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**When School Is Online, The Digital Divide Is Greater**

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LS 400: Senior Capstone

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### **Abstract**

As COVID continues to rise, students will not be going back to school anytime soon. The uncertainty is making students and teachers anxious about distance learning. Nearly six million public school children are currently enrolled in distance education (Freedberg, 2020). The focus of this capstone project is on obtaining a better understanding of the issues students and teachers are facing due to distance learning. This is important to me because many students do not have the proper technology devices, which is resulting in students falling behind academically. An evidence based argument is offered that distance learning is putting students under toxic stress and the absence from school is leading students to lose skills in reading and writing. The three primary stakeholders perspectives analyzed were an elementary school teacher, students, and parents. After interviewing the stakeholders three actions emerged as ways to help students with the digital divide. Based on this evidence an action option is to contact the school district to voice the concern of digital divide .

*Keywords: Digital divide, distance learning, COVID*

### **When School Is Online, The Digital Divide is Greater**

When COVID-19 started schools were unsure how to proceed with distance education it was an unfamiliar territory for administrators, teachers, and students. Digital divide is a major issue, and is only recently being talked about. I am a student, but I am a mother of a sixth grade student as well. Using technology in schools is on the rise as most classrooms have chromebooks, smartboards, and rely on the internet for most of their assignments. I am interested in how distance learning is affecting students not just academically but emotionally, and socially. The digital divide is the difference between those with or without the internet. With a better understanding on this topic, I would be able to come up with a solution that helps students feel comfortable continuing their education without feeling stressed out. The main goal is to help bridge the digital divide and bring awareness to the issue.

#### **What is the Problem?**

The digital divide is a serious equity issue, putting those students without the internet at a disadvantage. Approximately 21.3 million Americans have no access to the internet, many of these being low income students. With many students doing distance learning, the fear is some are falling behind. The issue is students are having a hard time adjusting to being responsible for their academics. Students are feeling overwhelmed, stressed, and ultimately falling behind academically. While there seems to be some pros to continuing distance learning, the challenges that come with having online learning is overwhelming. You do not have to look hard for evidence that when you take a student out of the school environment, a student's social, emotional, and academics are affected. A lot of students need support from the community, teachers, and parents. As a team they need to come together and find a solution that is best for students. How can every student be given the proper equipment for distance learning, this

includes chromebooks that work, wifi, and school supplies. New research suggests that by September, most students will have fallen behind where they would have been if they had stayed in classrooms, (Goldstein, 2020). The students who are at risk are students who live in low income communities. Low income students are already struggling, but now they are facing even more challenges. Some families have complained that chromebooks do not work properly either because they are refurbished or because they are simply old, the issue of not having wifi is also a major significant problem. The biggest problem with distance learning is that students are falling behind, however it is taking a toll on their emotional and mental wellness. Distance learning is taking a toll on students, they are now feeling mentally exhausted and do not have the resources to properly take care of themselves. What can we as a community do to help students succeed? The problem with distance learning is many teachers are not trained to teach online.

### **Why is it an Issue?**

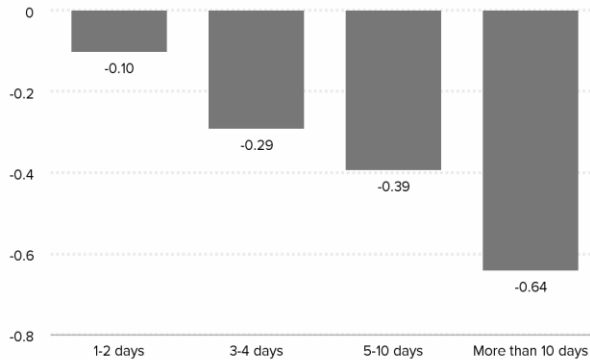
When students typically younger students are in school they are interacting with other students and asking questions, but now students are left to handle their education on their own. As schools close their doors as part of public health measures to limit the spread of COVID-19, educators are faced with how to support the diverse needs of all learners when students are not in school. As part of distance learning, schools and districts should consider: unequal access to technology; diverse affective/emotional responses to home lives and the pandemic; responsibilities learners hold as part of their homes and communities; access to safe and supportive learning spaces; and access to peers and/or adults to support learning and sense-making. If districts aren't better prepared , with "plans to address the different types of access gaps, instructional gaps, then it's an abdication of responsibility to those students and their families," (Gewertz, 2020). Low income students are the students who are struggling the most, distance learning is not inclusive

