



DISTANCE LEARNING And Belize

OPPORTUNITIES AND CHALLENGES

October 2016

THE UNIVERSITY OF TEXAS AT AUSTIN
IC2 INSTITUTE

Sana Noorani and
Dr. David Gibson
UT-Austin Bridging Disciplines Program

ACKNOWLEDGEMENTS

A special thank you to Dr. Gibson for his assistance to help make this research possible and for his guidance throughout the process.

Table of Contents

ABSTRACT	1
INTRODUCTION.....	2
WHAT IS DISTANCE LEARNING?	4
Brief History	4
One-way vs. Two-way Communication.....	5
Technologies	6
THE EXPERIMENT	7
Background	7
Case: Belize and Austin High Schools	8
I. Communication with Austin High Schools	8
II. Communication with Belizean High Schools	10
III. Challenges	13
IV. Results	15
DISTANCE LEARNING CASE STUDIES.....	15
Case Study: International Distance Learning	15
Case Study: Domestic Distance Learning.....	17
LESSONS LEARNED	19
CONCLUSION.....	19
REFERENCES.....	21

ABSTRACT

A method of learning that uses technology as its backbone, distance learning helps enrich lives and the reach of educational institutions. In developing nations, such as Belize, that find difficulty in reaching all of its students due to rough terrain, distance learning is a potential solution to allow students to learn virtually rather than directly in a classroom setting.

The distance learning model has been used in the past in countries like China, India, and Egypt, Mexico, and Nigeria and has been proven to work in bringing educational access to places where there would otherwise be no access (UNESCO).

Distance learning is aimed at helping bring universal education to all in a world where the need for education is becoming more and more demanding. However, there are many challenges that Belize is facing. First, there is a discrepancy between the supply and demand for skilled workers, with the demand being much higher than the supply. Second, the nation is struggling with poverty and lack of sufficient tertiary educational institutions. Lastly, many Belizeans cannot afford secondary and tertiary school costs, and end up dropping out of school after primary education.

There are several challenges in developing distance learning in Belize. The paper discusses a distance learning experiment between Belize and America (specifically East Austin), and the challenges, failures, and lessons that were collected from the experiment. Due to sheer distance, cost, and difficulty in communication (whether that be technological or cultural), distance learning is much harder to implement than was initially expected.

Distance Learning in Belize

“We have an obligation and a responsibility to be investing in our students and our schools. We must make sure that people who have the grades, the desire and the will, but not the money, can still get the best education possible.”

President Barack Obama

INTRODUCTION

Belize is going through major structural, developmental, and institutional changes. A small country with a population of 370,300 inhabitants (as identified in 2015 by UNESCO), Belize is facing considerable challenges with infrastructure, resource allocation and use, and poverty.

Additionally, the country has a large economic and globally important responsibility towards overseeing the country's natural resources, as well as being the “biological corridor” of the Mesoamerican peninsula (BNECT et al. 2016). Given the influx of global climate change, Belize is facing increasing pressure to develop and utilize the extravagance of its resources effectively.

However, Belize is facing newer problems attributed to the high demand of educated, skilled workers. Educated workers play a critical role in the country's development and are needed more now than ever. The workforce of Belizeans is largely comprised of uneducated individuals. Looking at the age group of 17+, we find that the percent of students attending high school or a higher educational institution is 5.4%.

Figure 1: Educational Status Students 17+

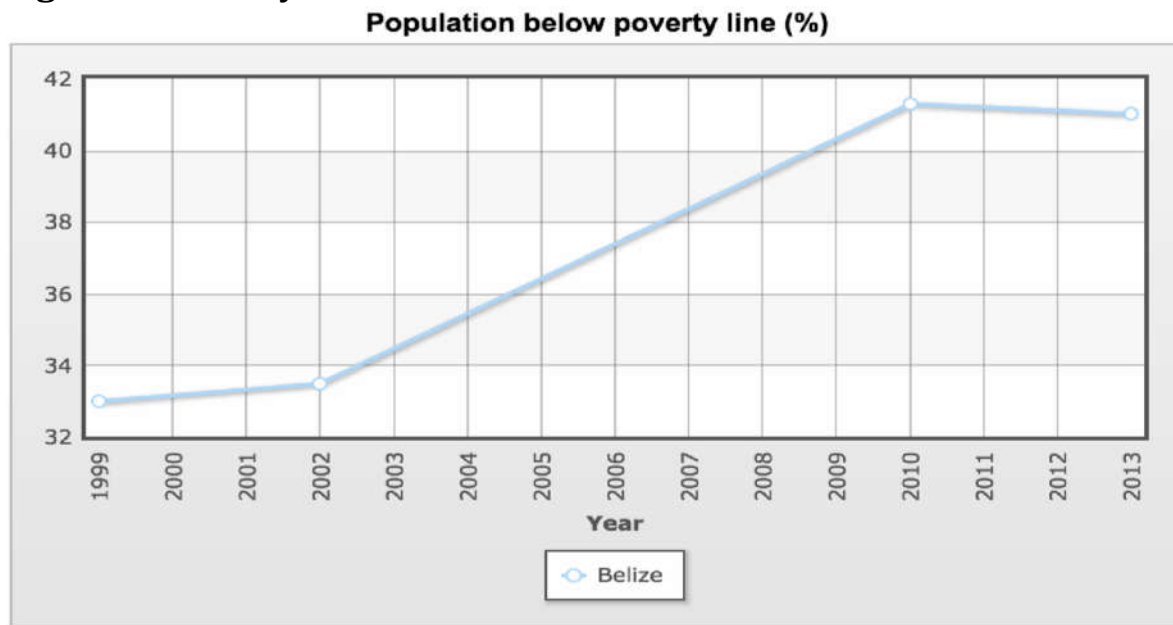
Age Group	Status	Total	Males	Females
17 +	Attending	7,308	3,413	3,895
	Not Attending	128,118	64,343	63,775
	Not Stated	260	134	126
	Total	135,686	67,890	67,796
Percentage Attending		5.4	5.0	5.7

