

## 1. INTRODUCTION

### a. SUMMARY

My Honors Research Manuscript focuses on bridging the digital divide for access to information and empowering education in Nucchu, Bolivia through the distribution of the Rachel(Remote Area Community Hotspot for Education and Learning) and other technologies to the U.E. German Busch School. The Rachel device already has pre-downloaded educational information, ranging from Wikipedia, Project Gutenberg, Khan Academy and many more, providing the school with an instant library once the Rachel arrives. In addition to providing the Rachel and additional technical devices, I will set up communication between the teachers at the school and the World Librarian's team at UMass. After delivering the Rachel and training the teachers on how to use it and request information, they will become the 7th school we are currently supporting. I am traveling to Nucchu on January 2nd and staying until the 15th to bring the Rachel, other technologies, and any other school supplies that I can get donated.

The U.E. German Busch School currently lacks the resources and funds to access educational resources. The school has one computer designated to each teacher, but no other technology for students to use. The Rachel, which we have on ground at six other schools in Kenya and Malawi, Africa, has shown a real impact to the students and teachers that use it. Working with multiple partners and through a socio-technical workflow, the World Librarian Team provides open educational resources in addition to the already provided resources on the Rachel.

The U.E. German Busch School is located in the small village of Nucchu. Nucchu is most known for hacienda, where many of the presidents of Bolivia have stayed, and what is currently still under the care of my family. However, what people fail to remember is the community that resides there and lives off of the land. Similar to the other schools we support, the use of resources from the land is an essential way to teach. For example, we have received in the past many instances of what we call "maker requests." These are requests on how to use the resources around them to build or learn something new. On the Rachel we already have pre-downloaded content on maker requests such as

“How to make sanitary pads?” or “How to make manure from ash?” We have found some great resources that are openly licensed on Youtube and I have added some in Spanish as well.

Sharing open licensed resources is an essential part of our program because we want to share information that they can then retain, reuse, and revise. Open educational resources (OER) is released under an intellectual property license that permits it to be used and reused at no cost and with no necessary permissions. This semester I have gathered open educational resources in Spanish and have added them to the Rachel’s library database for the students in Nucchu to use. These resources may be helpful, but receiving requests on specific topics will help us better develop the library base for them.

I am currently in contact with the main teacher at the school, Profe Leyda Chirinos. Leyda first learned of the project last year when my uncle, Peter Marion, went to the school in Bolivia and explained in person the idea for this project. From the start Leyda has been interested in and excited about bringing more resources to her school. However, communication has been hard through email and yields slow responses on important questions.

Over the past couple of months, through the suggestion of my family, I asked my aunt Cecilia who lives in Bolivia if she would assist me on my trip. Cecilia currently lives in La Paz, Bolivia where she has worked to help support the schools and the community there. When I told her of this project, she was very excited to get on board. That same day she called Leyda and they planned a day where Leyda will come to Nucchu to learn how to use the Rachel and how to send requests to the World Librarians team at UMass. Since January is their vacation time, I knew that getting Leyda to be at the school in Nucchu might be difficult. However, due to her eagerness to open resources for her students she is going to meet us in Nucchu on January 6th at the U.E. German Busch School. Knowing that she is taking time out of her vacation to do this we have helped with her transportation and are truly grateful for dedication and kindness.

These next two weeks I am preparing for the trip by making sure all necessary help documents are translated in Spanish and collecting all of the rest of the data that I want to upload onto the Rachel for the U.E. German Busch school. After returning from this trip, confident that I have prepared the

teachers to use this program, I will begin to collect all data showing what types of requests have come in and how the Rachel is impacting their school.

## **b. STATEMENT OF INTELLECTUAL INTENT**

The main goal of my thesis is to address the digital divide in under-resourced schools by providing access to educational tools and open educational resources (OER). My focus is on the U.E. German Busch School in Nucchu, Bolivia, where I will introduce the RACHEL (Remote Area Community Hotspot for Education and Learning) device and other technologies to help improve access to information and learning materials. By doing this, I aim to give students and teachers tools they can use to enhance their education and adapt these resources to meet their unique needs.

