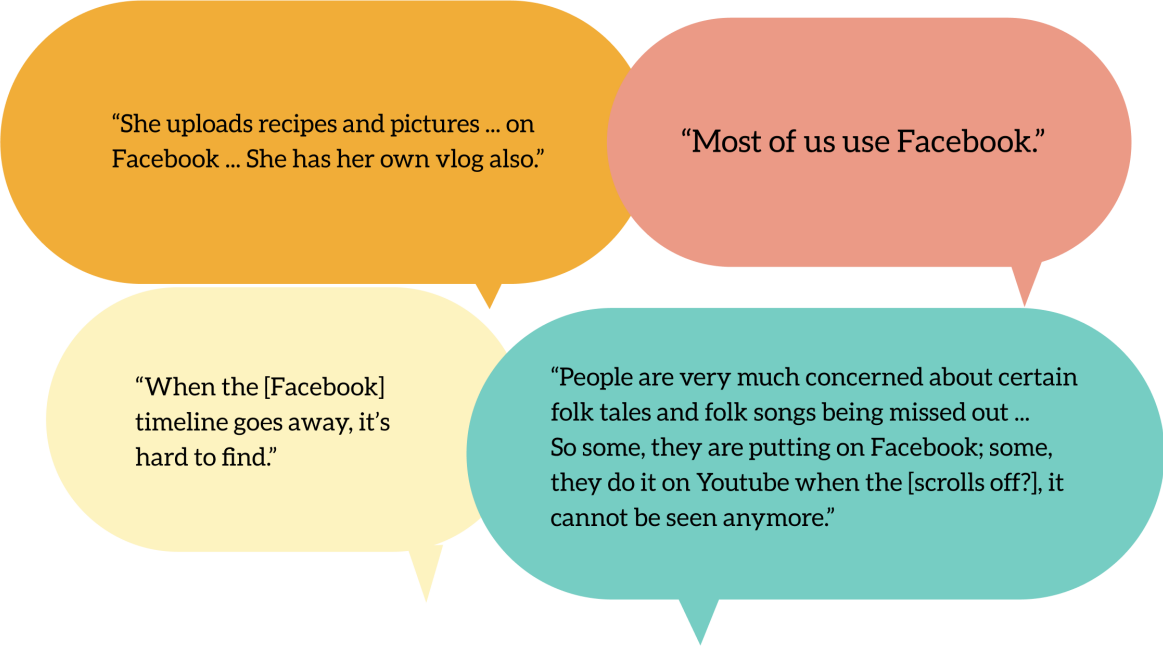
### **Two Ways to Consider Social Media**

This next pair of potential features are "high level" but may also include "content dependent" aspects. When considering social media sites such as Facebook and YouTube, it is most obvious to think of them as a way to, in the future, create publicity and potentially drive traffic to the new archive. However, people are already using these social media sites on their own to create cultural content such as videos and recipes (despite the fact that Facebook may be not entirely suited to this use). See Figure 4.4.

Given this existing social context, then, it is most useful to conceive of the new archive website as participating in a dialog with existing users. How might the new archive's features support social media in a holistic way?



Figure 4.4. Quotes about Social Media Use



**Use Case 1: How Do Existing Content Creators Use Social Media?**

There are already people who are uploading content to Facebook (recipes) and YouTube (dance videos). Given that some people already using tools that they know how to use to create content, and they are already speaking to an audience that they currently have on an existing platform, how might archive administrators approach these content creators to potentially partner with them?

Existing Role	Considerations
Content Creator	Who is currently creating content that could be uploaded to the archive?
	How do they create content today?
	What are their motivations for creating content?
	How often do they upload new content?
	Would they be interested in partnering with the archive in some way in the future?
	Would they be interested in promoting the new archive to their followers?

	Would there need to be training involved for them to use this new platform?
<b>Digital Content</b>	How much existing content do they have?
	What format is it in?
	Would the creator be interested in sharing this “content backlog” that they have already developed on the archive?
	Would someone be available to help them with copying this content backlog over to the new archive? (For example, the original creator might be busy, or technologically challenged)

It may be a good idea to explore collaborative technology ideas which will make use of the new platform a little easier. There are third party “automation” tools which allow users to connect different platforms. For example, Zapier.com supports creating connections between Drupal and Facebook, which allows a user to post all new content on Facebook to their Drupal page (and vice versa). “If This Then That” is a similar tool. Since Mukurtu is a variation of Drupal, it may be possible to use such an integration tool to help existing content creators who wish to contribute their content to the archive.

### ***Use Case 2: What Features Would Help People Publicize the Archive on Social Media?***

Several interviewees mentioned that they would definitely use Facebook to let people know about the archive. There are several ways that this might occur:

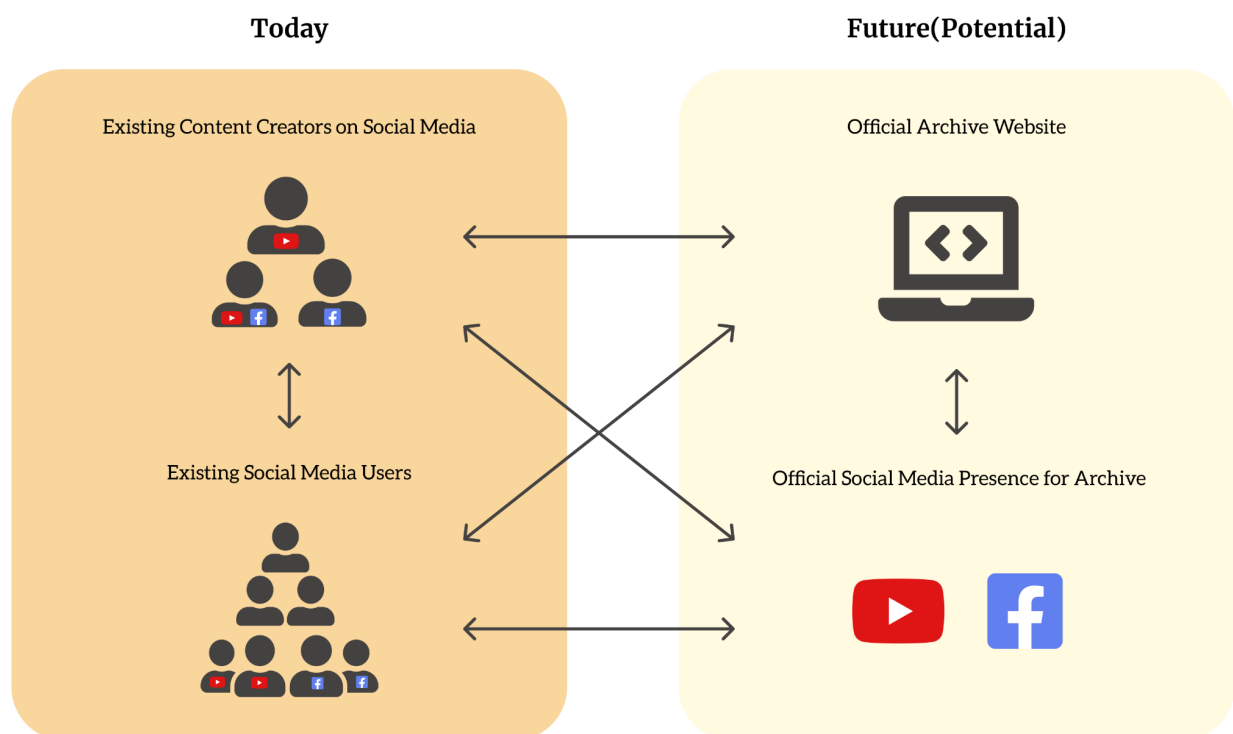
- People might be interested in sharing the front page of the website. The message here is, in essence, “I just found this website.”
- While browsing the website itself, users might be interested in sharing individual pages of the site when they have found something of specific interest.
  - This might be individual pages of uploaded content.
  - Or, if there is a blog / news feature or forum, people might be interested in sharing that content.

This type of interaction could be facilitated by adding a “share on Facebook” button. This could be on specific content pages or on the front page of the website in general. It’s useful to observe, though, that all of the above interactions depend on the user already being on the website, and then choosing to share to Facebook from the website itself.

It could be potentially useful to create an “official” social media presence for the archive on Facebook itself (and/or YouTube, Twitter, or other applicable social media). This presence would have similar “pros and cons” to those listed under the “Blog / News” section – it would require a person to create and curate the content, manage the discussions, create guidelines, and so on. However, as discussed in “Use Case 1” above, this could also take advantage of third- party integrations such as Zapier (in this case, going in the other direction) which would make content posting and management a little less time consuming.

See Figure 4.5 for a graphic representation of the potential many-to-many relationship which might come into play between content creators, an audience on social media, the archive website, and a possible social media presence for the archive.

Figure 4.5. Interconnectivity of Social Media



### 👤 Interface Language

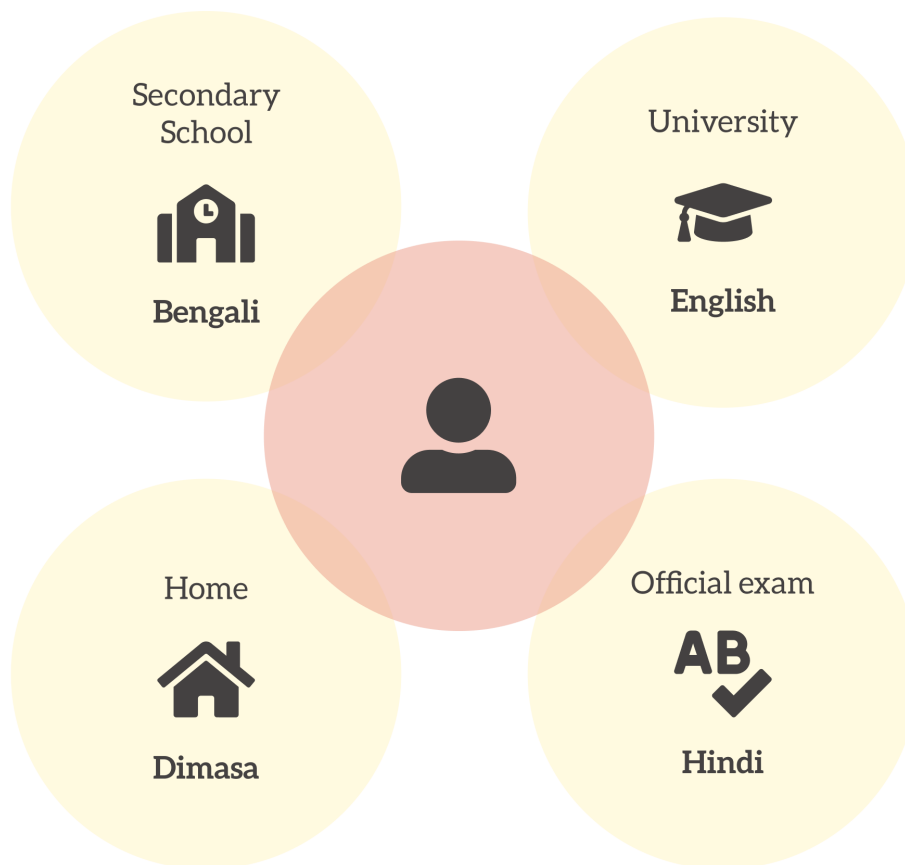
One important research question concerned the interface languages to be used (i.e. Bodo, Dimasa, English, etc.) In this round of research, this question was addressed only tangentially: There was only one excerpt in this data which specifically addressed this question. However, based on discussions in earlier visits, it seems likely that the main languages of interest will be Bodo, Dimasa, and English.