Source: Statistical Institute of Belize, 2010

Poverty and distance have been identified as major factors in the reduced access of education to Belizeans. To delve into the main issue of education, we must first look at the

source: poverty. As of 2013, Belize has 41.3% of its population below the poverty level and current trajectory reveals that the poverty level is systematically getting worse (IndexMundi, 2013). Amidst such conditions, we must find ways to help Belize educate its students. In short, without an increased supply of educated students, Belize has little hope of recovering from its high poverty levels.

Figure 2: Poverty Level in Belize



Source: IndexMundi, 2013

The sheer lack of higher level schools in Belize poses a huge challenge. Since there are not many upper level educational facilities in proximity to interested students, these students face challenges in both geography and transportation to get to tertiary schools and universities. Therefore, there must be remote access to these educational facilities so that more individuals can learn.

In a complex mesh of changes occurring globally, Belize is dealing with educational restructuring. Education is a vital part of helping Belize become more developed. From a metaphorical standpoint, the associations of education and the economy are simple: the independent variables are education and manpower, and the dependent variable is the country's economic growth (Cox, 2016). Without educational restructuring, stringent economic and environmental strides are constantly challenged and nearly impossible to achieve.

This report is the result of an interest in finding ways to curb the educational inequality in Belizean society, and finding ways to improve the current structure. As we saw, the educational disparity primarily stems from poverty and distance as the two main catalysts.

This report takes a special interest in understanding how to work with the issue of distance and find a sustainable way to help bring access to education to those in faraway towns and cities. Therefore, we explore how distance education can increase educational access to those in remote areas. Moreover, we are also exploring the notion of distance learning itself and if it can be a successful method of education.

WHAT IS DISTANCE LEARNING?

Distance learning is a method of study where there is limited face-to-face contact between the teacher and student in a traditional classroom setting. Instead, technologies such as the internet, television, email, or other forms, are exercised. This form of learning can be very useful in places where travel is challenging or in locations where educational structures are not prevalent.

Distance learning can be pivotal for the progress of a developing country and making education more accessible for all, regardless of geographical distance and personal financial situations. According to UNESCO, distance learning used by developing nations can make significant advances working collaboratively. Therefore, a *Joint Initiative on Distance Education* was formed so that developing nations can get “improved access, greater equity, and advanced quality of learning at the basic level”. Furthermore, “distance education can reach people who would otherwise be deprived of opportunities to learn” (UNESCO, 1994). In other words, it exhibits a more accessible, flexible learning for individuals.

Brief History

Distance learning largely began in the mid-1800s in Europe and the United States using the most robust technologies that relied on the postal system to send materials to those who could not be physically present. Students that usually took advantage of this system were women (who already had limited opportunities), people who had work during school hours, those with disabilities, and finally those who lived too remotely to attend school (CDLP, 2016).

Almost a century later in the 1920s, radio was introduced and began to be used for the spread of educational materials. Students could tune in to a particular station and learn remotely. Soon thereafter, in the 1940s, the television was introduced which meant that millions of learners could now tune in to a particular channel to obtain learning instruction. The improvement of technology and distance learning methods did not stop there.

Although the telephone systems became more reliable in the early 20th century, they were not popularly used for distance education until the advent of teleconferencing which began to be used in the 1980s. For the first time, two-way communication was introduced. With the other previous forms of communication, student and teacher interaction was limited. The students

received content, while the teacher delivered, with little interaction. With the advent of telecommunication, students could now speak directly to their instructor in real-time. The implications of this revealed that distance education would now be a more effective tool of learning. In addition, challenges of geographical distance could also be minimized because conference calls could be used in the same way for two individuals 20 miles apart and those 5000 miles apart.

Telecommunication was followed by web conferences where pictures and videos could now be shared. Moreover, file sharing through email and chat-boxes became more popularized. Unlike previous technologies, conference calls changed how effective technological exchange could be. Two-way video images could instantaneously be conveyed with Skype, FaceTime, and Google Hangout technologies as (CDLP, 2016).

Alongside telecommunication and video conferencing, email communication also became popularized. The method I found to be most effective for initial conversation was email exchange due to the sheer ease of use and power. It was effective while also not becoming too personal. Exchanges made through social media are usually too informal. After initial conversation, it is easy to change to other mediums such as video conferencing.

One-way vs. Two-way Communication

One-way communication is utilized in situations where a student is watching a prerecorded video or interacting with instructions that have been recorded beforehand. The mediums that tend to use this method are audio tapes, compact discs, computer files or videos, videotapes, etc (Rubiales, 1998). Examples of one-way exchange include MOOCs, such as Coursera and Udemy, as well as free Ivy-league courses. These massive open online courses are very helpful for those who want to learn but may not have the money or resources to pay. This form of learning is becoming more popular, and is used by many working adults and professionals who do not have time to go to a classroom often. An additional fee can be paid for certification, but classes are completely free for students to watch prerecorded lectures and chat with the professor through a chat-box.