A big part of my project is using OER, which are free and adaptable educational materials, to create a sustainable way for the school to access and share knowledge. I've been gathering Spanish-language resources to make the RACHEL device's library more relevant and useful for the school. I'm also focusing on culturally relevant content, like "maker requests" that teach practical skills using local resources, so the materials align with the way the community lives and learns.

Another important aspect of my thesis is setting up a communication system between the teachers at the school and the World Librarians team at UMass Amherst. This connection will allow the school to request additional resources in the future and provide feedback on what works best for them. In doing this I also want to keep in mind that I am in the role of librarian, providing the resources they need not the ones I think they need. Overall, my thesis aims to show how technology and open resources can make a real difference in underserved communities and create a model that could be used in other places facing similar challenges.

## **c. SIGNIFICANCE OF THE PROBLEM**

The lack of access to quality education and resources in Bolivia is a longstanding issue that perpetuates inequality, undermines rural development, and marginalizes indigenous communities. Bolivian schools, especially in rural areas like Nucchu, face systemic challenges, including inadequate

funding, insufficient instructional materials, and poorly trained teachers. These barriers are further compounded by Bolivia's diverse linguistic and cultural context, which requires an education system that is not only inclusive but also adaptive to local needs. This honors thesis project aims to address these critical gaps by introducing Open Educational Resources (OER) and bridging the digital divide at the U.E. German Busch school in Nucchu. The following articles all speak of this issue and discuss ways to improve Bolivian education.

The article, "World Librarians: A Socio-technical system providing library search services to offline schools and libraries in Malawi," highlights the World Librarians (WL) initiative, which leverages offline technologies like RACHEL to provide educational resources to underserved communities, addressing digital inequities through a socio-technical framework. The program emphasizes community-driven content requests, localized training, and intermediary organizations to ensure sustainable implementation. Rooted in ICT4D principles and frameworks like the ICT Impact Chain and Power Parity Theory, WL prioritizes empowering communities to access and utilize information meaningfully, while addressing historical power imbalances between the Global North and South. This aligns with my thesis by providing a foundational model for deploying RACHEL in Nucchu, Bolivia. Like WL's work in Malawi, my project seeks to bridge the digital divide through community-driven methods, but will adapt these strategies to Bolivia's unique cultural and educational context, marking a significant expansion of this global mission into South America.

The findings of Larrie E. Gale's *"Rural Education in Bolivia & the Potential of Educational Technology"* reveal the fundamental constraints of Bolivia's rural education system. With over 90% of the education budget allocated to salaries, there is little funding left for infrastructure, instructional materials, or technological integration. Rural schools often lack basic resources, and existing materials are outdated, imported, or culturally irrelevant. The study highlights the potential for educational technology to fill this void by providing scalable, low-cost solutions tailored to Bolivia's multilingual and multicultural realities. This thesis aligns with these recommendations by leveraging the Rachel library database to provide relevant content in Spanish and Quechua.

Regalsky and Laurie's study, *"The School, Whose Place Is This?"* emphasizes how education in Bolivia has historically served as a tool for sociopolitical control rather than empowerment, sidelining indigenous languages and knowledge systems in favor of a state-centric, Spanish-dominant curriculum. The research illustrates the detrimental effects of this "hidden curriculum" on rural and indigenous communities, where schools are often seen as symbols of external authority rather than community assets. By incorporating bilingual and culturally relevant OER into the U.E. German Busch school, this project seeks to counteract these dynamics, empowering students with knowledge that reflects their linguistic and cultural heritage.

Lastly, Mieke Lopes Cardozo's article, *Decolonizing Bolivian Education – Ideology vs. Reality*, examines Bolivia's Avelino Siñani-Elizardo Pérez (ASEP) education reform, which aims to decolonize the education system by integrating indigenous languages, knowledge systems, and values. While the reform seeks to address historical inequities and promote social justice through pillars such as decolonization, interculturalism, and productive education, its implementation faces challenges, including limited resources, resistance from educators, and insufficient grassroots involvement. These systemic issues, particularly the lack of access to educational materials and infrastructure in rural areas, are mirrored in the community of Nucchu and highlight the significance of your thesis project. By providing Open Educational Resources (OER) through the Rachel platform, your work addresses the same inequities ASEP seeks to resolve, ensuring that resources are culturally relevant and accessible in both Spanish and Quechua. Cardozo's critique of ASEP's top-down approach underscores the importance of collaboration with local stakeholders, which is a guiding principle for your project. Your effort to bridge the digital divide and empower educators in Nucchu aligns with the broader movement for educational equity in Bolivia, contributing to the realization of ASEP's transformative goals.