Note that it is possible to have information in different languages. For example, the individual artifact pages could be in one language, whereas the information about the community, on the

community home page, could be in another language. Core navigation (tabs, menus) might need to stay in one language, English, based on the capabilities of Mukurtu.

However, it might be interesting to ask if there are additional languages which might be beneficial to include when one considers the overall cultural context. For example, when evaluating our “Language Mixing” code, specifically the interview with the Headmistress of St. Xavier’s School in Maibang, we heard that people often use different languages in different situations. See Figure 4.6, below.

*Figure 4.6. One Person, Different Languages in Different Contexts*



Given that this geographic area is quite rich in languages, are there any additional languages (besides Bodo, Dimasa, and English), which might be advantageous to include for other reasons, such as “official languages,” or languages that might be particularly influential in the area?

### Access Permissions

One obvious potential feature which is content dependent is the permission to view specific material. We have discussed with our collaborators the option of making particular items only

visible to community members. They have told us that it is not necessary to create this kind of restricted access now, but it might be useful in the future. For instance, restrictions might be applied to sensitive materials like religious rituals. Or they could be used to protect information that might be used for commercial purposes by outsiders, like weaving patterns. This might be especially desirable for new content which has not yet been publicized on the internet at large.

<b>Permissions Overview</b>
A user account would be created. The user would apply to become an “authenticated user” of community 1, and a curator would approve the application. Once approved, the user could then log into the archive as an “authenticated user” of community 1.
The authenticated user could see digital items A, B, and C belonging to community 1, but other users could not see A, B, or C.
Permissions are related to user roles in Mukurtu itself.
Permissions would be assigned to specific people on an ongoing basis as they come on to the platform and take on different roles.

One thing to note is that permissions are different from Traditional Knowledge (TK) labels, which are discussed in the section below. The key difference is that permissions are intended to restrict access to a specific piece of content. Traditional Knowledge labels do not restrict access, but instead, label the content with the wishes of the community as to the way this content should be handled.

### **Traditional Knowledge (TK) Labels**

Traditional Knowledge (TK) labels are a project of the Local Contexts Initiative. The Mukurtu CMS supports using and customizing these labels. These labels are ways to “tag” content. They are meant to be customized and used by Indigenous communities who are curating digital content. They are a way for these content curators to let their audience know additional information about the content they are viewing.

For example, according to the LocalContexts.org website, curators should use the label TK Community Voice (TK CV):

... within a community-based archive to encourage the sharing of stories. This Label indicates that the current narrative or explanation that accompanies this material is incomplete or partial and that many community voices are needed to help make sense and understand the event, photograph, recording or heritage item. The Community Voice Label encourages multiplicity in the telling, listening and sharing of community histories and cultural knowledge (Local Contexts 2017).

Some TK Labels could be applied to specific content, but other TK labels might be applied to the entire site. According to the Mukurtu digital heritage FAQ, “Each digital heritage item can contain up to 4 TK Labels.” The title of the label and the description can be customized in any language, and can include audio or other media (Mukurtu 2020). The description can contain language which will tell the viewer more information about how the content is meant to be viewed. More information about the use of TK labels in Mukurtu can be found here:

[https://mukurtu.org/wp-content/uploads/2020/02/TK\\_Labels\\_FAQ\\_Mukurtu.pdf](https://mukurtu.org/wp-content/uploads/2020/02/TK_Labels_FAQ_Mukurtu.pdf).

For example, suppose that a story which is restricted to women only in an Indigenous community has already found its way on to the internet through other public forums. The community could put this already-published information on their website and apply the label “TK Women Restricted” which would let the archive users know that this material was meant to be restricted to women only, even though it has already found its way into the public eye at large.

<b>TK Labels</b>
Are seen by all users of the site, whether or not they are logged in
Any person viewing the site can see digital item D, which has TK labels applied that will contextualize the digital content for the viewer
Are related to the content which is being created and uploaded
The use of the tags would be discussed and agreed upon, and tags would be customized, at the beginning of the archive project. These tags would then be applied to content as items are uploaded.

Some content might have both access permissions and also a TK label. For example, several interviewees mentioned that rituals which are specific to the community should most likely be restricted to members of that community (Bodo / Dimasa). That content could be controlled at the permissions level so that only users who are logged in and affiliated with the specific community could view it. Then, on that page, while those specific users are viewing the content, there could also be TK tags applied which would tell those users the specific context that curators wish to communicate (for example, “TK Culturally Sensitive,” “TK Secret / Sacred,” and so on).

There are currently 15 TK labels. Full descriptions and graphics can be found here:

<https://localcontexts.org/tk-labels/>.

1. Attribution	9. Sensitive
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2. Community Use Only	10. Community Voice
3. Non-commercial	11. Commercial
4. Men’s Restricted	12. Men’s General
5. Family Use	13. Women’s Restricted
6. Seasonal	14. Secret/Sacred/Private
7. Verified	15. Women’s General
8. Outreach	

The “Non-commercial” TK label, which asks viewers to only use content for non-commercial purposes, is relevant to discussions we have held with community members about protecting their cultural knowledge from outsiders who want to use it for commercial purposes. It could be applied to weaving patterns, for instance. However, the label would not actually prevent outsiders from misuse of archive materials. It is not legally enforceable. It is more of a request for understanding.

Another label that responds to concerns we have discussed with community members is the TK “Attribution” label. This label allows outsiders to use archive content for their own purposes, but asks them to clearly state that the content belongs to e.g. the Bodo or the Dimasa whenever they use it.

Some TK labels might be applied to the archive as a whole, some might be applied at the community level, and some might be specific to particular items. A complete discussion of the various TK labels is beyond the scope of this report, but should probably be conducted with various stakeholders as the archive site moves forward. Each label would need to be discussed and customized to the community’s wishes before it was brought into Mukurtu and applied to specific pages and content.

## 5. How User Groups Engage with the Archive

By Florencia Forno, Kelsey Faherty, and Edwina Sunny

### Overview: Archive as a Resource for Different User Groups

Most of the people we talked to were interested in the application of the archive for many different user groups. We identified the two major ways people could use the archive:

- Accessing materials on the archive
- Creating and uploading materials to the archive

Each user is not limited to one type of use and can therefore move back and forth between these activities.

Based on the research in India, we also identified various user groups that can engage with and benefit from the archive, and we expect will make up a larger part of the kinds of user groups that will access the platform. Furthermore, we looked into how creating and uploading the materials, and eventually accessing the materials, would look for each user group.

From the research, we determined that users involved in education - including students of all ages - were one type of user group that our collaborators and interviewees extensively considered for the archive users. The interviews discuss how the material can be accessed for educational purposes, as well as how the archive can be used as part of classroom projects to create and upload material. The research gave us the opportunity to look into how the archive can be used to teach and preserve the Bodo and Dimasa cultures.

We also identified the younger generations as potential users outside of the school context. We are hoping that the youth will interact with the archive in more ways than one. Our research gave us insight into ways that the youth may access the platform; perhaps as agents of revitalization for the cultures. We were also able to identify opportunities for the younger generations to play the role of informal documenters by using their extensive knowledge of today's technology and social media.

Moreover, today's technology has made it possible for those who have left the local communities and dispersed to larger cities outside of Northeast India to draw on resources in the archive. We classified this group as users in the diaspora. We are interested in understanding how the platform can be used and accessed by those who want to connect with their native culture, but live in a place where they cannot access knowledge about it locally. We considered the types of technologies available to both the local community as well as to those living outside Northeast India. We also looked into how they can access the platform's content through authentication measures.

The final potential user group we describe is those who are experts in traditional cultural practices. The development of the archive would greatly benefit from the content they are able



to develop and upload, as it can be seen and used by the aforementioned user groups. Through the archive, these experts will have the opportunity to make their knowledge timeless and accessible for generations to come.

We expect there will also be other user groups for the archive so these four groups should be regarded as examples, not as a complete list of groups.

## Educational Use

One of the best ways to preserve a culture is through teaching it, especially to younger generations. Through the 2020 research, we were able to identify various opportunities for the archive to be accessed and used as an educational platform in classrooms, as well as other spaces. There are several different user types that could access the archive as part of the education user group. Teachers, professors, students, and other educational faculty will have access to the archive within the educational user group, but we are curious as to how they will access it.

Within educational settings, the archive can be used for creating and uploading materials as part of an educational project. During the Community-Based Archiving Workshop at CIT-Kokrajhar, Bihung Brahma asked, *"How can students contribute to archiving?"* This question sparked a connection with a previous conversation Christina had with CIT-K's Professor Debarshi Brahma. During this interview, he recounted a time when he had previously collaborated with a government school, where his students coordinated animations with the school's curriculum. From the results of the animations, Debarshi stated that doing more animations for Bodo students could be a PhD project for him. This idea presents an excellent opportunity for Debarshi's students to work on a class project to create animations for the archive, especially if they are catered towards students of younger ages. A fun, child-friendly animation would be more attractive to younger students and makes learning about their cultures more accessible. Furthermore, people like Prafulla Basumatary could provide pedagogical expertise on the design of language learning materials for children. Through this example, we can see that students can both create for, and learn from the archive. Specifically, the university students are learning how to create animations (as part of content creation), and the animations are teaching younger students about their culture.

The potential for this kind of dual use was also seen for other topics within education. St. Xavier's school in Maibang participates in a weekly Dimasa Day, where students participate in various Dimasa cultural activities and they come dressed in their traditional clothing. According to Dhruvajit Langthasa, the school was *"also planning to implement some cultural activities in schools and things like that. Some basket-weaving and things like that."* Weekly cultural days in English-speaking schools are a wonderful event to preserve culture, and therefore provide a great opportunity for use of the archive. In the case of Dhruvajit's example, it would be beneficial to complement the basket-weaving activities with a "how-to" video that has been uploaded. The event can also be filmed, and eventually uploaded onto the platform to be

accessed by other users as an example of cultural events in schools. In Figure 5.1, children are watching soccer and participating in a cultural event that could be recorded and added onto the archive (picture from 2018 fieldwork with Lamkaang in Manipur).

*Figure 5.1. Lamkaang Children Watching Soccer, Manipur, 2018*



Weekend schools that teach Indigenous culture also present an opportunity for the platform to be used to further cultural education and preservation. These weekend schools teach children an array of cultural activities and topics. According to Anful Naiding, who leads a Dimasa weekend school:

*We teach children who are interested. They come every Saturday, Sundays, and then they would learn the technique of playing that flute...That plate dance, I think it has been uploaded in YouTube also. It is there. But the flute, since they are not so used to it, we didn't upload any video regarding that.*

While YouTube is a great platform to use for instructional videos, it has been hard for teachers to find videos that are relevant to their cultural lessons, such as music instruction. Coincidentally, Dwihung Brahma asked to be filmed playing a Bodo type of flute called the Sifung, as seen in Figure 5.2. If this video were uploaded onto the archive, students and teachers alike would have the ability to access it and hopefully learn from such videos, and more importantly, gain more exposure to the instruments, as Anful pointed out.