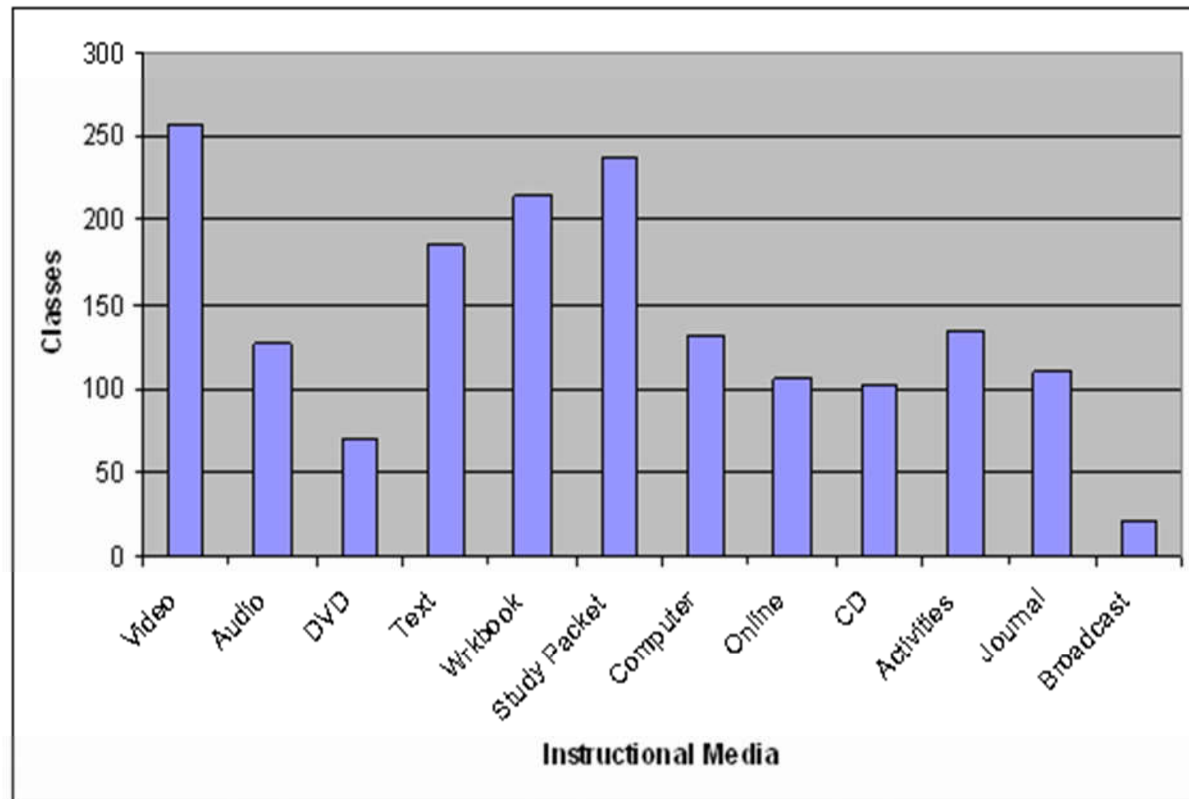
A more effective method for distance learning is two-way communication in which information can flow more efficiently between professor and student. Studies have found that distance learning is more effective when it is conducted where questions and conversations can occur in real time. This helps simulate a real-life classroom setting.

In this analysis, our main concern is not time-efficiency as it is cost-efficiency. In Belize, we must be cognizant of costs since most students would not be able to afford the fees.

Technologies

Survey results by the California Distance Learning Project, surveyors measured which method of learning was most suitable for students. The results revealed that video media was most popular.

Figure 3: Forms of Distance Learning



Source: California Distance Learning Project

Students who engaged in distance learning found video learning to be the most effective for instruction. In the survey, it must be noted that study packets (which were the second most popular method) are used as accompanying material for video, broadcast, and audio based courses (CDLP). Video learning includes both prerecorded lectures and one-on-one video exchanges. Also note that MOOCs that were mentioned earlier in this report use the popular video form of learning. The results reveal that video learning is preferred due to face-time that helps the student learn more effectively.

THE EXPERIMENT

I wanted to test the efficacy of distance education in Belize as a way to bring access to students who have no means of travelling to nearby schools. My goal with this project was to connect one or more high school classrooms in Austin with high schools in Belize to see the effectiveness of distance learning. Based on the results, we can evaluate whether or not distance learning was a potential solution to the complex issues that face the educational system in Belize.

Background

A major challenge I found in Belize with distance was the sheer number of schools. Education in Belize is broken up in preschool, primary school, secondary, tertiary, and adult/continuing education (“Education in Belize”, 2016). The tertiary system includes junior college and university systems. However, it is important to note that until the 1990s, Belize did not have a four-year university system and the growth in the junior college educational system has been recent.

There are about 500 schools in Belize all together with the vast majority of the schools being preprimary (Ministry of Education, 2016). However, the number of tertiary programs is nearing 20 schools, which is not nearly close to enough for its growing population. This is definitely concerning because the vast amount of education that is needed for the older population (think secondary and tertiary) is lacking. It is vital for students to graduate from a tertiary program to get a specialized degree, which is what the workforce in Belize is very desperately needing.

In 1990, the Education Act in Belize was passed, which meant that the national government required children from ages 5 to 14 to attend primary school (Weigand, 2015). However, it is important to note that secondary schools (and above) in Belize require a fee, which means that impoverished families who make up almost half of the Belizean population cannot afford education. Seldom do students receive financial scholarships. With the series of school reforms which started in 2000, the Ministry of Education and Sports was able to design a national curriculum, and standardize education in Belize. This helped improve the quality of education available to Belizeans. However, it did not do much in solving the school access crisis.