learning. According to an article published in August 2020 by The Los Angeles Times, “The Times survey found that districts serving communities with the lowest incomes — all with a majority of Latino students — had to confront a wide digital divide”. Students are struggling to turn in assignments and it is hard for them to catch up. Students are feeling the pressure of school, but for many students they also worry about their next meal. Luis Chaidez a high school teacher went from having 120 students to only fifteen students logged in, “People are worried about dying, and in addition to that people are being laid off, and now students in my community, where I serve, are worried about eating or rent”. Chaidez is seeing the struggles his students face, and he is not sure how to help his students. As we can see from figure 1 the more school students miss the worse their performance is. COVID has put a strain on students who do not have a support system at home, therefore they are falling behind academically. The digital divide is the reality we face for low income families. When a student misses ten percent of school days this starts affecting their reading levels and grade retention. The ParentsTogether survey included data that said, “ 40 percent of parents are reporting they are not receiving any support”.

Figure 1

### The more frequently students miss school, the worse their performance

Performance disadvantage experienced by eighth graders who missed school relative to students with perfect attendance in the last month, by number of days missed (standard deviations)



**Notes:** Data reflect performance in the 2015 NAEP mathematics assessment. Estimates are obtained after controlling for race/ethnicity, poverty status, gender, IEP status, and ELL status; for the racial/ethnic composition of the student's school; and for the share of students in the school who are eligible for FRPL (a proxy for school socioeconomic composition). All estimates are statistically significant at  $p < 0.01$ .

**Source:** EPI analysis of National Assessment of Educational Progress microdata, 2015. Chart adapted from Figure A in García and Weiss 2018.

Economic Policy Institute

### What Should Be Done?

When we look at how students are learning in classrooms it is easy to pinpoint the things they need, such as newer books, school supplies, we can see how they feel stressed or happy and even what they eat; but when students are at home we do not see their struggle, however right now more than ever students need support from their community. First schools need to make sure every student has the proper technology device to continue distance learning. This includes a working chromebook and reliable wifi. Although many schools have distributed chromebooks and WiFi hotspots, those still come with hoops parents have to go through. The WiFi hotspots that are available are first come first serve, and parents must meet certain requirements. A student needs to feel emotionally safe, cared for, and valued. Educators need to focus on making an effort to strengthen their relationship with students, building a community in the classroom. Feeling connected to a teacher makes a big difference, but with remote learning students have to

wait on feedback from teachers. The best way for teachers to understand students' emotional well-being is to help them succeed. Teachers need to know when to pause, know when students are overwhelmed. Online learning is difficult for both teachers and students because you cannot see your students face to see if they truly understand, so as an educator it is important to know when to take a break from the lesson. Examine what kind of skills would be helpful for students who struggle. Educators can help students learn about time management and how to ask for help when they are struggling. Parents need to be trained on all the programs a student uses for their class. The best way to do this would be to have a special training program for parents, this would be beneficial because it would allow parents to be more involved. Many of the parents I interviewed had that problem. They became frustrated because they could not help their students with certain school related apps. One parent mentioned that they did not know how to use their students chromebook, which led to the student being frustrated as well. If parents were trained this could have been avoided. Students are using many different applications for their classes, and it would be helpful if they had an adult they could ask for help. Governor Newsom and legislators are setting new requirements for distance learning (sections starting 43502 of trailer bill AB 77). These new requirements have many guidelines such as confirming that students have computer and internet access, setting procedures for engaging students who are absent more than 60% of the time, communicating with parents about the learning process, and providing academic support for english learners.

### **Conclusion**

As a community there is a lot we can do for students academically, socially, and emotionally. We need to offer all the support we can for students during these hard times, parents and teachers need to be the support systems for students. With COVID cases increasing by the day, it does not



look likely that students will be back to classrooms anytime soon. Distance learning is new for everyone, but students need to be put first and supported in any way possible.

### **Method**

For this Capstone Project an investigation was conducted to determine how distance learning is affecting students overall development. Students typically spend seven to eight hours at school, for many students school is an escape from home.. Elementary school is the time when you learn from your peers , therefore the researcher wanted to gain a better understanding of what can be done to ease the transition from face to face instruction to being online. Based on an analysis of the data and the relevant literature the researcher will use what she has learned to come up with an action plan that focuses on the issue.

### **Context**

Leopard Elementary School is located in Salinas, California. This project will only focus on Leopard Elementary School. This school is rated about average in school quality compared to other schools in California. They have below average results in how well they are serving their disadvantaged students. More than half of the students are Hispanic. 43 percent of students are from low income families.