All of these articles tackle the same issue; a lack of resources and funds to improve education in Bolivia. Through my honors thesis, I will be aiming to solve this issue beginning with bring OER to the U.E. German Busch school in Nucchu, Bolivia and continuing access to education through the partnership of the World Librarians Team at Umass Amherst.

## 2. REVIEW OF LITERATURE

On the topic of education in rural communities, specifically in Bolivia there was little research that was current. However, much of the historical context of Bolivia's education system remains relevant today, and the strategies proposed in earlier studies are still applicable to addressing contemporary challenges. The first article I analyzed, "World Librarians: A Socio-Technical System Providing Library Search Services to Offline Schools and Libraries in Malawi," focuses on deploying the Rachel platform to a school in Malawi, Africa. The methods and approaches detailed in this study will serve as a foundation for my project, though I will adapt them to meet the unique needs of the community I am working with in Nucchu. The next two articles, "Rural Education in Bolivia and the Potential of Educational Technology" and "Whose Place Is This? The Deep Structures of the Hidden Curriculum in Indigenous Education in Bolivia," provided critical insights into Bolivia's education system and the areas requiring improvement. Finally, the article "Decolonizing Bolivian Education – Ideology vs. Reality" emphasized the importance of a collaborative, culturally sensitive, and contextually aware approach to improving education in rural Bolivian schools. Together, these studies have informed my understanding of the systemic challenges and shaped my strategy for implementing meaningful and sustainable change through my project in Nucchu.

The article, "World Librarians: A Socio-technical system providing library search services to offline schools and libraries in Malawi," discusses the World Librarians (WL) project, the problem they were aiming to fix, and the outcomes of providing the Rachel. The initiative addresses the lack of internet and information access in remote schools and libraries by deploying solar-powered computer labs equipped with the RACHEL platform, which hosts a wealth of Open Educational Resources (OER).

The WL system is rooted in the ICT4D (Information and Communication Technology for Development) framework and acknowledges the historical power imbalances between the Global North and South in knowledge production. It strives for inclusivity by allowing local stakeholders to request specific content, ensuring their informational needs drive the system rather than top-down

assumptions. The project emphasizes the Gigler ICT Impact Chain framework, particularly its early stages: identifying community needs, establishing ICT infrastructure, and fostering meaningful ICT use. Key innovations include the integration of local intermediaries like the Malawi-based ShiftIT organization and the use of micro-payment systems to enable content delivery through cellular networks. Preliminary findings show the program enhances educational outcomes and fosters meaningful community engagement (Schweik, Meyer, Chinkondenji, Smith, Mchenga).

My project in Nucchu, Bolivia, parallels the Malawi deployment as it also represents a localized solution to bridge the digital divide. This marks the first implementation of RACHEL in South America, a ground-breaking initiative that can adapt the methodologies described in the article. Like the Malawi initiative, I will establish ICT infrastructure to support the community's information needs.

However, unlike the Malawi initiative, my project will not include a solar-powered computer lab, but will include the Rachel's implementation into the U.E. German Busch school along with the technology I bring. Also, given the unique cultural, linguistic, and socio-economic context of Nucchu, my approach will adapt these methods to fit local conditions. For instance, content customization will focus on Bolivian educational priorities and local languages, like Spanish and Quechua, ensuring cultural relevance. My deployment serves as an extension of the World Librarians' philosophy, affirming the importance of community-driven development while developing its application in new global contexts.