Belize still needs to have robust measures taken to provide more educational access to those in remote parts of the country. This is why I decided to address distance learning to see how the method could be tested to increase students’ exposure to education and to test which technological methods would be the most effective.

Case: Belize and Austin High Schools

I attempted to connect students from Belize high schools with students from East Austin high schools. From Belize, I was looking specifically at Ocean Academy and the Anglican Cathedral College #71. In Austin, I contacted several high schools and spoke to the administration of each school. East Austin is a more impoverished part of Austin, so the schools were selected because they would most likely improve from the experiment and would also be more likely to accept participating in the distance learning experiment. Moreover, the University of Texas is also closer to East Austin, so visits to the schools would be easier to conduct.

The timeline I was looking at for the project was from January 2016 to April 2016, which – if no severe roadblocks were met – would give me enough time to be able to successfully develop distance learning communication between the two countries.

I. Communication with Austin High Schools

I hypothesized that developed nations tend to have well-equipped educational systems already in place, so they might be less willing to disrupt their educational system with such a study. Schools in a developed country such as the U.S. might not see how this experiment with distance learning could help them. They might be more resistant to a possible new curriculum path. In addition, it would be effort on their part to tweak a fully formed teaching agenda to incorporate a project in distance learning. Regardless of my skepticism, the experiment was important to conduct.

My method of contacting the East Austin high schools was primarily through cold calling and emails. I also received a lot of help and guidance from Dr. David Gibson from the IC² Institute. I immediately started contacting the schools by early February. The results were the following:

- **Westlake** - I spoke to the assistant principal and science department head. They were not interested in taking on the experiment since the science department had a lot on their plate. The department head, Mrs. Demartino, was fighting breast cancer, so she said would perhaps be interested in participating in the following year. Dr. Gibson also tried to contact the school by reaching out to Michel Froneberger, assistant principal of the school. However, even upon persistent communication, we never received interest. I also reached out to a very high-achieving student from Westlake that was featured in the Austin community newspaper. He was of interest to me because he was working with nonprofit education, but I received no communication back from him.

- **William B. Travis** – This school in the East Austin area that was of particular interest to me. I spoke to the assistant principal, Christina Steel, but she was busy and avoided returning my voicemails.
- **Gonzalo Garza Independence High School** – Of all the schools I contacted, I realized that this school was the most disorganized in terms of connecting me to the right people. I spoke with several of the operators who would reconnect me to other parts of the school (such as the science department or assistant principal) who would not pick up the phone or respond to voicemails. I was also given several email contacts and phone numbers which I utilized. However, the verdict was clear: there were no responses from any individuals I contacted so I concluded that there was no interest in the project from this particular high school.
- **Eastside Memorial** – I had the most headway with this school. Upon my communication with them, I felt like this school would be the most promising for the distance learning experiment. I was able to get into contact with the science department head, Mrs. Barton, who showed a lot of interest in the experiment and wanted to propose the idea to the department. This was instrumental for me because the Belize schools I would be putting the East Austin schools into contact with would be discussing science topics with each other such as a possible biodiversity topic. However, after several rounds of communication with her, she stopped responding to phone calls and email exchanges. After much persistence, I concluded that she was no longer interested.
- **International High School** - The majority of the students unfortunately did not speak English. The staff was very accommodating and receptive to the idea, but I sensed that the communication would not work since there would be a large communication barrier on top of the distance barrier. This was of particular concern, since the Belizean students spoke English which was one of the strengths of doing a distance learning project with Belize. Moreover, the distance was the variable I was testing, and I did not want unaccounted variables (such as a language barrier) to affect the results of the experiment.

The results from the communication were very disappointing since there was a lot of work that had been put into contacting these schools, and the lack of interest or sheer disorganization were the consistent responses from every school. I contemplated on the results and came up with a few ideas as to why the communication with the East Austin schools might have failed.

One idea I noticed was that the administration might have been less receptive to new additions to their curriculum which would possibly ensue upon agreeing to participate in the distance learning experiment. The next (which was suggested by Dr. Gibson) was that the schools may have not found it particularly valuable to

engage with a distant country. It may have been hard for them to understand the value that they could gain from the experiment. Lastly, as a more underprivileged school district, East Austin may have had less organization within its administration due to less disposable wealth. In many studies in the past, wealth within the school system attracts talent and motivation among faculty and administration. If the school district has a lower salary rate than other schools, teachers may feel less motivated to work hard since harder work may not equate to higher compensation.

The shortcomings I saw from a technological standpoint were that of phone and email exchange. It was hard to have a face-to-face communication due to the bureaucracy within the school system. Face-to-face is not an effective method of communication if the visit is spontaneous, especially in a school system where there is not any authority to go to a school teacher's classroom without the express permission of a front desk worker or assistant principal. Even with that, they must approve of your purpose for a visit. Therefore, given my situation, I felt that using phone calls as the primary exchange would be the most effective, with email exchanges as a follow-up.

A possible solution would be to talk directly with an administrative personnel that I may have a connection to. The connection would not have to be mine, but can rather be someone that I was introduced to within my network. Simply making cold-calls is not the most effective since there has been no previously-formed rapport or trust, as well as no preceding relationship. Nonverbal communication is 50-93% of our communication, which means that the only way to experience this communication is through face-to-face contact (Galloway, 1968). At this time, I was simultaneously working on forming contacts with Belize. However, for Belize, I had to stay within my means and find an electronic way to contact the schools and professors at the high schools. Dr. Gibson, who had many contacts in Belize, helped me implement more personable communication with the Belizean administration.