### **Participants and Participant Selection**

I invited a sixth grade teacher and three sixth grade parents, I also was able to ask the parents permission to ask their student a few questions. This group of prospective participants were invited to participate because of their experience with distance learning. The students in this class are unique, because they have been with each other since kindergarten. Mr. Weber also has been a teacher previously for this class during fourth grade.

**Jill Shepard:** A parent of a sixth grade student. She only has one student and is a stay at home mom, but her husband travels for work as he works in agriculture.

**Audriana Robins:** A parent of a sixth grade student, she also has one other student who is in high school. Audrianna is a working mother, but has been laid off due to COVID

**Tina Torres:** She is a parent of four students who are all doing distance learning. She is a single parent who is an essential worker, working at a grocery store.

**Mr. Weber:** He is a teacher for sixth grade, which at this school is an elementary school. He has been teaching for ten years, and has been teaching at this school for the last five years.

**Researcher.**

This concern is personally meaningful to me because I believe that students need emotional support more than ever right now. Students need to feel they are being supported during these difficult times. I come from a family where failure is not an option, no matter how difficult things. I have seen my own son struggle with distance learning, and I do my best to make sure I am there for him in whatever he needs. As a mother it is hard to see your student falling behind academically and being overwhelmed. Many students do not have a support system at home, therefore it is important for me to find a solution to better help all students struggling right now.

**Semi-Structured Interview and Survey Questions**

1. What do you see as the problem with Distance learning or What are you concerned about when it comes to your students' education this year?
2. What is currently being done to improve distance learning - by whom - and do you think this is good, bad, or indifferent? Why?

3. What do you think should be done to improve student learning?
4. What do you think are the obstacles to improving distance learning?
5. Do you have a reliable internet connection?
6. Do all adults in your family work?
7. How worried are you about your child/children's academics and do you think they are falling behind?
8. How anxious are you about your child/children's peer relationship due to physical and social distancing.
9. Is there anything else that you would like to say about distance learning and/or the improvement of student learning

### **Procedure**

All interviews were done individually due to COVID-19 we were not able to meet in person. All participants were invited to join me via a zoom link for an interview lasting no more than one hour. A semi structured interview format was used for “face to face” interviews, to allow for follow up questions to unclear, interesting or unexpected responses. All interviews were scheduled at the convenience of the interviewee and should take approximately 45 minutes to complete.

## Data Analysis

Transcribed interviews were coded and analyzed for emergent themes.

## Results

For this Capstone Project, teachers, parents, and students were interviewed to see what they think could be done to improve the digital divide in low income students. This is important because many low income students are being left behind academically due to the digital divide. Low income students are suffering the most during COVID, they have no internet access and cannot access school. Based on an analysis of the data and the relevant research literature three themes emerged (see Table 1). Evidence-based decision making required evaluating each potential Action Option by the following criteria: time required; reach; and effectiveness. Time is important because The last significant element is effectiveness. It is key when looking at the digital divide, because it is a plan that needs to work, otherwise it needs to change. Based on the evaluation of each Action Option an action will be recommended and justified.

Table 1

### *Evaluation of Action Options*

	Time Required	Reach	Effectiveness
Grants	High	Low	High
Community Support	High	Medium	low/medium
WiFi/ Hotspots	High	Low/Medium	High

## Grants

Through one of the online interviews I acquired, a parent declared, “ our school needs to apply for grants to be able to afford new chromebooks and internet for every student”( Jill Shepard,

personal communication, November 1, 2020). In order to improve distance learning during these difficult times, school districts need to apply for grants to bring in more money to better assist students. There are a variety of ways for schools to help with the digital divide through grants. All students should have access to high quality, affordable internet service. A parent suggested ,”to reach out to internet company owners and get their attention and ask if they can help the school out’( A. Robins, personal communication, November 1,2020). Funds from any of these grants would help close the digital divide by providing essential devices, connectivity and any other related digital resources. The results

### **Community Support**

The second option that presented itself from the data and literature is having community support for students without internet access. The City of Salinas recently put a list together of the available places offering wifi for students. There are several different places where students can set up their chromebook and get internet access, while being supervised by an adult these sites also offer students lunch. When I asked the parents if they knew this list existed they mentioned that they were unaware and did not know that certain places were offering internet access to students ( A. Robins, personal communication, November 1, 2020). This option was favored by one parent because she lives in a rural area where the connection is not the best. The following option is effective in that students will have a place to do their homework and attend class. In the terms of reach, it is limited. For this to reach parents and students they must decide to drive to the location to access this resource. Lastly the cost is free for all students no matter the age. All that is needed is their own digital device and a face mask due to COVID.