The next article "Rural Education in Bolivia & the Potential of Educational Technology" by Larrie E. Gale provides an in-depth analysis of the challenges faced by students in rural areas of Bolivia during the 1970s and proposes strategies to overcome these barriers. The research identifies significant constraints, such as inadequate funding, poor infrastructure, outdated or non-existent instructional materials, underqualified educators, and the logistical difficulties posed by Bolivia's diverse geography and linguistic diversity. An issue we deal with within World Librarians is finding content that is up-to-date. Searching for current materials while dealing with outdated or non-existent materials hinders learning experience and limits the access to education that children deserve. Gale also

highlighted high unenrollment rates among students which I have seen to be true with students at the Nucchu school. When my uncle was there he was told they have under 50 students, but he saw many empty classrooms and knew that unfortunately, in the rural areas of Bolivia, not all parents send their children to class consistently.

The article also emphasized the potential of instructional technology to address these problems, advocating for the development of systematic curriculum, teacher training programs, and locally adaptable instructional materials in multiple languages, including Aymara, Quechua, and Spanish. It suggests employing cost-effective and easily maintainable technological devices and methods that align with the country's resource limitations (Gale).

My thesis on integrating open educational resources (OER) and technology into rural schools in Bolivia aligns with the recommendations and findings of this article. The challenges identified; such as the lack of localized, multilingual materials and funds to access information, emphasize the need for open educational resources and librarians who can work to find those resources. Implementing Rachel's library database to include resources in Spanish and Quechua directly addresses the linguistic diversity emphasized in the article as well.

Gale's research supports the creation of culturally and linguistically relevant materials. In Nucchu, this would involve developing OER content that resonates with local traditions and values while being accessible in the primary languages spoken by the community. The article also highlights the importance of affordable, low-maintenance devices. Rachel's library database, being offline-compatible, fulfills these criteria, ensuring functionality in areas with limited internet and electricity. I will also be providing tablets and a chromebook to the school to allow students to work with the technology to learn as well.

The study stresses the critical role of teachers in learning the technology and methods to deliver effective education. My project integrates training modules within Rachel's system to improve teachers' content knowledge and instructional methodologies. When I meet with Leyda on January 6th, I will also be training her in how to use the Rachel to access its materials as well as showing her how to request information from the World Librarian's team and then download that information. Lastly, in



my project we provide the U.E. German Busch School with 24/7 communication. So, if a teacher would like to do a lesson on a specific topic and needs resources, we can send back materials on a use need assessment basis to identify specific educational gaps in Nucchu. This aligns with Gale's suggestion for systematically designed curricula that meet the practical needs of students and teachers. By drawing on these insights, my project can better address the systemic challenges of rural Bolivian education, creating a sustainable impact on Nucchu's educational landscape.

Another article, "The School, Whose Place Is This?" by Pablo Regalsky and Nina Laurie explores the intersection of state and indigenous education in Bolivia, with a focus on the hidden curriculum as a means of sociopolitical control and cultural negotiation. The research examines the case of Quechua communities in Raqaypampa to reveal how rural schools function as contested political spaces, balancing state authority and indigenous autonomy. Historically, schools in Bolivia have been instruments of cultural homogenization and state control, promoting Spanish language and Western pedagogies while marginalizing indigenous languages, values, and knowledge systems. The hidden curriculum—comprising both explicit and implicit power dynamics—reinforces these structures, often creating tensions between community needs and state mandates.

The study highlights the significance of indigenous community-led initiatives, such as bilingual and intercultural education reforms, as mechanisms to assert local jurisdiction and cultural relevance in education. Raqaypampa's struggle for community control over school governance, curriculum development, and academic calendars illustrates broader challenges in integrating indigenous perspectives within the Bolivian educational system. In Nucchu, indigenous community-led initiatives will be essential for providing resources that they find useful and centered towards their learning wants and needs.

This research provides valuable insights for my thesis on introducing open educational resources (OER) and technology into rural schools in Bolivia by understanding local educational needs. The case of Raqaypampa emphasizes the importance of aligning education with community priorities, such as agricultural cycles, linguistic diversity, and cultural practices. For Nucchu, this means designing OER content that incorporates and respects local Quechua and Spanish-speaking traditions,

ensuring the curriculum reflects community values and realities. The success of Bolivia's bilingual educational reforms highlights the need to integrate Quechua alongside Spanish in our Rachel library database. This will ensure linguistic inclusivity and empower students with resources relevant to their cultural context.