II. Communication with Belizean High Schools

I hypothesized that the Belizean schools would be much harder to communicate with than Austin schools. I did not foresee any interest on their part since I assumed that they would not find value in participating in a project by someone in another nation. I assumed that they would not trust me and the effectiveness of participating in such a project.

My observations for the email communication was that it was very slow. It would take several days to elicit a response from representatives of the school. My two responses for this were either that the administration had a high volume of emails to tend to, or that they did not have as big of a digital culture as the U.S. If the latter was true, it would be very challenging to make distance learning successful in the future.

The method in which I communicated with Belize was similar to the communication I had done with the Austin schools, but there were two stark differences. One of them was the implication of only email communication since there was no option for physical or phone communication due to the international distance between where I was researching from in Austin and the country of interest, Belize. The second difference was that this email communication was inherently more effective since Dr. Gibson had previous connections with the administration in Belize.

I noticed a few things he did that were very instrumental for successful communication. Besides his previously established credentials, Dr. Gibson sent an introductory paragraph about me to establish trust in who I was and what I wanted. He also explained the distance learning project in detail, but gave the opposite party options to give suggestions and feedback in the possible project implementation and topic. They could decide which technologies to use and the topic the students should discuss. This gave the opposite party a greater sense of responsibility in the project and a say in how the distance learning would be measured.

In communicating with Belize, Dr. Gibson put me into contact with Ishmael Requena, who is the Principal of the Anglican Cathedral Catholic College #71. He also put me into contact with representative from the Ocean Academy, Heidi Curry and Joni Valencia, who he knew personally. However, all communication with Ocean Academy did not proceed far beyond a few email exchanges as Heidi was very busy at this time, and it was hard to communicate efficiently with her. Unfortunately, Ocean Academy, would have been a great addition to the experiment. The school was well-distinguished and a possible learning topic with the school could have been a topic of biodiversity. This would have certainly been an interesting project. Although Ocean Academy was not successfully added to the experiment, the Anglican Cathedral Catholic College #71 was very promising. The administration was very receptive and willing to participate in distance learning.

The timeline for this was early February. Luckily, Dr. Gibson helped put me in communication with the right people. The first person I was put into contact with was Marcia Ortega who is the head of the Business department for the school, and the second was Corrine Nah who is an Information Technology teacher. Marcia was really helpful in the beginning of the project when she helped me find ways to understand how the students would be most engaging to work with. She suggested Facebook communication. My exchange with her was very efficient and quick, as she would respond very quickly to emails (within 1-2 days). However, she soon gave over reign of the project to Corrine Nah, the IT teacher at the school. From then onwards, I would be communicating directly with Corrine.

My experience with Corrine was much different since I suspect she was busy juggling other responsibilities. Our email exchanges had several empty days in

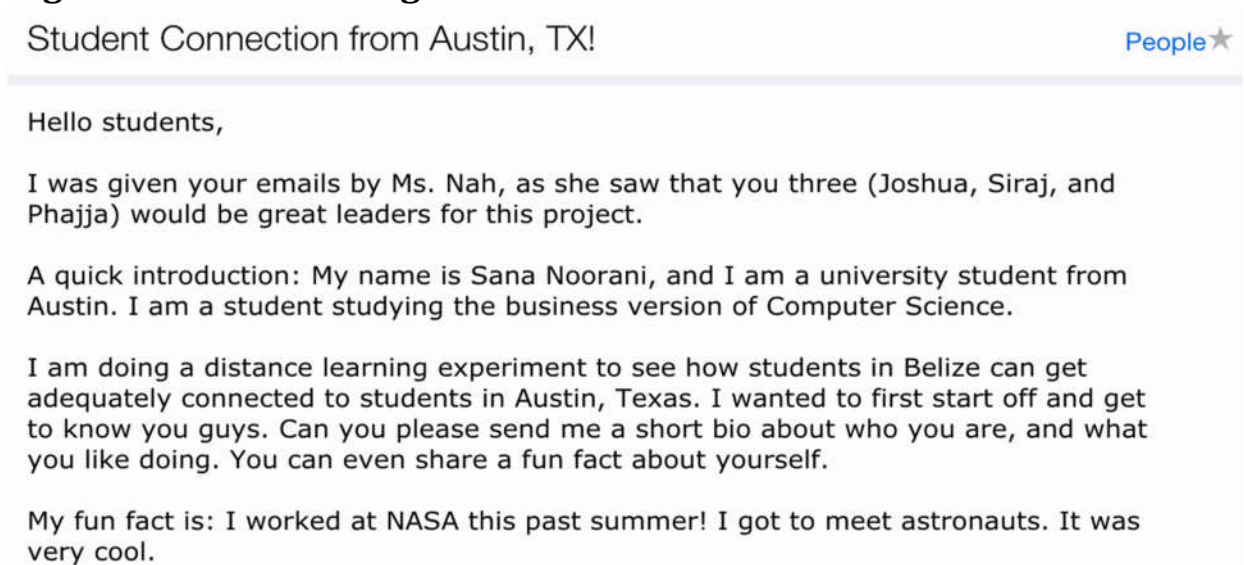
between, which was a struggle point for the project. I was losing precious time that would be needed for the distance learning project to take place. When March was a few days in, and I knew that I had about seven weeks left for the project; furthermore, I knew more progress had to be made quickly so that the efficacy of distance learning could be properly tested.

The purpose of my email exchange with Corrine was to find an effective communication method in which to speak with the students in her class. We decided against using social media as the first means of communication (as Marcia had suggested), since there needed to be a division between school/learning and personal forms of media. Corrine suggested that Gmail exchange would be a great way to start. Dr. Gibson also agreed that Gmail would be a better means of beginning the distance learning experiment since the school gave access to computers and Gmail services to the students.