Figure 5.2. Dwihung Brahma Playing the Sifung



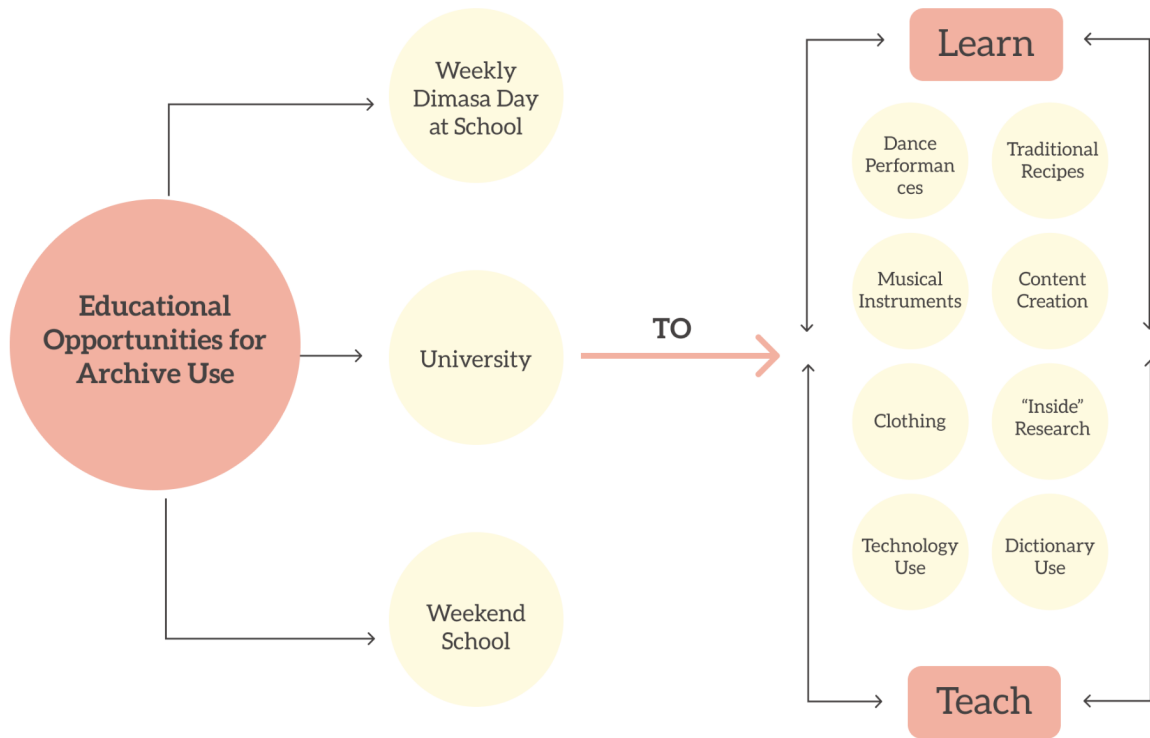
Finally, scholars and researchers fit into this loop of creating content and learning from it. Dr. Humi Thaosen is an example of how scholars could both learn from and contribute to the archive. She is an anthropology professor at Gauhati University. She studies Dimasa culture, but from an inside perspective because she is Dimasa herself. With this in mind, scholars and “inside” researchers like Dr. Thaosen could upload digitized versions of their research and publishings onto the archive. These uploads would allow other scholars and university students to access the research and further inform their studies. However, discussions of how these scholarly materials will be accessed would need to occur, in order to comply with copyright as well as scholars’ concerns about sharing ongoing research prior to publication. Would users need specific access permissions? Who could access it and from where?

For a more visual depiction of how this learning/content creating flow occurs, Figure 5.3 exemplifies this correlation as well as other potential applications between learning and teaching.

From the research, it seems that most universities are equipped with the computational technology to visit the platform. However, during the research team’s time at one university, there were a few instances of technological issues that impeded the access of other archives that used the Mukurtu platform. The issues seemed to relate to security restrictions. The IT departments of these universities might need to be trained on solving access problems if they did occur. We believe that further research on access in primary and secondary-level

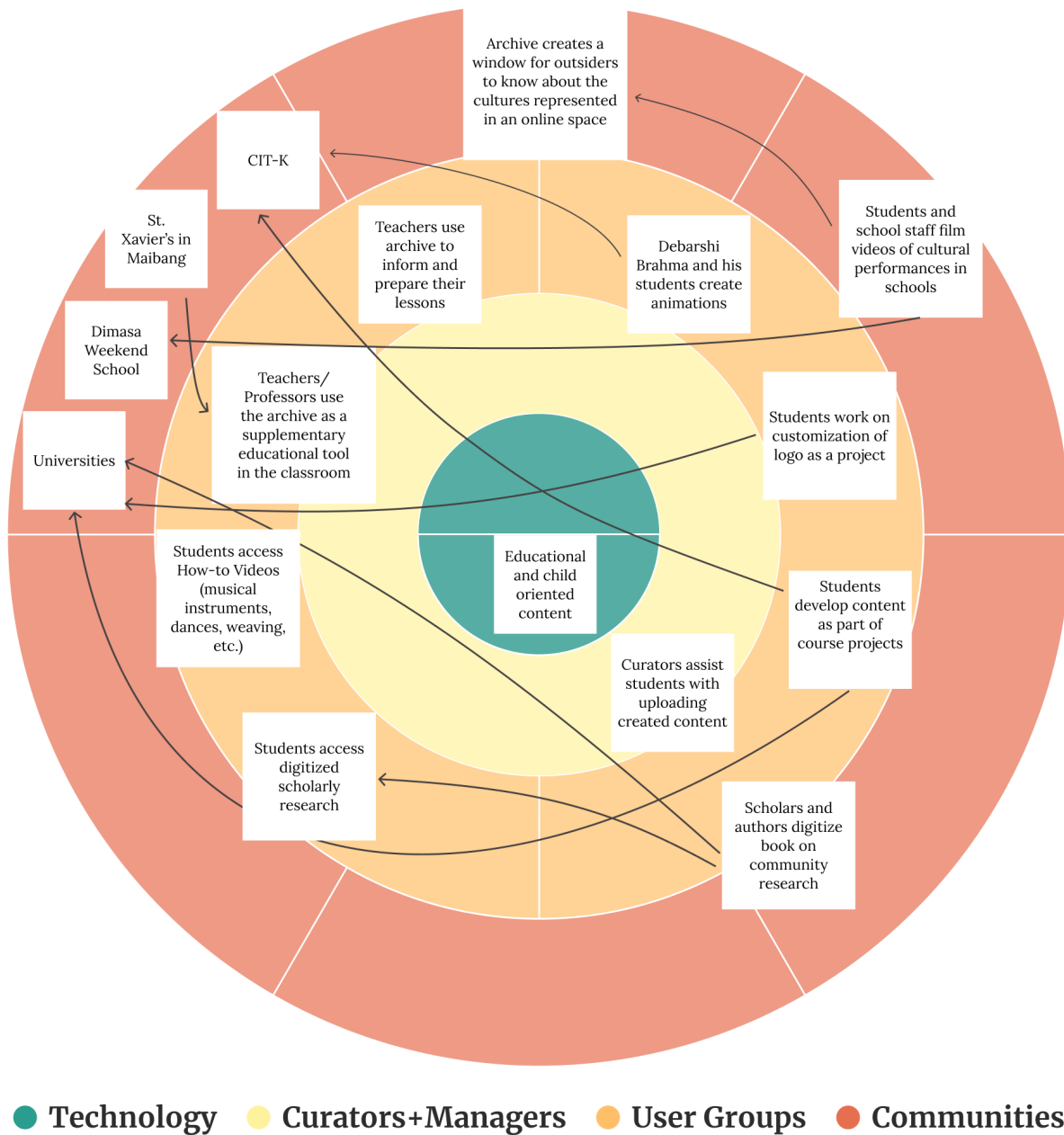
classrooms needs to be done in order to understand how accessible the archive is in these spaces, and what potential problems may arise in order to find solutions to them ahead of time.

Figure 5.3. Opportunities for Archive as a Learning and Teaching Tool



The educational use scenarios are mapped onto our model in Figure 5.4. It demonstrates the kind of educational content that the different types of users may access and upload. Some of the scenarios are connected to others in order to show the overlaps that can occur. For example, scholars who digitize their research will make it available for students to access that research, and the users will most likely come from universities.

Figure 5.4. Archive Interaction Scenarios for Education



### Archive Use by Youth

In the Bodo and Dimasa communities, there has been a major concern about the youth losing their culture. Due to this concern, youth in these communities could become one of the main user groups of the archive. Older members are concerned about younger members losing their language and culture/history. This caused a big focus on youth staying connected to their culture. This concern will reflect why the youth might want to access the archive.

The primary motivation of youth for accessing the archive will be so that they can learn more about their culture. The main content that the youth will be accessing is traditional cultural practices such as cooking, dance, music, or weaving patterns. This can include videos of performances or how-to videos. The how-to videos will allow people to teach themselves about whichever subject they choose. This may include certain dishes they want to learn or to cook or the lyrics to a specific song. For example, Bihung Brahma's 4 1/2 year old daughter taught herself dances from YouTube videos (although in this case, the dances were not necessarily Bodo). Having this content available would allow younger members to educate themselves, thus allowing them to be able to revitalize their culture.

While the primary use of the archive by younger members could be accessing cultural knowledge, there is also potential for them to be creators/uploaders as well. It is a common occurrence to see younger members of the community taking videos on their phones when a cultural event is taking place. While certain events may not be officially recorded, there usually are people in the crowd taking videos on their phones. People are already uploading these videos to social media (Instagram, Facebook, YouTube) to share them. Now that many people in the community have phones with 4G, both access to and uploading to the archive are easier. These informal documenters are recording events that otherwise wouldn't have been documented. This can be a valuable asset to the archive.

*That plate dance, I think it has been uploaded in YouTube also. It is there. But the flute, since they are not used so used to it, we didn't upload any video regarding that. (Anful Naiding, Dimasa)*

*There is one trend going on around the communities here, since after the 4G mobile effort has been launched. People have been uploading so many videos online, on YouTube. (Bihung Brahma, Bodo)*

Figure 5.5 shows students from the NEILS conference video recording a traditional Bodo dance at a dinner celebration. It vividly illustrates the propensity of younger people to record cultural performances.

While some informal documenters will take videos of what they see, some may create their own content. Dhruvajit Langthasa mentioned a woman who uploads recipes and pictures of food that she makes to Facebook, as well as having her own vlog. Followers from her vlog may also be interested in the archive as well, if advertised there. There is already a lot of knowledge and content on social media currently, from both informal documenters and creators.

Figure 5.6 illustrates the use scenarios for the youth user group on our concentric circular model. The ways that the youth are trying to stay connected to their culture as well as their knowledge of technology will affect what content they access and upload to the archive.