The hidden curriculum's role in preserving socio-political hierarchies emphasizes the necessity of community involvement in educational decision-making. By collaborating with parents, teachers, and students, we can ensure the Rachel database aligns with the community's educational goals and avoids replicating top-down structures (Regalsky and Laurie).

As seen in Raqaypampa, the use of simple, context-sensitive materials (like Quechua literacy tools) can have a transformative impact. Similarly, my project will employ accessible technologies and prioritize locally adaptable content to overcome logistical challenges in Nucchu.

My work in Nucchu will prioritize participatory planning with the community to understand their specific educational needs and challenges. By incorporating these lessons from Raqaypampa and adapting the Rachel database's potential for multilingual and culturally relevant materials, I can create a transformative educational resource that respects and enhances the community's autonomy and identity.

Finally, Mieke Lopes Cardozo's article, "*Decolonising Bolivian Education – Ideology Versus Reality*," provides a critical examination of Bolivia's Avelino Siñani-Elizardo Pérez (ASEP) education reform, which seeks to address historical inequities and create a decolonized, intercultural, and multilingual education system. The reform, introduced under President Evo Morales in 2010, aims to empower indigenous populations by integrating their languages, knowledge, and values into the educational system while addressing economic, cultural, and political inequalities. Despite its ambitious goals, the reform faces significant resistance and challenges in implementation, including a lack of consensus among teachers, insufficient resources, and entrenched systemic inequalities. The reform's reliance on a top-down approach has also raised concerns about its legitimacy and effectiveness in fostering indigenous participation.

The article explains the importance of addressing Bolivia's linguistic and cultural diversity while respecting community autonomy. In implementing Open Educational Resources (OER) at the U.E. German Busch School, it is crucial to integrate both Spanish and Quechua into the Rachel library to reflect the community's linguistic heritage. This ensures cultural relevance and inclusivity, aligning with the reform's goals of interculturalism.

Cardozo's critique of ASEP's perceived top-down imposition highlights the importance of the community's involvement. In Nucchu, actively involving teachers, parents, and local leaders in designing and selecting educational content will foster ownership and improve adoption. This was also mentioned in "Rural Education in Bolivia & the Potential of Educational Technology" which emphasized the need to know what the community wants through conversations with people within the community.

The reform's tension between modernizing aspirations and preserving indigenous identities reflects a broader challenge. Recognizing that families may prioritize practical skills and economic opportunities for their children, my project will balance traditional knowledge with contemporary subjects like STEM, providing resources that prepare students for both local and global opportunities. Cardozo's analysis serves as a reminder to approach the project with humility and awareness of privilege. As someone bringing new technologies and resources into a rural Bolivian context, it is essential to act as a collaborator rather than an authoritative outsider. A main message I took from this article was: acknowledge the community's existing strengths and knowledge systems, and use the project to amplify their voices rather than impose external solutions (Cardozo).

The insights from this article reinforce the need for a collaborative, culturally sensitive, and contextually aware approach to my project. By incorporating these principles, I can ensure the introduction of OER and technology at the U.E. German Busch School not only bridges the digital divide, but also aligns with the broader goals of educational equity and empowerment for the Nucchu community.

## REFERENCES

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### 3. METHODOLOGY

To address the lack of educational resources and bridge the digital divide in rural Bolivian communities, particularly in Nucchu, my research employs a mixed-methods approach that combines qualitative data collection with participatory and community-focused techniques. The following outlines my procedures and the resources/materials utilized.

In regards to community engagement and needs, I am conducting fieldwork in Nucchu to engage directly with teachers, students, and the community. This participatory approach involves interviews, focus groups, and surveys to understand the specific educational needs and challenges of the U.E. German Busch school. The data collected helps identify gaps in existing resources, language preferences (Spanish and Quechua), and technological readiness, ensuring that the solutions are tailored to the community's context.

Concerning the analysis of educational policy and curriculum, I am using the resources from my initial key readings in my first proposal. Drawing on secondary data from literature such as *Decolonizing Bolivian Education – Ideology vs. Reality* and *Rural Education in Bolivia and the Potential of Educational Technology*, I am analyzing Bolivia's education system, with a focus on its historical inequities, the ASEP reform, and the impact of bilingual and intercultural education. This analysis informs my understanding of the systemic barriers that affect rural education and provides a framework for designing culturally relevant educational content.