Instead of speaking to all 23 students in her class, I asked Corrine to send me the names of the three students she thought embodied the most leadership in her class. The selected student leaders would be the main liaisons between me and the full group of students. I received the names from Corrine, and contacted the students. This part was critical. Dr. Gibson had warned me that from prior experience, students tend to show disinterest when they did not understand who you were, what you wanted, and if you had a hidden agenda. I tried to be as personable with the students as possible and posed a fun, informative, and open email to the students.

However, this was the most challenging. This was the email I sent to the students:

Figure 4: Email Exchange



I tried to be as friendly and transparent with them as possible and signed the email with my name and signature block which also contained my university, major, and club organizations/affiliations. This would give the students more information on who I was and what I was studying. However, a week passed by and I had not heard anything from the students. I decided to email Corrine back and tell her about the outcome. She mentioned that she would remind the students to respond and explain to them in person what my project was about. I took her word for it, but I still did not hear from the students.

When Corrine emailed me again, she said the students and that they were on Spring break, so she would have to remind them after the break. Another week passed, and I emailed Corrine to remind her to ask the students to begin any sort of light communication with me if possible. By this time, it was early April and the struggle of no responses continued. I proceeded to ask Corrine a critical question that changed the trajectory of the experiment, which brings us to the next idea of discourse: challenges of distance learning.

III. Challenges

Me: "Why do you think the students are not participating?"

Corrine: "Disinterest"

Email Exchange with Ms. Nah
IT Teacher at ACC #71

I had asked Corrine why the students were not responding. By this time, the project deadline was approaching. I asked her if the students needed more context of who I was, if they were possibly disinterested, or if they needed motivation. I was getting desperate and asked her if there was anything I could do differently to capture their attention. I had really wanted to see a few rounds of experimentation with distance learning and knew that the student's participation was vital. She responded that they seemed disinterested whenever she reminded them to respond. By the time she gave me the news, it was April 12th and all hopes of communicating with the students were over. There were less than two weeks left for the remainder of my project, and I knew that the road was full of many more challenges.

I then spoke with Dr. Gibson and made a call to cap off the distance learning project, but it was not a failure since it helped me draw a lot of important conclusions. Moreover, the challenges that I had encountered revealed great amounts of information of how difficult future progress for educational development and aid in Belize could be.

The first challenge that I noted was capturing the students' attention. I did not know how else to communicate with them in order to get them on board with the distance learning project. I had assumed that they would be excited to have other students in the same shoes as them in a different country (America in this case) to talk to via web communication and Google Hangout. However, they did not see purpose or value in this. This challenge revealed to me the nature of students. In developing countries with high levels of poverty, many students have become trapped in their livelihood and have accepted things for what they are (Rosa, 2006). Similarly, many of the students did not feel particularly motivated to learn try a new method of learning and deviate from what they knew as the educational status quo.

The second challenge I noted was the issue of communication. The time it took Corrine to respond to my emails took a lot of the time opportunity away from the project. This, therefore, brings up the challenge of email communication from a distance. When the person on the other end has not met you before, it is harder to get them motivated for a project that will not affect their career. My project was seemingly a low priority for Corrine since she had many other responsibilities. Despite that, I was still pleased that she managed to be more accommodating and willing to help facilitate communication between the me and the students to ascertain success in the experiment. She did not have to participate, so her willingness to be cooperative was a great stride in the project in itself.

The third challenge was the barrier of geographical distance. The distance between Austin and Belize is between 2500-3000 miles, which creates a large barrier. The lack of face-to-face communication, I believe, was the real failure of this project. Had I been able to see the students and talk to them in person, I would have been able to motivate them to communicate with the students in Austin, and become more engaged with the project. Moreover, their lack of motivation was likely from the lack of understanding the purpose, which could've been further explained in a personal dialogue with each of them.

The last challenge was that of technology. There is a plethora of technological resources that can be used for distance learning. To begin with, it is important to note that although technologies are available at the school for the students, they are likely to not have a computer at home, since the vast majority of homes in Belize do not have a computer which adds to the issues regarding technological learning from home/remotely. Although the idea of distance learning can be experimented with for students that attend a school with computers, it gets increasingly difficult to have students that live remotely practice distance learning from the comfort of their home since many are impoverished or poor.

IV. Results

Based on what I had hypothesized, I was both correct and incorrect. My hypothesis was that Belize would be harder to contact than Austin, but that Austin would be more likely to be disinterested. The results of this double tier hypothesis were interesting.