Figure 5.5 People Recording Dancers at the North East Indian Linguistics Society Conference



To enable the youth user group to fully benefit from the archive, we suggest some ideas for the design of the archive, and for steps the community could take.

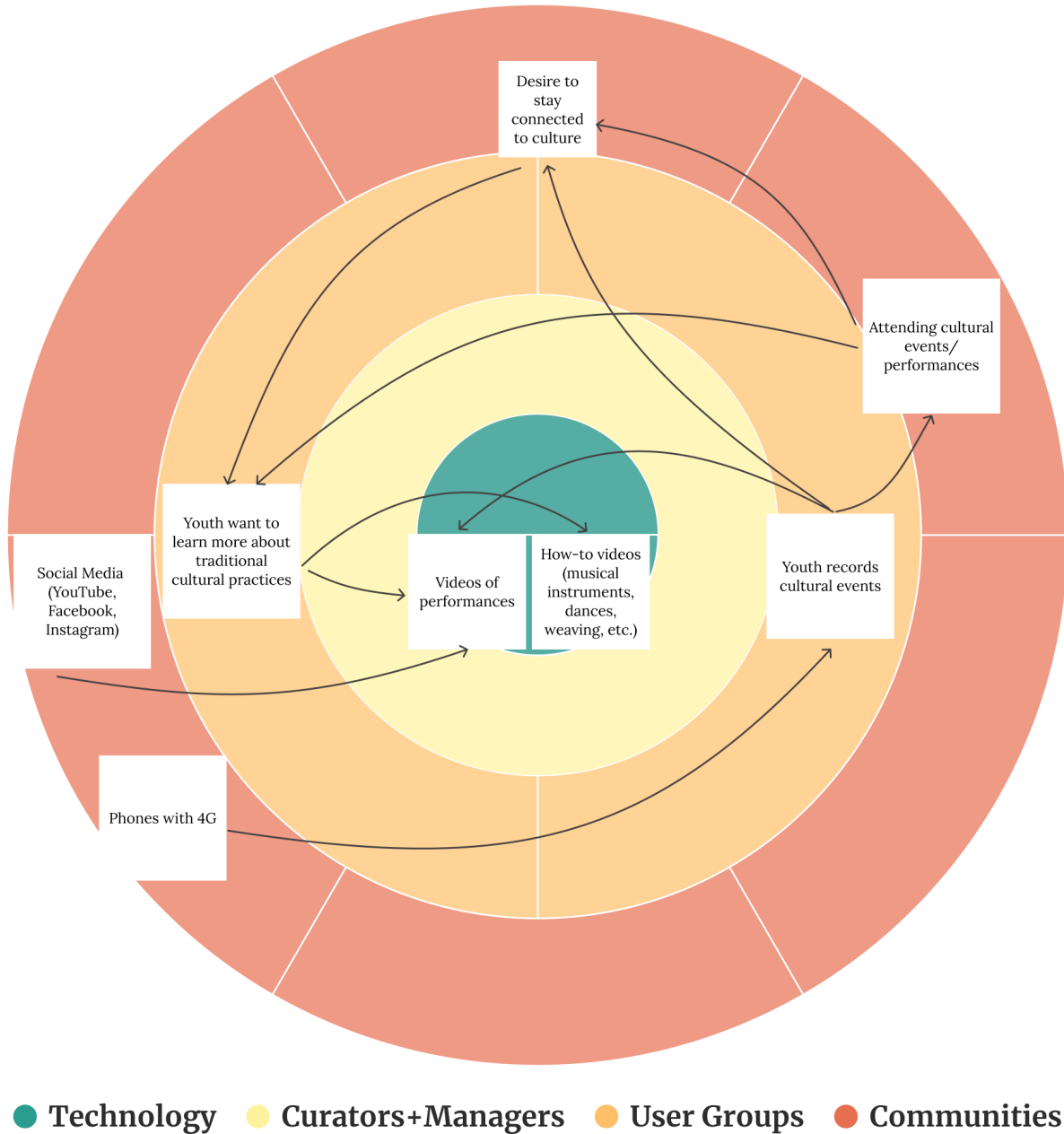
For the design of the archive, we suggest that it would be useful to link the archive to social media, since youth tend to be very active on social media. Specific design implications include:

- The ability to share content from the archive to various social media sites.
- The archive could allow uploads from social media sites if from authenticated users or links to the content on social media.
  - This function should be available on the desktop and mobile versions of the archive.

The community plays a big role in the encouragement of youth staying connected to their culture. Suggestions for steps the community could take are:

- The continuation of cultural events in the community. These events increase desire for younger members to stay connected to their cultures. It might be helpful to increase annual events to showcase other traditional practices.
  - Ensure that events are held outside of schools so that younger members of the community who are no longer students may be able to learn/participate.
  - Engage in publicity to let informal documenters know they can upload their materials to the archive, and encourage them to upload or link their videos and photographs.

Figure 5.6. Archive Interaction Scenarios for Youth



### Community Members in Diaspora

The archive could be especially useful for this group of people. "Diaspora" refers to people who move away from their homeland but who maintain the cultural identity of the community they came from. We learned that in Northeast India, many members of Indigenous communities move away from their homeland for higher education and in search of jobs, and end up in metropolitan cities like Guwahati, Mumbai, and New Delhi. While they may encounter members from their community there, it is often not the same as life back home. In



order to succeed at university classes or in jobs, one has to assimilate into the dominant culture of the metropolis. This could mean a variety of things, from changes in lifestyle to the language one speaks on a daily basis. Needless to say, there is a certain level of disconnect that the urban crowd experiences from their native culture. Language and food might be the immediate and major disparities that they encounter, followed by differences in social norms, dressing sense, entertainment etc.

On the other hand, there might be some comfort to be gained from participating in the local diasporic community in the form of cultural associations and social clubs. While these are significant efforts, it is often not enough. The danger of losing certain aspects of one's culture still lingers. The diaspora includes many younger members who may lack adequate knowledge or even the resources (by virtue of living in a different location) to properly replicate and carry forward their traditions. Another issue that may come up is the passing down of cultural knowledge to the next generation. Often these diasporic members might choose to settle down and start a family where they are. In these cases, how does one ensure that the next generation doesn't lose their culture?

Diaspora doesn't just exist in metropolises. Take the example of two towns, Haflong and Maibang, located in the Dima Hasao district, whose demographics include tribal groups like the Dimasa, Kuki, Zeme, Hmar, and Karbis as well as non-tribal groups like Bengali, Nepali, and Assamese communities (Government of Assam 2020). Haflong is a mixed community while Maibang is a town with a majority population of Dimasa people. In Haflong, there is concern about the loss of language among the Dimasa people as encapsulated in this statement.

*Language is facing this problem that they're not speaking much in Dimasa. Because sometimes it so happens that the language enters-- obviously, in the school domain, they are required to speak in English. But sometimes it so happens that in Haflong, for example, the Hindi or the Hindi language, it also enters the home domain. The students talk to their parents in Hindi. (Dhrubajit Langthasa, Dimasa)*

Dr. Humi Thaosen, anthropology professor at Gauhati University who specializes in the Dimasa community (that she belongs to), has expressed a similar concern about loss of culture for those in diaspora.

*It's there. It's increasing more so for people located in those areas. I think, more or less, people in the Dima Hasao area, they have been able to preserve, to an extent. So of course, the constant efforts are there every way. But I think more for those who have realized that, "Okay, we have already lost quite a few traits" ...more efforts are there than in Guwahati as well.*

Users from the diaspora show great interest in the preservation of their cultural identity and therefore, the archive is a perfect tool for them. This user group may primarily be accessing the archive rather than uploading materials, although creating and uploading materials to the

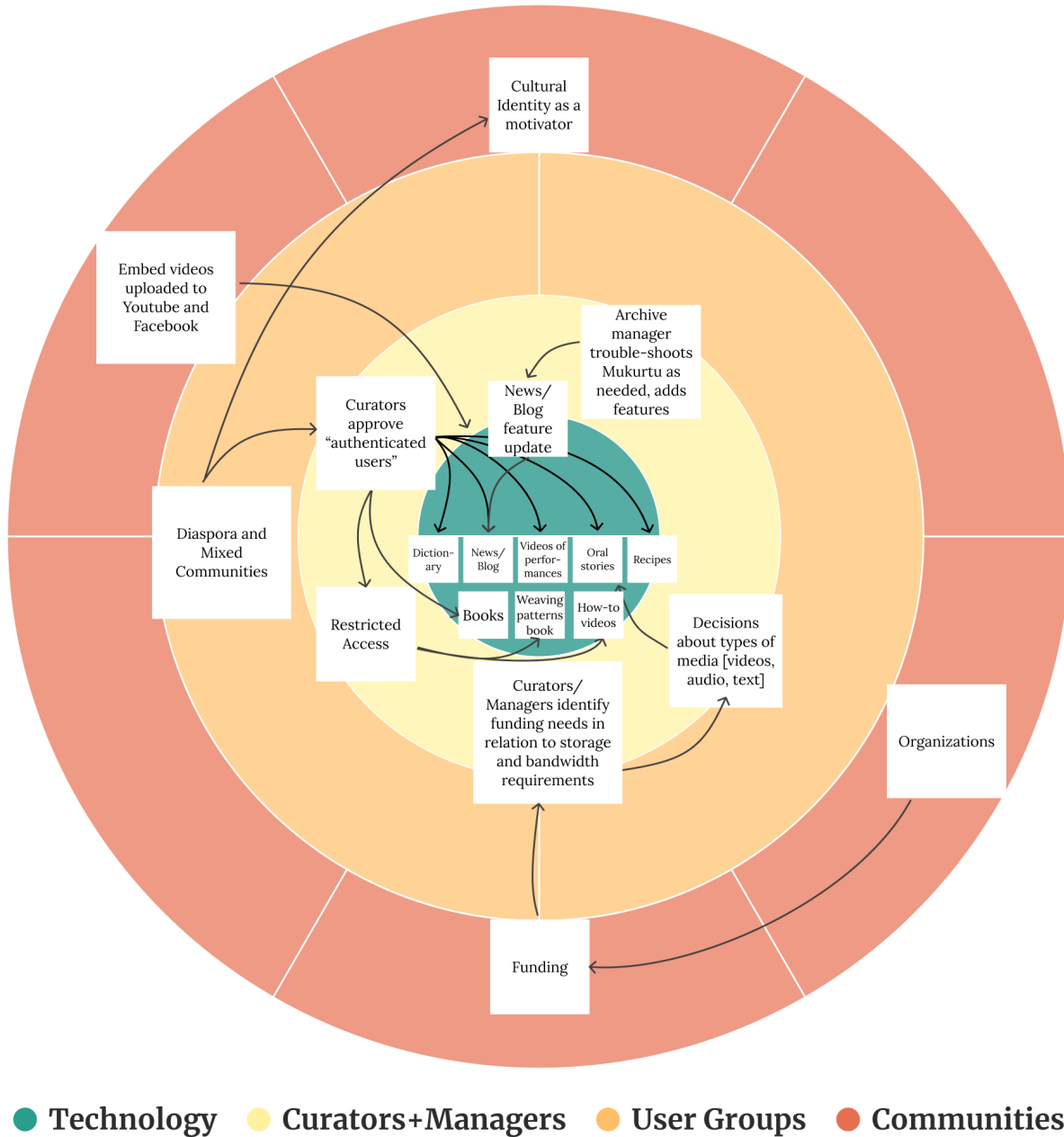
archive are not to be ruled out. Considering the fact that food and language might be what they miss the most in cities, it may be inferred that recipes and linguistic content like the dictionary or books might be most popular among this group of archive users. For children of urban dwellers, the linguistic content might be most useful. Animations (mentioned in previous sections), oral stories, and basic grammar books could also be added to this list. A news or blog feature might help this user group feel connected to the happenings back home. Of course, music and dance cannot be excluded from these lists because these are just as integral to staying connected to the culture.