I am also implementing the Rachel wifi device, a portable digital library that functions offline, as a core resource to address the lack of access to information and technology in Nucchu. The Rachel database is customized to include Open Educational Resources (OER) in Spanish and Quechua, ensuring the content aligns with the community's linguistic and cultural context. By integrating these resources, you aim to create a sustainable and scalable model for improving education in resource-constrained settings. In addition to the Rachel, I will also be providing the school with tablets and one chromebook. Initially I wanted to provide the school solely with chromebooks but due to cost

and traveling with this equipment, tablets will be easier to transport and easier for the students to use. I have created a go-fund me where I am hoping to raise some money to buy the school new technology and school supplies.

With the Rachel, I will need to work closely with the teachers in Nucchu to co-develop lesson plans and instructional materials that they can then add to the Rachel database. This ensures that the tools provided are practical, relevant, and seamlessly integrated into the school's curriculum. I have already added some resources to their device, but working with the teachers to find resources helpful to their curriculum will be essential for this project.

When I return from my trip from Bolivia, this period of time will be devoted to results and support. While they are becoming familiar with the Rachel, I hope to see some requests coming from their school as well as any troubleshooting help they need downloading or requesting data. To help with troubleshooting, in a different language, my aunt Cecilia will also be a point of contact for the teachers, making sure that they are comfortable with communicating their needs in their language and ensuring that I will understand completely what issue they would like resolved. We typically receive at least 5 requests a month from each school, so a goal is to have at least 5 requests from the Nucchu school by March.

Through the communication process of sending and receiving data, I also plan to incorporate an evaluation process for the teachers to determine what materials are helpful. I plan to set up this communication, via WhatsApp, like we do with our other couriers. With WhatsApp, I can easily and quickly communicate with the teachers in Bolivia so we can solve any issues that arise right away. While I want to learn how the teacher views the information, I will also be asking how it is impacting student performance in the classroom. This feedback loop allows for continuous refinement of the materials and methods, ensuring the project's adaptability and long-term impact.



The resources and materials that I will use to complete this project are the Rachel and its digital library, the community input tools such as WhatsApp, the literature and policy analysis from key readings, and the culturally relevant content that is either in Spanish or translated into Spanish.

The Rachel, a Remote Community Area Hotspot for Education and Learning, will be given to the U.E. German Busch school to use to access its library and to download additional resources. Content already downloaded on the Rachel ranges from Khan Academy to Wikipedia. The resources that I have uploaded onto the Rachel are tailored to include bilingual content in Spanish and Quechua.

The community input tools, such as using WhatsApp, will be used for communication on what material is working and what information they need more of. Working and speaking with people within the community will also help provide input into what resources are important for their education.

The key readings that I analyzed and included in my literature review, have aided how the World Librarians team and I should be sharing information. These key texts such as *Decolonizing Bolivian Education – Ideology vs. Reality* and studies on rural education in Bolivia helped me to understand systemic challenges and inform project design. It also helped me figure out which content should and shouldn't be included. Although I still want the community's input on the content, I have also provided some content as a starting point.

Finally, this project will include culturally relevant content that is translated into Spanish and Quechua to provide the best resources for this community. A resource I have used to find these materials and have them translated is my grandmother and aunt Cecilia. My grandmother was a big help not only with finding good Spanish materials, but also translating communication between the teacher and I. Since Cecilia has also worked with underserved schools in Bolivia, she brought insight from her experience to better the way I approach this project. These educational materials also align with Bolivia's ASEP reform principles; emphasizing decolonization, intercultural education, and practical skills.

By combining these methods and materials, my research not only addresses immediate educational gaps in Nucchu but also contributes to broader discussions about equity and innovation in rural education in Bolivia.

The only necessary training was training I did myself with the Rachel. Over the last four months, I have worked with the Rachel to better understand the technology and to learn how to best train and teach the teachers I will be giving the Rachel to. I have become skilled in navigating the main interface that contains applications like Khan Academy and Project Gutenberg. I have also tested sending and receiving datapost requests, seeing a side to the process I never have before.