**Wifi/ Hotspots**

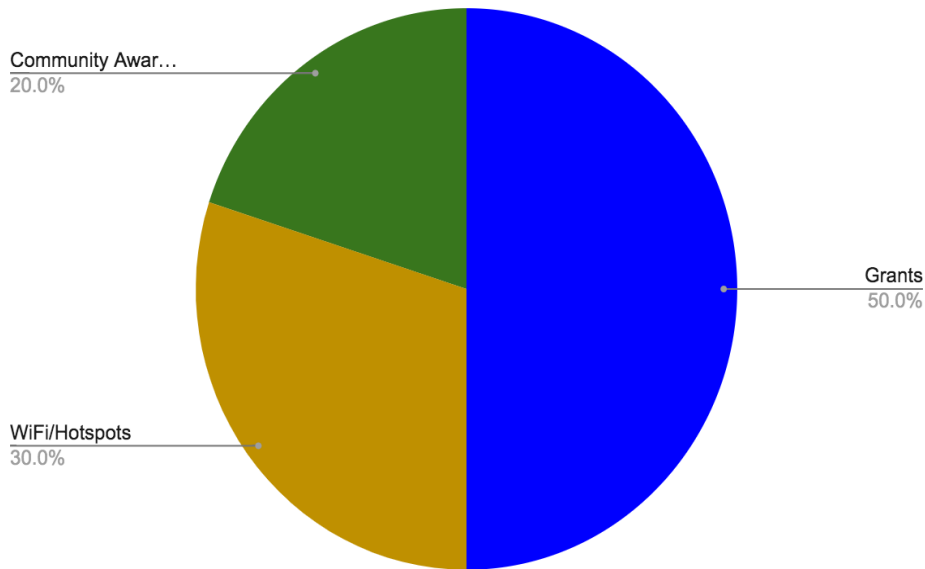
During this pandemic, it is hard for students who do not have WiFi at home to do their school work. The sixth grade teacher I interviewed understands students are faced with this challenge, he personally reached out to his district to see what the options were for providing students with internet access at home ( Mr.Weber, personal communications, November 1, 2020). Due to this issue being new and the pandemic affecting other aspects of school, he was not available to get a clear answer on how to help students. From data I collected it is clear that WiFi for every student is the best solution, however it is unlikely that students will get one right now. The pandemic has put a hold on many things and getting Hotspots is one of them. At the beginning of the school year parents were told they could get a hotspot, however they were on a first come, first serve basis. Mr. Weber was able to find resources for parents to get WiFi at low cost from some internet providers.

**Conclusion**

When looking at all three options, it is important to consider what is beneficial for the students. I believe that every student should have access to the internet at home and applying for grants to achieve that goal is the most beneficial solution. I have a strong belief that applying for grants will help get money for new chromebooks and internet access for all students. I came to this conclusion because Figure 2 shows that this option was strongly supported by parents and teachers.

Figure 2

*Participants Who Agree With This Option*



### **Concession.**

The other two options were split in half; however I feel if teachers and parents did more with community awareness then they could possibly be able to gain followers who can help them out with obtaining a solution for their problem. The option of WiFi/ Hotspots is a good alternative for students who do not have access to the internet currently. You can easily combine community awareness with WiFi/hotspots because more and more businesses are helping students with this issue. There are a few businesses in town that offer tables outside for students. They can use the internet and get free lunch, unfortunately not many parents know of this option because of the lack of community awareness.

### **Limitations.**

The option of applying for grants is the best option, there are still limitations that come with that. After researching the issue there are limitations to following the solution that is being recommended. This data is new and funding might take a while to get. Many parents and

teachers do not know about the alternative options that are available to students. Since many parents are not aware of all the resources available the digital divide will continue. The information getting to parents is limited in regards to how to help their students with getting a digital device and internet access.

### **Potential negative outcomes**

Although the following option has been recommended there is always a possibility for a potential student outcome. The recommendation that was made was to apply for grants either to help get students money for new digital devices or to get a hotspot for their home. The negative outcomes that arise from this recommendation is parents not getting into contact with programs that could help them with this issue, this can be for a number of reasons such as a language barrier. What is important to realize is that many parents in these schools are working parents, usually farmworkers and they do not have the time to apply for these grants. No matter what option parents or teachers choose, there is always going to be a negative outcome, but that should not discourage parents and teachers from applying for grants because at the end of the day everyone wants students to succeed.