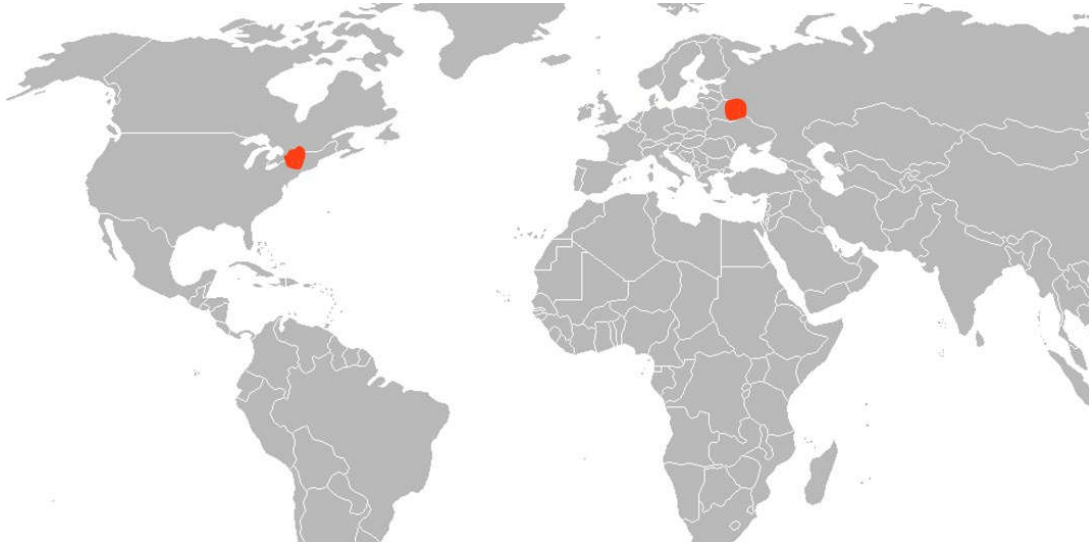
The first part of it was incorrect, since East Austin ended up being harder to contact. The sheer bureaucracy of the Austin ISD was enough to make the contacting portion very difficult. I would constantly get redirected from one person to another, and then had trouble getting people to call me back after leaving messages and emails for them. On the other hand, the Belizean school officials were more interested in the project and were more willing to participate. This could have been partly due to the fact that Dr. Gibson had personal connections with them. The other factor could have been their interest in seeing promise of participating in a study from a developed country, as it could add value to their curriculum and learning.

The second part of my hypothesis was correct: Austin was disinterested in the experiment. All schools I got a response from seemed to not want to participate in the experiment since they did not see value in it. It was as simple as that. The novelty of an idea of distance learning did not faze them and did not particularly motivate teachers to incorporate it into their already developed curriculum.

DISTANCE LEARNING CASE STUDIES

Case Study: International Distance Learning

The first case study that we will look at was conducted between the State University of New York (SUNY) and Belarus State University (BSU). The case was done to experiment teaching international students a curriculum to make them more open minded and experienced (Little, 2005). The target was to give students who were unable to study abroad, the experience of an international curriculum. Moreover, the other reason for this was because it would give students the ability to diversify their education.

Figure 5: SUNY and BSU Locations

Source: Little, 2005

The course that was presented was taught at SUNY and was accessible through the SUNY Learning Network which is a web-based platform. The study enrolled a total of 12 students. Five were enrolled from BSU and seven were enrolled from SUNY. This experiment served as a pilot to future distance learning projects that these universities hoped to conduct.

The course would cost no more than the price of a normal online class to those taking it internationally, which meant that the benefits of taking such a class were huge. The primary objective was to create an international online learning community. Moreover, the experimenters wanted to make a point of bringing together students from various countries at a low set cost since the only cost would be to pay a professor and a small fee to the university; moreover, there would be no overhead costs such as that of electricity, classroom rental, and other booking fees (Little, 2005).

There were many parts of the course that had to be well-planned, such as how often the teacher would communicate with the students, and to determine the protocol and expectations for the online class. Moreover, there would need to be a happy medium of course-load determined for the class. For example, if a student from a less demanding (or even easier) university were to take a class from a more difficult university, they would be surprised at the workload that would be expected of them from the course. Therefore, when conducting a distance learning project, it is essential to understand the audiences and find what works.

This brings us into the idea of what to expect from the audience. As a university course to be taught to eager students, it is important that the course be ready to be taught to a group of heterogeneous students. This means that each student has different levels of understanding, technical skills, previous knowledge, experiences, etc. Keeping this in mind,

the course must be able to address the interests of such a diverse audience. In addition, the sensitive nature of certain topics must also be taken into consideration.

Simplicity is effective. In an online course, it is very important for the course to be broken down in sizable chunks. This means that the content should not be too demanding because the experience for the student in a virtual environment would be more stressful due to the distracting outside environment that exists outside of the classroom. Taking this into consideration, it is also important to keep the modules consistent so that the student knows exactly what to expect.

It is also important to realize that distant learning courses have a lot of hidden potential. Besides presenting domestic educational content to an international audience, it can also promote tolerance and understanding between groups of students. Students have the ability to chat with each other on a virtual platform. Through an online communication chat, the experimenters recorded very empathetic and connecting conversations these students were having. For example, the Chernobyl disaster, as written by the BSU student affected everyone, especially his family. His heartfelt response talked about how his childhood village was destroyed and now looked like a dead zone. Moreover, he was able to explain the ecological disaster and tie it into the discussion, which all the other students read. The responses from the SUNY students were incredible to the BYU student, and spoke about how his personal yet informative response helped them see the truth and reality in such a grim disaster.

Case Study: Domestic Distance Learning

The two universities working with each other for online virtual classes were Columbia's School of International and Public Affairs (SIPA) and Carnegie Mellon's Heinz School of Public Policy and Management. These two schools would be working together as part of an innovative program in Information Resources Management. The two target cities were New York and Washington, D.C.

Several courses were offered in the IRM program, and the classes were taught through videotapes and the World Wide Web. During the course of the study, they found that a happy medium for class size was no more than 25 students. The small student to professor ratio was to ensure the intimacy for the two parties.

The goals of this distance learning project were simple. They wanted to take advantage of cheap/inexpensive technologies such as videos and the internet, experiment with the efficacy of mixing technologies and face time resulting in video lectures, and properly meet the expectation of each student. Their only expenses were producing high quality videos for the students to access, but the university already had such resources available.

The distance learning courses did not have any financial aid policies that could allow these courses to be taken at a reduced price. The amount to be paid was to be \$2,200 per course initially. For students who do not have access to such money, it is quite challenging for them to take a part in such a great exchange learning experience.