#### 4. EVALUATION

My work will be reviewed and graded by my chair committee member, Theresa Dooley. Since we meet each week to discuss my honors thesis, Theresa will be the one to review my work and provide me with any feedback on how to better my work moving forward. I will be submitting results and different drafts of my research manuscript to Theresa throughout the semester so that my final draft can be reviewed by both her and Charlie Schweik, my second committee member and co-founder of the World Librarians program, at the end of the semester.

The measurable goals that my committee expects me to achieve are to receive at least five requests from the Nucchu school by March and hopefully ten by the end of my thesis. Since this project has never been done before in Bolivia, there may be some issues that affect the total number of requests that we receive; however, the hope is to at least provide them with a database of information. So, the results and deliverables will depend on how they adapt to the Rachel and the gaps within their education that need to be filled by open educational resources.

My committee will provide feedback by providing comments within my documents, as well as in-person discussions to talk about and improve the ways in which we can help the U.E. German Busch school receive information. Each week, I will be submitting any documentation I have created based on the progress of the school in Nucchu to Theresa and Charlie. In addition to this, every Friday, the World Librarians team meets to discuss our current requests and this is where I will also look for feedback from my peers to see how we are sending information to the U.E. German Busch school and if it is helpful towards their curriculum.

My committee will assess the viability of my research and my ability to produce a research manuscript by examining several critical aspects throughout the semester. A key factor will be the consistent progress demonstrated through my weekly submissions to Theresa Dooley and Charlie Schweik. These submissions, which include drafts of my manuscript, updates on requests from the Nucchu school, and documentation of my measurable goals, will allow my committee to monitor my development and provide constructive feedback.

The measurable goals of my project will serve as benchmarks for evaluating its impact and effectiveness. Specifically, I aim to receive at least five requests from the Nucchu school by March and ten by the end of my thesis will guide their assessment. My committee will also consider how well I adapt to challenges, such as potential issues stemming from the implementation of the Rachel system in Bolivia.

The deliverables I produce, particularly the database of open educational resources for the U.E. German Busch school will be another key component of the evaluation. My committee will examine the relevance and quality of these resources, as well as my ability to address any gaps or challenges in their implementation. The adaptability of the Rachel system to the school's educational needs will also play a significant role in determining the viability of my research.

The final manuscript should clearly and comprehensively detail my methods, results, challenges, and the overall impact of my project. Throughout the semester, my committee's feedback will help guide my revisions to ensure the manuscript displays all of these components.

Finally, the presentation of my results and deliverables will be a crucial factor in my overall assessment. By the end of the semester, my manuscript and supporting documentation should effectively communicate the outcomes of my project, including how successfully implementing OER addresses the educational needs of the U.E. German Busch school.

## 5. COMMUNICATION

I will meet, like I have previously been doing, with Theresa Dooley, my faculty sponsor, for an hour each week to discuss my progress and the tasks moving forward. The expectations of these meetings from my faculty sponsor will be to discuss current progress made in my thesis proposal, such as communication being made between the school and I, as well as discussing the next steps and upcoming assignments. We also plan to discuss any new changes that can be made to better my thesis and assist one another on any issues that may arise throughout the semester.

Specifically this semester, we will focus on looking at the results from the deployment of the Rachel as well as how the resources are benefitting the students. To look at these results, we will be checking communication with the teachers as well as the requests we are sent. I also plan to have Charlie join our meetings bi-weekly so he can provide any of his previous experiences and knowledge to this project. The time commitment expected for my research is about 12-15 hours a week. This includes researching content for their Rachel database. I will also spend about 1-2 hours per week communicating with the teachers and the school to find open educational resources for their curriculum.

## 6. TIMELINE

The expectations for periodic review of my research results are that they are reviewed weekly. Any additional assignments I will complete that are separate from the research manuscript will be reviewed weekly.

For my research manuscript the timeline and dates follow:

### Research Manuscript Outline

Due Date: 2/14/25

First Draft

Due Date: 2/28/25

Second Draft

Due Date: 3/14/25

Final Research Manuscript

Due Date: 4/4/25

Final Presentation

Date and Setting: 4/11/25 Informal Presentation with 499T/P committee members in CHC

Date and Setting: 4/18/25 Public Presentation at Massachusetts Undergraduate Research Conference