Except for the books and news, all the other forms of content are well suited for the visual medium like instructional videos on traditional dishes, oral stories, or musical performances. But there are considerations of storage space and bandwidth when it comes to uploading and streaming videos. In that case, what other forms of media can be used to replace videos and convey the same amount of information? For example, recipes can be written out and accompanied by photos. Oral stories may translate well into audio recordings unless gestures are an integral part of them. What about music? Is audio instruction a better option? Will it be enough?

Thinking about diaspora in bigger metropolises like Mumbai, one would assume that they tend to have access to better internet and technology, not just in their homes but also at their jobs and in their classes. Therefore, even if the content of the archive is limited by the bandwidth and storage requirements of its place of origin, they shouldn't have issues accessing it. But what about the inverse scenario, i.e. if they wish to upload content (which they would be able to do as authenticated users), how can technological compatibility be ensured?

The use case scenarios and their resulting design implications for this user group have been mapped onto our concentric circle model in Figure 5.7. The graphic aims to summarize the various social, technical, and emotional interactions of the community members in diaspora with relation to the archive. It takes you through their journey from motivations all the way through to the assortment of content that might be most relevant to this user group.

Figure 5.7. Archive Interaction Scenarios for Community Members in Diaspora



### Experts in Traditional Cultural Practices

The final user group we describe is community experts in traditional cultural practices such as weaving and music. While the common assumption is that these experts mostly belong to the older generation (this belief is not unfounded), the younger members of the community are not far behind. For example, in the Bodo community, musicians Dwihung Brahma and Zangila Basumatary have taken up the mantle and are enthusiastic about the prospect of performing

musical content and uploading it to the archive, because it is an integral part of Bodo culture (see Figure 5.8). These songs encapsulate within them the Bodo lifestyle.

*Figure 5.8. Musical Performance by Dwihung Brahma and Zangila Basumatary*



Dimasa community member Avantika Haflongbar's project, Roohi Clothing, is another great example of the younger generation carrying the torch forward (Dey 2017). Even with these admirable efforts, there is a genuine concern surrounding the loss of the traditions of these communities. For example, it is known that weaving patterns cannot be perfectly replicated by machines because machines can only produce simplified and magnified versions of otherwise intricate designs. In short, experts cannot be replaced. Dr. Thaosen articulated this concern about the loss of weaving tradition that the Dimasa community faces due to its time-consuming nature.

*But then if you want to work on the loom, it becomes so that you have to stay at home, you have to give total dedication to that... It takes time. Yeah, now, of course, that machine-made clothes have crept in again, weaving our same designs. They magnify it. It's not that intricate.*

While there are worries about the future of weaving, music is of great interest. Many younger members are self-taught in traditional tunes and instruments and share a sense of pride about it. There have been attempts to upload videos of performances on Facebook and Youtube, but an archive would serve as a great one-stop source.

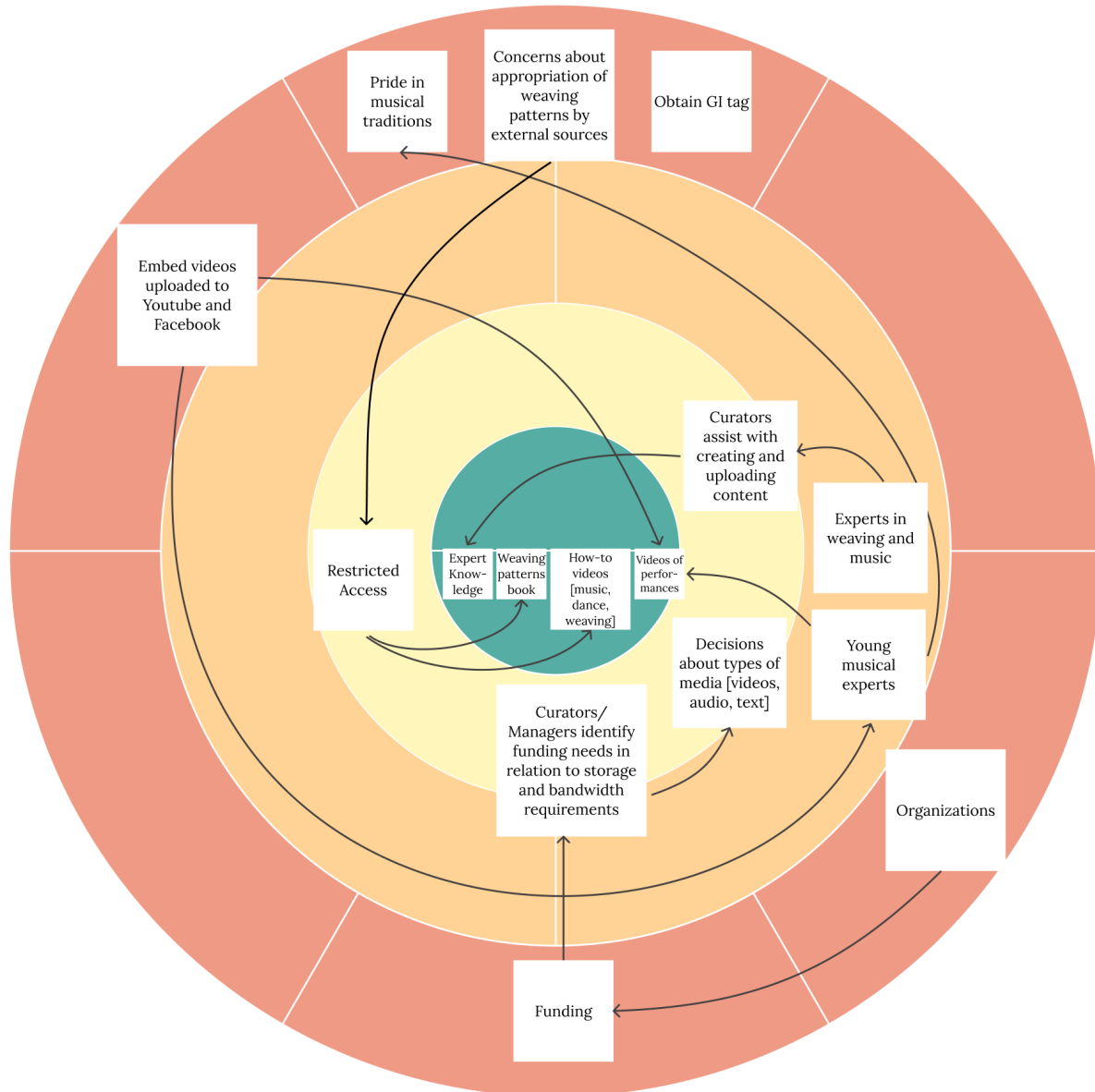
*What we are seeing nowadays is that people are very much concerned about certain folk tales and folk songs being missed out... So some, they are putting on Facebook; some, they do it on YouTube, but maybe no one sees it. And if you do it on Facebook when the timeline goes out, it cannot be seen anymore. So Mukurtu provides us a platform, and we can see everything. We can talk about songs; we can talk about dance; we can talk about, I mean, how weaving is done, okay, and someone can provide stories in Dimasa. So, it will be a common platform, and every Dimasa can come together. We need a website. (Dhrubajit Langthasa, Dimasa)*

Figure 5.9. Book of Dimasa Weaving Patterns by Maiphal Kemprai



Ideally, in the case of weaving and music, instructional videos might be the optimal tool for propagation of this knowledge but as stated previously, storage and internet speeds must be taken into consideration. In this case, decisions about which types of content would benefit the most from being archived in the visual medium need to be taken. Would weaving and music fall under this category? In addition, experts that belong to an older generation who might be unfamiliar with the process of creating and uploading videos would need assistance. Should younger members take up this job?

Figure 5.10. Archive Interaction Scenarios for Experts in Traditional Cultural Practices



● Technology ● Curators+Managers ● User Groups ● Communities

In addition to videos, books about weaving like the one by weaving expert Maiphai Kemprai of the Dimasa community could be uploaded (see Figure 5.9). But a new concern crops up here: the need to protect the ownership of traditional designs that belong to each community. Without a Geographical Indication (GI) tag assigned to the designs, there is a risk of appropriation from outside sources. Can the restricted access customizations offered by the Mukurtu platform be employed to solve this issue? In other words, should access to designs or instructional videos be limited to members of the community? This might even prove useful in the case of sacred and sensitive content like ceremonial practices i.e. if the members later

decide they want to add that to the archive. Despite the worries that surround the uploading of traditional expert knowledge on a public archive, one thing is indisputable: this knowledge needs to be preserved and the Mukurtu platform is designed to serve that exact function.

As in the previous archive interaction scenario graphics, Figure 5.10 aims to encapsulate the concerns and interactions surrounding the archive of the experts in traditional cultural practices. It represents the user group's motivations, worries about the misuse of traditional knowledge, the assistance that can be provided in the processes of creating and uploading content, decisions to be made about customizations and the types of content as well as the design implications generated by the aforementioned aspects.

## 6. The Archive in Relationship with Communities

By Molly Walsh-Warder, Eden Ewing, Jessica N. Keller, and Sally Darling

In this chapter, we describe the archive in relationship with communities. We analyze community pride and its relationship with feelings of cultural loss, concerns for the future, existing efforts at revitalization, and the desire to participate in the archive. In addition, we look at organizations and how they relate to resources that may be available for the development and growth of the archive. Many Dimasa and Bodo community members are members of government, community, or academic organizations that may be able to provide resources for the archive. The Bodo and Dimasa express a lot of pride over their traditional cultural practices, which leads to a desire not just to participate, but also to provide support from the organizations that they are a part of.