They did come across some challenges and questions that had to be properly discussed (Cohen, 1998).

1. University Degree Credit

One of these issues was what degree the students would get by taking these masters level classes since the classes were under the a joint-reign of both universities. They then agreed that the students would indeed receive the degrees of their specific universities that they attended. **2. Professor Approval**

The assignment of a professor to a particular class was something that had to be initially worked out. It was then decided that the professor teaching for one of the classes would have a home university, and then would be enrolled as an adjunct professor at the other university.

3. Student Resources

For classes that required outside research and work, the students would need to access resources from the universities. At first there was confusion on what would be available to each student, but the universities determined that the students would only have access to resources from their own university. As for meeting places, special rooms could be booked through the school advisors so that the students could meet up in a previously arranged space.

4. Finances

Both of the universities had to figure out how the students' course fees would be distributed to each university because some courses had a Columbia professor teaching while another had a Carnegie Melon professor.

The case between these two universities revealed a lot of policy implications, but these were properly worked out so that the classes would be able to run seamlessly.

The end of the experiment revealed the positive experiences that each of the students had while being enrolled in certain distance education classes. An important lesson that the experimenters learned was that the students had to be highly-motivated to be successful in a distance learning environment (Little, 2005). Besides that, the students complimented the classes on their professionalism, usability, and accessibility which is an important element since the implications of accessibility meant that distance learning could be tested and proven to be more accessible than a traditional classroom course.

The few negative experiences students were encountering were somewhat predictable. For example, some students had frustrating technical difficulties such as those with loading certain material or downloading necessary software. The most concerning was when a student would be unable to submit an assignment on time due to glitches on the web portal. Despite this, technical problems are always a risk when engaging with any technology. The overall experience for the students was still very positive.

LESSONS LEARNED

The first prerequisite for successful distance learning is for both sides – faculty and students – to be eager and motivated to teach and learn, respectively. If there is disinterest on one end, then the project will not be successful.

The second requirement is personalized plans that work for a diverse audience. This means that the curriculum must be prepared to accommodate a heterogeneous audience. The students must find value and interest in what they are learning.

The third and most important element is that of usable technology. It is important to use the form of technology that is best in your particular situation. For example, my communication with the Belizeans was primarily through email contact. However, further in my project, it was more appropriate to begin using Google Hangout for the necessary face time that is needed between the two parties (usually the professor and the student).

CONCLUSION

Many important conclusions can be drawn from the implications of distance learning. This form of learning can be very effective in bringing content to audiences that are remotely located or simply unable to access classroom instruction due to a conflicting schedule. For those individuals, distance learning can be an effective alternative.

For countries that are currently developing, such as Belize, distance learning can help bridge the gap between diverse populations of cultures. This helps bring educational access to those who would otherwise not receive any form of education. In a country such as

Belize, this is especially important because students will be the working population in the future and they need to be properly educated and trained to help the country develop. If its citizens do not receive a proper education, Belize faces increased challenges to more fully develop.

Another issue that is important to address is the cost of distance learning programs. Some programs can be free if it is a MOOC for example, but to get an actual degree from an educational course, the student must take a course from an accredited university. That

brings the question whether aid can be provided for students that are in need. With the low income of the majority of its citizens, Belize desperately needs aid and assistance for educational endeavors.

REFERENCES

- "Belize - Population below Poverty Line." IndexMundi. Web. 2016. <<http://www.indexmundi.com/g/g.aspx?c=bh&v=69>>.
- Cohen, Steven, William Eimicke, Mark Kamlet, and Robert Pearson. "The Information Resource Management Program: A Case Study In Distance Education." Columbia, 1998. Web. <<http://www.columbia.edu/~sc32/documents/cmrevisedjpae.pdf>>.
- Cox, Robert W. "Education for Development". *International Organization* 22.1 (196`8): 310–331. Web.
- "Creating Our Sustainable Future: Belize, Central America, and the Caribbean." BNECT, IC2 Institute, Arctic University. 2016.
- "Education in Belize." ITM Ltd. Web. 2016. <<http://www.belize.com/education-inbelize>>.
- Galloway, Charles. "Nonverbal Communication". *Theory Into Practice* 7.5 (1968): 172– 175. Web.
- Government of Belize. Ministry of Education. *List of Deans, Junior Colleges and Universities*. Web. 2016. <<http://www.moe.gov.bz/index.php/tertiaryinstitutions>>.
- Little, Craig B., Larissa Titarenko, and Mira Bergelson. "Creating a Successful International Distance-learning Classroom". *Teaching Sociology* 33.4 (2005): 355– 370. Web.
- Rosa, Peter, Sarath S. Kodithuwakku, and Waswa Balunywa. "Entrepreneurial Motivation in Developing Countries: What Does 'Necessity' and 'Opportunity' Entrepreneurship Really Mean?" *SSRN Electronic Journal* 4th ser. 26.20 (2006). *Frontiers of Entrepreneurship Research*. Web.
- Rubiales, David et al. "Distance Learning". *Academe* 84.3 (1998): 30–38. Web.
- "Statistics - Early Childhood Development." *UNICEF*. UNICEF, 2013. Web. 2016.
- The Statistical Institute of Belize. *National Census 2010*. 2010.
- Weigand, Madison. "Educating Belize: Challenges and Opportunities for the Future." Web. 2016. <<http://www.thebelizefoundation.com>>.
- "What Is Distance Learning?" *California Distance Learning Project*. Sacramento County Office of Education. Web. 2016. <<http://www.cdllponline.org/index.cfm?fuseaction=whatis&pg=3>>.