### Community Pride

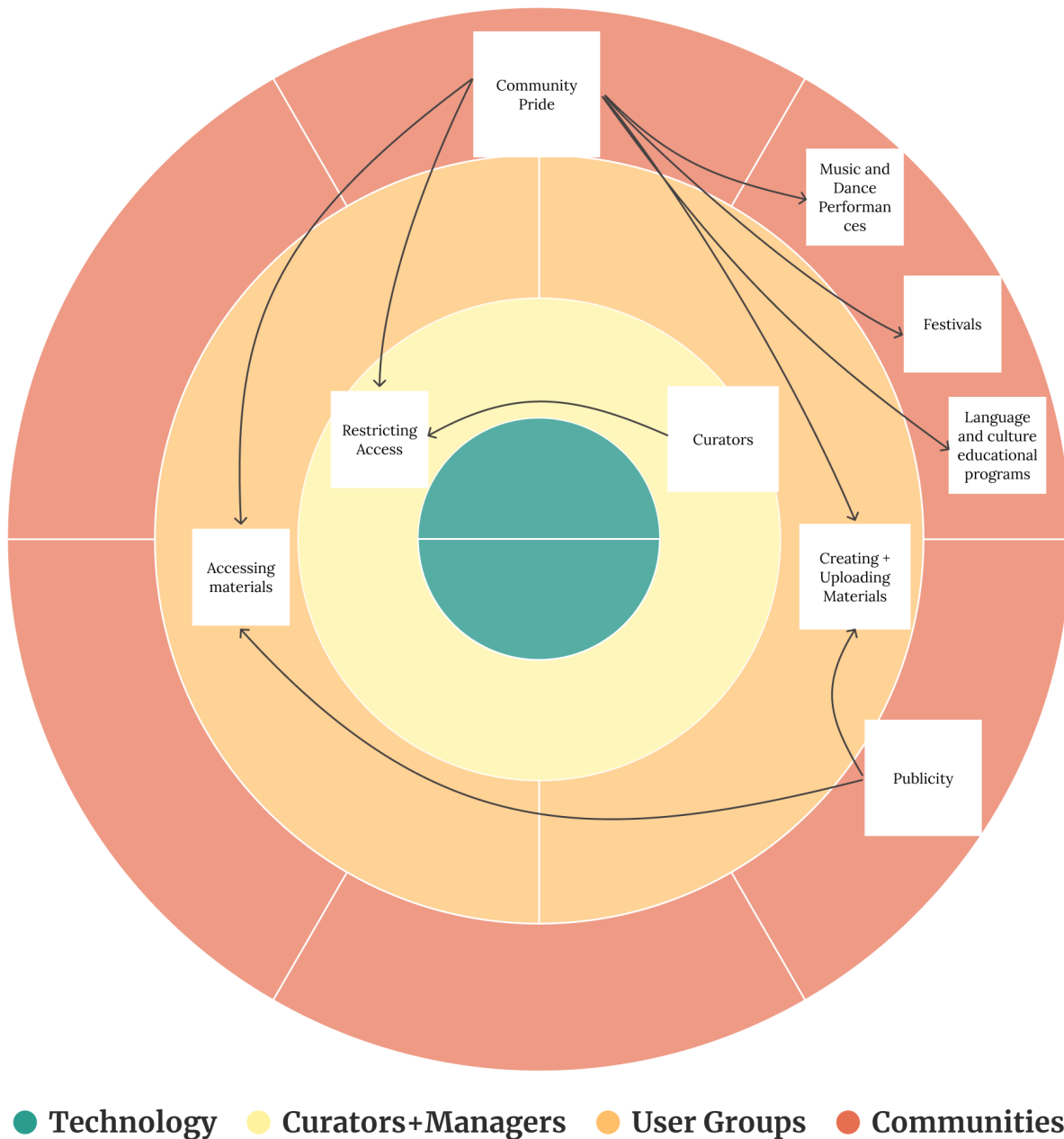
One of the main themes that emerged through this research was the importance of community pride in fostering preservation efforts. Participants expressed a lot of grief over lost traditions and other aspects of their culture, as well as deep feelings of pride about their community and remaining traditions. These conversations often focused on dance and music or were more general emotional statements about cultural loss. Dance and music, in particular, seemed to be a major source of pride. Several participants expressed a desire to perform and have recorded performances uploaded to the archive. These feelings of pride were a major motivator for wanting to participate in revitalization activities, both current and planned.

Figure 6.1 shows how community pride can motivate community members to interact with the archive. Pride in traditional culture inspires older members of the community to encourage youth to participate in cultural activities. This, in turn, inspires youth to learn more about their culture, who then decide to participate in festivals and to learn the traditional music and dance of their community. Participation then increases community pride and community members are further inspired to upload or create content for the archive, such as videos of music, dance, and oral stories. Curators maintain and organize the content, which may include restricting access to sensitive material.

The theme of cultural pride and its connection to the desire to revitalize traditional cultural practices was evident throughout the field notes that we looked at. Musicians and dancers expressed interest in being recorded and having those recordings uploaded to the archive. One participant wanted to upload recipes because she thought Dimasa food was delicious and expressed pride over her community's traditional food. Some participants expressed high interest in uploading materials to the archive as soon as possible. Thus, it seems that cultivating and encouraging pride in Dimasa and Bodo traditional cultural practices are key to ensuring successful preservation efforts.



Figure 6.1. Archive Interaction Scenarios for Community Pride



### Concerns about Loss

There was a lot of discussion of cultural loss in our interviews. This loss was often attributed to both modernization and to knowledge disappearing with older generations. Community members used emotional language when speaking about changes in their way of life. As Agnes Gorlosa put it, *"In this small, small town we are losing our own self-identity day by day."* Slowly, but surely, modernization in technology and architecture is changing how the Dimasa community lives and certain traditional cultural practices are being lost. Agnes said, *"We have*

*different, different kind of kitchen, living room, and way of-- everything is different... It's very disheartening.*" The areas that both the Bodo and Dimasa communities seemed most concerned about losing were weaving, music, and dance. A recurring theme was a deep fear about elders passing away without transferring their knowledge and skills onto the next generation. As Agnes said, *"Most of the old dance practices, it's already gone."* Weavers are also becoming less common and songs have been forgotten. Others also fear that the communities will lose knowledge of different traditional instruments.

Many Dimasa community members mentioned concerns about modernization and urbanization. Agnes Gorlosa, a member of the Mizo community who married into the Dimasa years ago said, *"Every community wants to grow, every community wants to be developed. But at the same time, we are losing our own--culture and identity, day by day."* This same sentiment was expressed by Bodo people as well on our 2018 research trip. Several Dimasa participants pointed to changes in clothing as a symptom of modernization and cultural loss. They spoke about young people's preference for modern clothing, like jeans and t-shirts, over more traditional styles. They also mentioned how much architecture has changed in the area, with gas being used rather than fire in kitchens.

One area that was surprisingly not mentioned often during the 2020 field notes was language loss. However, we did discuss concerns about language loss extensively during the 2018 research trip. Northeast India is an extremely multilingual area. Assamese, English, Bengali, and Hindi are all common, in some places more than others. For instance, according to the headmistress of an English-medium school in Maibang, her students speak English at school and Dimasa at home. She said, *"Even in the town and market and all that. Everywhere they--only in Dimasa."* She said even the Bengali shopkeepers know Dimasa. Ashok Kumer Langthasa, however, pointed out that *"Dimasa people have to speak Bengali"* when they go out and that many students have to speak English in college. Additionally, in nearby Haflong, the public language of the marketplace is "Haflong Hindi." It seems common for community members to speak several languages.

Some kinds of traditions seem to be more endangered than others. A form of cultural practice that seems to be surviving fairly well among the Bodo and Dimasa is religion. For the Bodo, the majority religion is Bathouism. Some practice Christianity or a variety of Hinduism. When we visited CIT-Kokrajar, we saw a Bathou altar and banner on the grounds that had been created a few days earlier for a January 28 celebration of Gwthar Bathou San (Figure 6.2). There was another banner and altar for Saraswati Puja, a January 29 celebration of the Hindu Goddess of Learning (Figure 6.2). We have seen Bathou altars at a number of traditional cultural events in 2018 and 2020. Dimasa religious practices – based on a form of Hinduism that incorporates animist elements – also still seem to remain active, according to the research of Humi Thaosen and others (Thaosen 2015; Medhi and Thaosen 2013). It was interesting to compare the Bodo and Dimasa to Indigenous groups we visited in Manipur in 2018 that had largely adopted Christianity.

Figure 6.2. Bathou Altar for Gwthar Bathou San + Hindu Altar for Saraswati Puja



Concerns about the loss of some traditional cultural practices have led to concerted efforts to perform, share, and learn these practices. Community members expressed a lot of pride in their traditional culture, which led to a desire to participate in the archive and upload materials that were meaningful to them. For example, categories such as music, dance, food, clothing, and traditional weaving were mentioned several times throughout the field notes. An area where both Bodo and Dimasa participants expressed a lot of pride was dance and music. Multiple community members asked to be recorded for the archive, showing a desire to share their talent and knowledge with others. These musicians had great knowledge of traditional songs, dances, and instruments, and seemed enthusiastic about preserving this part of their culture.

Community members also expressed sadness over the loss of traditional dance. Agnes Gorlosa, for example, said that *"Dimasas have more than 40 types of dances which we don't even know"* and expressed concern over losing more traditional dance and song as the older generation passes on. She stated that most of them were already gone and that *"the dance which we haven't seen anymore, only we hear the old people sing... and even that also will be gone in a few years. I mean, if you don't keep the report."* Dhrubajit Langthasa also mentioned that he had seen his mother dance using more traditional forms, but that these dances are not being performed now.

Dwihung Brahma and Zangila Basutamary, both young Bodo community members in their 20s, performed traditional Bodo folk songs for us during our visit to CIT-Kokrajhar so we could record them. They seemed to express a lot of pride as they performed, as shown in the recordings. At one point, Dwihung said *"now we will play the Bagarumba; as we know the Bagarumba is the most significant dance and song of Bodos."* The songs told stories about how the Bodo live and traditional folk tales. Both young men seemed passionate about what they were doing and had been learning traditional Bodo folk songs for several years. According to Christina's reflections, the event happened because Zangila really wanted to be recorded and it *"speaks to a revival of interest in traditional music."* Similar to the Dimasa, these desires to record and to preserve point to a pride in traditional Bodo song and dance. It is possible that more musicians and dancers from both communities will be enthusiastic about using the archive as a platform for their traditional artforms.

Although there is not much data on food in the 2020 field notes, this also seemed to be a source of pride. At the Mother's Association event, Dhruvajit Langthasa and Agnes Gorlosa mentioned a woman who is a cook who uploads recipes to Facebook and her vlog. Agnes said that this woman *"keeps on researching in this language we don't know,"* and that *"she has so much ideas"* and *"could do the cookery part"* for the archive. Dhruvajit pointed out that if her vlogs were posted on the archive, she could have more viewers and her traditional recipes could be shared with more people. Through her Facebook and her vlog, this woman was expressing pride over traditional Dimasa food and wanted to share it with the world. Agnes, herself, said that Dimasa food *"looks tasty and delicious"* and *"Who doesn't want to have Dimasa food? People will like to try if it's shown."* Although there is no information about it in the 2020 field notes, the Bodo may feel similarly about their traditional culinary practices. Traditional food is important to many communities around the world, as shown by immigrant communities continuing to eat their country's food long after they have settled in their new countries. Dimasa and Bodo living in diaspora could benefit from resources like this in a similar way.

### **Efforts to Preserve Dimasa and Bodo Culture**

According to Dr. Humi Thaosen, an anthropologist, there has also been a renewed interest in conducting research on Dimasa culture among Dimasa community members who are scholars. She said *"I am in realization that we staying in Northeast itself, we are not explored enough. So there's this new trend of studying our own communities. That is, I think that's very valuable."* This trend speaks to a high level of community pride among Dimasa students and academics, as well as a deeper concern about this knowledge being lost without further documentation.

Another way community pride has presented itself among both the Dimasa and Bodo communities is through social media. Collaborators mentioned a number of community members uploading videos of cultural events on Youtube, as well as sharing their weaving and recipes on platforms like Instagram and Facebook. By spending energy documenting and promoting cultural activities, these individuals show a high level of community pride. This pride may inspire community members to participate in the archive, especially if they are

experiencing issues with findability. In other words, they may be experiencing difficulty finding information on Bodo and Dimasa culture on the internet and social media sites.

Aside from using social media to document cultural practices and events, several Dimasa community members spoke to the importance of education in the preservation of both language and culture. According to Dr. Thaosen, some public schools have already started programs to teach Dimasa in primary school, and even Catholic English-medium schools have some initiatives that may serve to support their students' culture. For example, St. Xavier's in Maibang encourages students to wear traditional clothing every Thursday and has Dimasa dance events. Several community members also mentioned a weekend school in Haflong that focuses on Dimasa culture, dance, and music. However, these initiatives are limited and may not be accessible to all school children.

Another way the Dimasa and Bodo communities work to preserve and promote their culture is through large events. The Bodo literary society has an annual event that includes many different organizations and performances. There is also a cultural festival that happens less often but includes many different communities.

In addition to the initiatives that are already in effect, community members expressed a lot of enthusiasm for the archive. Agnes Gorlosa described her reaction to the idea of an archive.

*It's a kind of documentation for each and every community. I mean, the website, it's really important. And I find it very-- at the right time and at the right moment because we are not having these kind of platforms internationally. So it's a very good opportunity for not only the Dimasa, and for the tribes as well. So it would very interesting. And I think we'd like to learn more. And if there were more people should be connected for this purpose, community.*

Other participants similarly focused on its potential benefits to the community as a whole and had many wonderful ideas for how to participate.

### **Design Implications**

Like many other Indigenous communities around the world, the Bodo and Dimasa share data concerns about restricted access to certain materials in the Mukurtu archive. For example, during a conversation with Christina on the capabilities of Mukurtu to restrict access to sensitive materials, Agnes Gorlosa mentioned that restricted access would be a good feature because "there are some issues that might come out." Agnes, speaking for the Dimasa community, seemed to express a desire for Dimasa culture to be seen when she said "If we restrict it, how people come to know?," but both Dhrubajit Langthasa and Agnes seemed to agree that not all content should be public.

In addition, a group from the Dimasa Literary Society expressed interest in potentially restricting access to some materials for the Dimasa community only, especially regarding

certain religious practices, ceremonies, and rituals. Dhruvajit also mentioned that some students had asked questions about security and preventing people from uploading inappropriate material. All of this seems to imply a desire for the Dimasa community to protect what they are trying to build and to keep some material private. This is a topic we explored extensively on the 2018 research trip with all of the Indigenous communities we visited. Everyone agreed that some things should not be made public, but there was debate about whether the archive should have access restrictions on some materials, or whether sensitive materials should not be uploaded at all.

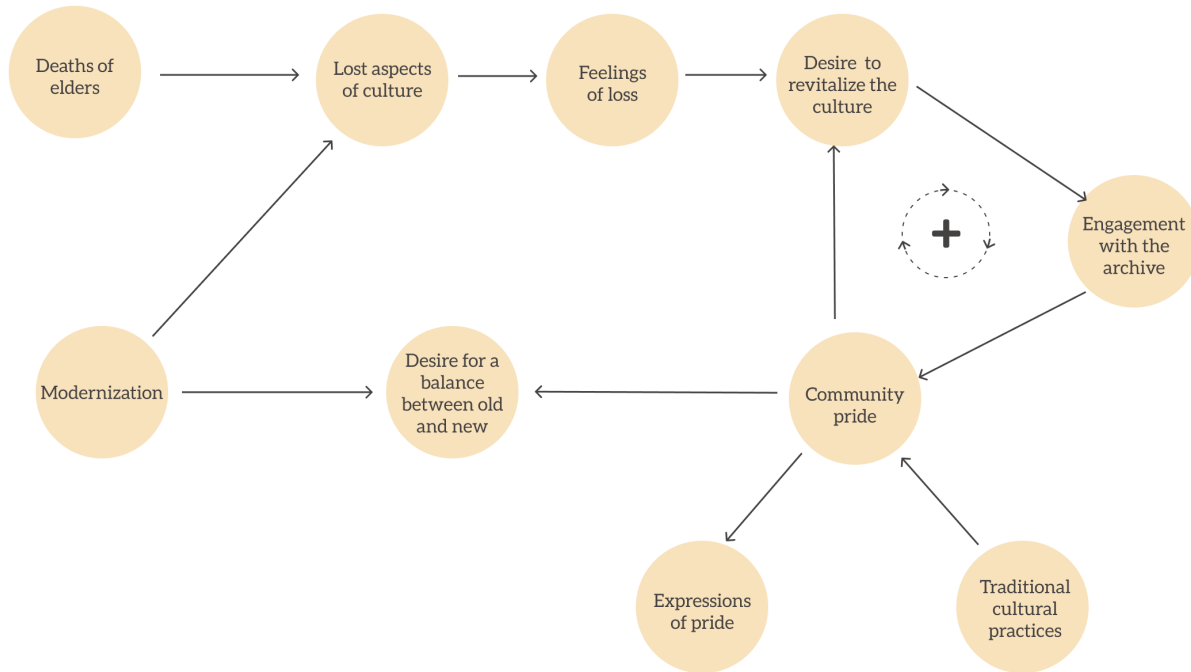
The desire to safeguard sensitive information in the platform is both a result of pride and concerns about how outsiders might view their communities. At times, community members may not want to upload certain information at all. However, in the event that they do want to upload sensitive information, the platform will need features that allow certain items to be limited to only community members. As mentioned in the field notes, curators are able to look at requests to become “authenticated users” for a particular community and determine whether the potential user is a Bodo or Dimasa community member. In addition, users can restrict the ability to download certain materials that they upload to the archive. These are essential features for community members worried about sensitive materials or traditional cultural designs, such as weaving patterns, that they want to protect from exploitation both inside and outside of India. However, restrictions must be balanced with having a large amount of publicly accessible material, since many community members see the archive as a way to show their culture to the world.

On both of our research trips to Northeast India, we found that members of Indigenous communities would like their communities to have more visibility on the world stage. They regarded a community-based archive as one way to help accomplish that. In this sense, pride in the Bodo and Dimasa communities’ traditional culture leads to a desire to share their culture with the world. Thus, community events that display Dimasa and Bodo traditional cultural practices such as dance and music performances, storytelling, and food could be used to bolster community pride and encourage participation in the archive. This acts as a feedback loop in which increased pride encourages more participation and more participation increases pride, as shown in the diagram below. With enough engagement, the archive can serve as a powerful platform for both expressions of community pride and as an essential tool in the preservation of Dimasa and Bodo culture.

Figure 6.3 shows that the relationship of community pride to engagement with the archive and the desire to share their culture with the world. The deaths of elders and modernization lead to lost aspects of traditional Bodo and Dimasa culture, such as dance and music, which creates feelings of sadness and loss. However, community pride turns those feelings of loss into a desire to revitalize their culture and to integrate Bodo and Dimasa cultural practices into a modernized world, to maintain their culture in the face of modernization. This creates a feedback loop in which community pride leads to a desire to revitalize the culture, then to engage with the archive, which leads back to increased feelings of community pride. This

explains why bolstering community pride could be effective at encouraging others to engage with the archive.

Figure 6.3. *The Relationship Between Loss, Pride, and Engagement with the Archive*



## Organizations

Organizations play a key role in the development and ongoing support of the archive. Within the Bodo and the Dimasa communities, there are a number of organizations that may offer financial and technological resources, publicize and promote the archive, and provide additional forms of support. Figure 6.4 illustrates the potential for interconnections among these elements, and how they fit in our model of archive interaction scenarios, as part of the outermost circle that represents ways the archive could be in relationship with communities.

Three primary categories of organizations identified by community collaborators as potential sources of support and resources for the archive are academic institutions, government organizations, and community organizations. Collaborative relationships within and between these organizations (see Figure 6.5) form a network for developing and supporting not only the archive but also the communities' cultural preservation efforts at the heart of the archive.

Many people in the Bodo and the Dimasa communities who participated in this research in 2020 are members of, or connected with, the organizations discussed in this chapter. These communities and organizations boast members with a wide variety of interests and expertise who will provide vital resources and support for the development and ongoing support of the

archive. Community members in these organizations include skilled computer science students, tech experts, animators, educators, musicians, artists and performers, anthropologists, linguists, and other academics, just to name a few.

Figure 6.4. Archive Interaction Scenarios for Organizations

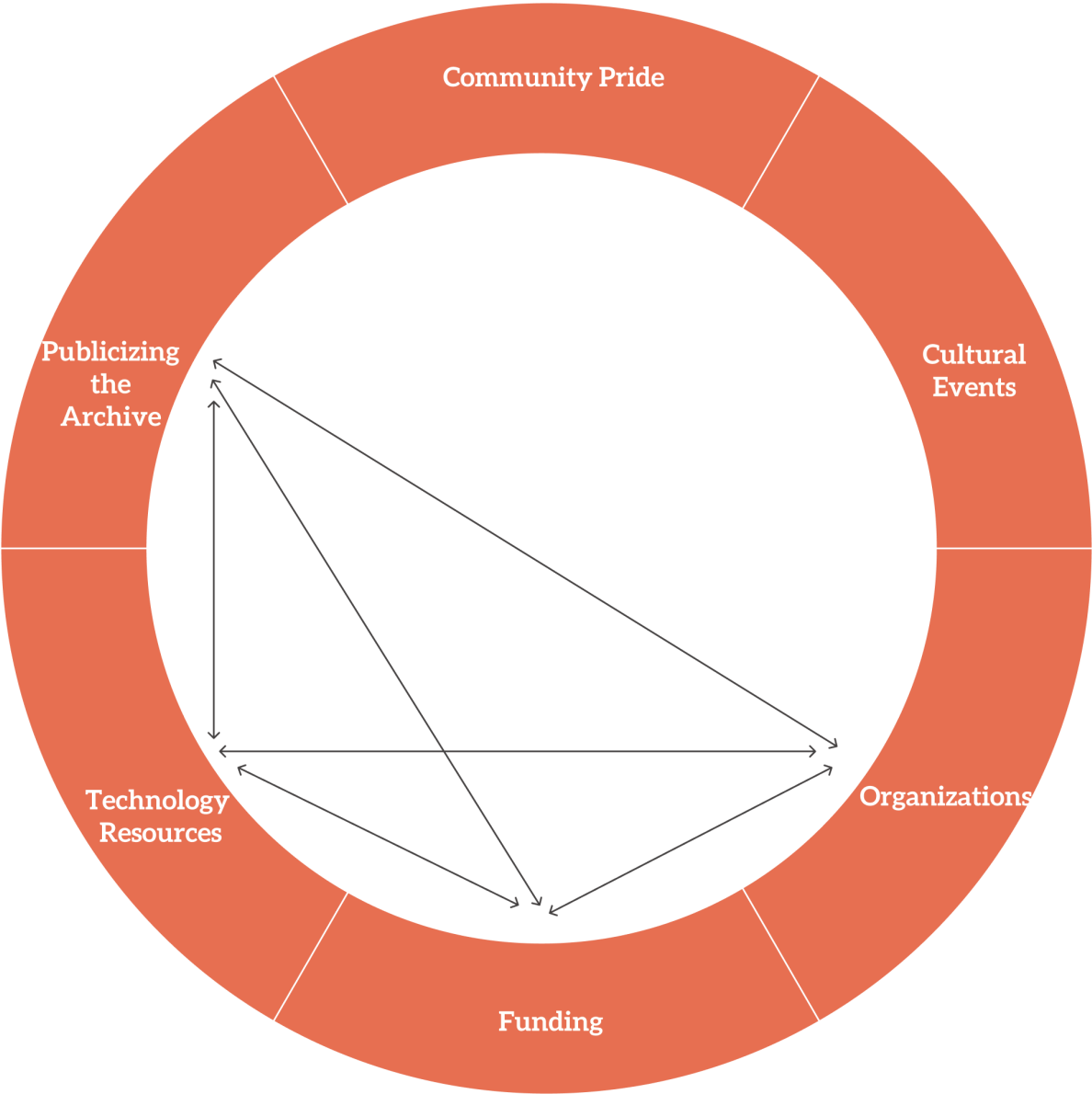
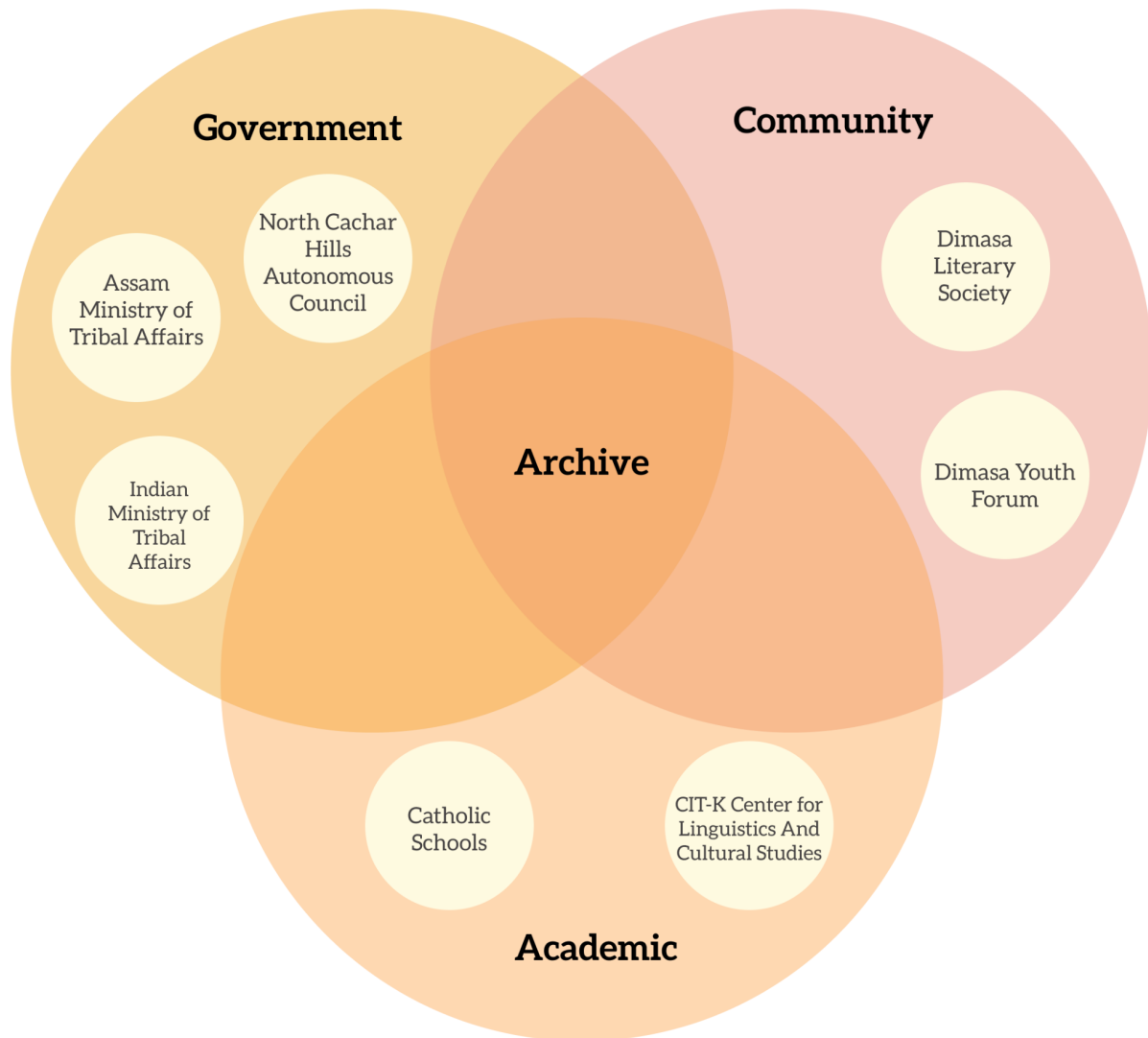




Figure 6.5. Organizations Identified During 2020 Research Trip



Eager to develop and cultivate the growth of the archive, many community members have participated in archiving workshops and demonstrations (see Figures 6.6 and 6.7), and have been enthusiastic in discussions surrounding the archive and its role in preservation, revitalization, and international recognition. Many community members view the archive as a tool to continue and expand upon their existing preservation and recognition efforts. Agnes Gorlosa explained that *“the website, it’s really important. And I find it very – at the right time and at the right moment because we are not having these kind of platforms internationally.”*

Figure 6.6. Community-Based Archiving Workshop at CIT-Kokrajhar



Figure 6.7. Community-Based Archiving Workshop in Maibang



### **Academic Institutions**

Established in 2019, the **Centre for Linguistics and Cultural Studies** at the Central Institute of Technology Kokrajhar (CIT-K) is committed to the preservation and revitalization of endangered languages in Northeast India (Central Institute of Technology Kokrajhar 2020). Bihung Brahma (member of the Bodo community, Assistant Professor in the H.S.S. Department,

and Coordinator of the Centre for Linguistics and Cultural Studies at CIT-K) has expressed strong interest in supporting the archive and plans to provide financial and technological resources. To that end, the Centre will house a dedicated room and computer for accessing the archive. In addition, a few students at CIT-K have expressed interest in offering their technological expertise and knowledge of the Drupal content management system - of which Mukurtu is a customization - to assist with archive setup and ongoing support.

**Catholic schools** in the region may also be a potential source of support and resources for the archive. As previously discussed in this report, some of these schools are already engaged in efforts to study and celebrate students' Indigenous heritage. During the 2020 research trip, we met with the Headmistress at a Catholic school in Maibang, but we did not request support for the archive nor meet with coordinators at any other schools. Still, as these schools may be able to provide educational, financial, and/or technological support for the archive, it may be beneficial to explore this potential relationship further.

### **Government Organizations**

Conversations with community members indicated that there are a few government organizations that could potentially provide sources of support for the archive. The **North Cachar Hills Autonomous Council** is one such organization. A meeting with Nandita Gorlosa, Executive Member of the North Cachar Hills Autonomous Council, revealed that the organization provides funding for the Dimasa Literary Society – discussed in more detail in the following section – and determines which projects are funded in the Society's budget each year. Even though the Society's current budget includes enough funding for the archive, receiving the Council's approval of the archive appears to be important.

Two additional potential sources of support for the archive are the **Ministry of Tribal Affairs for the Assam government** and the **Indian Ministry of Tribal Affairs**. Each year, these organizations provide as much as ten lakhs for cultural enrichment and linguistic projects in the community. As a result, collaborators may want to develop relationships with persons in these organizations to further explore the possibility of archive support.

### **Community Organizations**

As mentioned above, the **Dimasa Literary Society** (Dimasa Lairidim Mel) is funded by the North Cachar Hills Autonomous Council. The Society receives funds each year for language promotion and has expressed interest in potentially utilizing a portion of this funding to support the archive. In addition to financial support, members of the Society expressed excitement about contributing texts to the archive (see Figure 6.8), including their self-published dictionary, grammar book, and biannual publications. Kumud Kemprai, Headman of Dibarai and member of the Dimasa Literary Society, explained that, *"whatever books, literary books we have with us, we'll give it to the curators [of the archive], so they can upload. It'll be easier for us, since we are dealing with literary subjects only. So we will be able to give whatever materials we have."* Additionally, many members of the Society are avid social media

users and were enthusiastic about promoting and advertising the archive. Referencing recent conversations within the Society, Dhrubajit Langthasa confirmed this interest: “We were just talking about how we can make [the archive] more famous, advertise it. Like, most of us use Facebook, so we can publicize it through the form of Facebook. And then, we have also the local newspapers.”

Figure 6.8. Conversing with the Dimasa Literary Society



Another potential source of support for the archive is the **Dimasa Youth Forum**. Collaborators may want to continue developing a relationship with Nandita Gorlosa of the North Cachar Hills Autonomous Council, as she is affiliated with the Dimasa Youth Forum and is already aware of the archive, as noted above. Each year, the Forum organizes and hosts the annual Dimasa Youth Festival, which is aimed at showcasing, preserving, and revitalizing the culture of the Dimasa society. In addition, a primary focus of the Forum is “to create cultural awareness among the young generation of the Dimasa community” (Dimasa Youth Forum 2015). Based on this focus, the archive could be an invaluable tool for the Forum to utilize in achieving some of the goals outlined in the Forum’s mission, such as “integrat[ing] the Dimasa people from different corners of North East India,” “showcas[ing] the rich culture and tradition of the Dimasa tribe,” and “providing a platform for all sections of the Dimasa society to showcase their talents” (Dimasa Youth Forum 2015).

### **Design Implications**

As the archive is a community-based endeavor, the process of development and continued support for the archive requires collaboration. Collaborative relationships within and between organizations in the Bodo and the Dimasa communities are essential to achieving the communities' desires, needs, and goals for the archive. To that end, we want to present the following design implications:

- Many relationships already exist among organizations that are committed to cultural preservation. The archive will benefit from continued communication among these organizations.
- The discussions about resources that took place during the 2020 research trip were exploratory. The next steps might include following up with these organizations and continuing the discussions to a point of finalizing agreements.
- Having a concrete plan for resources and support for the archive will enable identification of areas still in need of financial and/or technological support. Once these gaps in resources have been identified, collaborators may wish to determine the next steps for obtaining these needed resources.
- Infrastructural factors that may impact the archive and require interorganizational efforts should be considered. As an example, during the 2020 research trip, access to the archive website was blocked multiple times due to security protocols in certain locations. As development of the archive proceeds, addressing these types of concerns may require collaboration among institutions, community members, and local governments.

The Bodo and the Dimasa communities have long been engaged in collaborative efforts to preserve their cultures and traditions. This implies a strong sense of community pride as community members work together with organizations. The archive is intended to serve as a tool for the communities and organizations to utilize in these ongoing efforts. A collaborative network of relationships will make it possible for these communities and organizations to determine the resources necessary for the development and long-term support of the archive.

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