### **Conclusion.**

When looking at the concessions, the limitations, and the potential negative outcomes, I have confidence that applying for grants to help bridge the digital divide in students is the best option. Funding is a big part of the digital divide and many parents and schools are not aware of the many grants available. Grants are available for parents and for schools, unfortunately not many people are aware of this and do not take advantage of them. All classrooms should have the same resources, it should not matter where you live. COVID has really highlighted the digital divide and has left students falling behind academically. Mr. Weber commented, “ It is



unfortunate that students are missing out on daily school activities and assignments, and if they do come, their internet connection is not the greatest”( Mr.Weber, personal communication, November 1, 2020). It is important for students to have the opportunity at home during distance learning, because unfortunately many students are falling behind and struggling to catch up. If all students had internet access and a technology device it would be easier for teachers to teach them and help their students out if they are struggling. The main goal right now is to make sure that every student has somewhere to go to login into school.

### **Action Documentation and Critical Reflection**

The main focus for this issue is the digital divide in low income communities. For this project, I interviewed one teacher, three parents, and three students. After completing my interviews, and research, three options stuck out to me: applying for grants, community awareness, and having WiFi/hotspots available. After doing more research on each option, the one I decided to implement applying for grants to help bridge the digital divide. I picked this option, because it had the best results when talking to teachers and parents, and it had the strongest impact on helping students with distance learning.

### **Action Research Project Documentation and Reflection**

For this action project of my project, I encouraged parents to reach out to their districts and have them apply for grants to better support their digital divide. I gave the parents and Mr. Weber the idea on how to apply for grants and that this could be an option to better help students. I performed this action by emailing a list of grants available and encouraging them to apply for them and let other parents know as well. I did research and found a few programs that offer grants for the digital divide. By applying for grants, this allows the district to have funding for better technology. If approved for fundings the grants would help students without the internet

by providing them with hotspots and chromebooks for every student. The one thing that surprised me was the parent support I received, the parents had no idea that there were grants out there to help them if they did not have access to the internet or a chromebook. The parents were very interested in knowing more about the grants available and how they could help not only their students but others as well. As I was writing my email, I realized that not all parents have an email or language barriers play a role as well. In order to make sure all parents and teachers have this information I made a bilingual flyer that could be passed out to parents; see *Image 1*. When looking back at how far I have come from the start of my capstone project, I wish I had been able to do a home visit to see how students' chromebooks work with their hotspots. I wish I could have been able to apply for one grant on the behalf of the classroom I had the opportunity to interview. The important next steps are to keep spreading awareness about the digital divide in low income schools. I feel the more awareness about digital divide there is, the more the gap closes for students who suffer from the digital divide. One major aspect I learned about myself is that I can step out of my comfort zone and be a leader. This project was something completely different from anything I have ever done. It pushed me in ways I never thought possible, overall I am grateful for the opportunity to step out of my comfort zone. It was overwhelming at times to find local and non local grants, but I am happy with the information I found and happy I was able to provide that for parents and teachers.

### **Synthesis and Integration**

When looking at all five of California State University Monterey Bays Liberal Studies MLOs, I accurately saw three MLO's that impacted my professional development; MLO 3, MLO 4, and MLO 5. These are three MLO's that have motivated me to look at all the aspects of teaching and learning. MLO 3 is based on being an innovative technology practitioner. For my senior capstone

project I had to rely on technology to gather most of my information on the digital divide. MLO 3 was used in a variety of ways for my project. I had to do research on the digital divide and come up with a plan on how to bridge the gap. My plan consisted of interviews with teachers, parents, and students, I tried to reach out to the school district but had no responses. I was able to identify three solutions that could help with the digital divide, especially right now due to COVID. There were different resources I was able to find online for parents and teachers to help bridge the digital divide gap. By providing them with these resources students are able to find the funding they need for better technology devices.

Through this capstone project MLO 4 was a big part of my project, MLO 4 is based on being a social justice collaborator. Being a social justice collaborator means to stand up for what you believe in, putting the needs of your students first. The biggest goal for any educator is to want the best for their students and to help them succeed. The digital divide is a huge problem in low income communities, COVID has helped shed light on this issue. After seeing how many students do not have access to the internet at home or a technology device, I was surprised to see that the school district is not more involved and wanting a change. This project gave me the opportunity to talk to parents, teachers, and students about how the digital divide is affecting them and how the community can better help them. We established that there needs to be more funding for schools. This impacted my professional development by making me realize that many students do not have access to the internet at home or technology devices. I want to make sure that my students have access to reliable sources, by doing this I will be able to make sure my students do not suffer from the digital divide.

MLO 5 is based on subject matter generalist and it is an important aspect to my professional development. The reason it is important is because I had the opportunity to observe

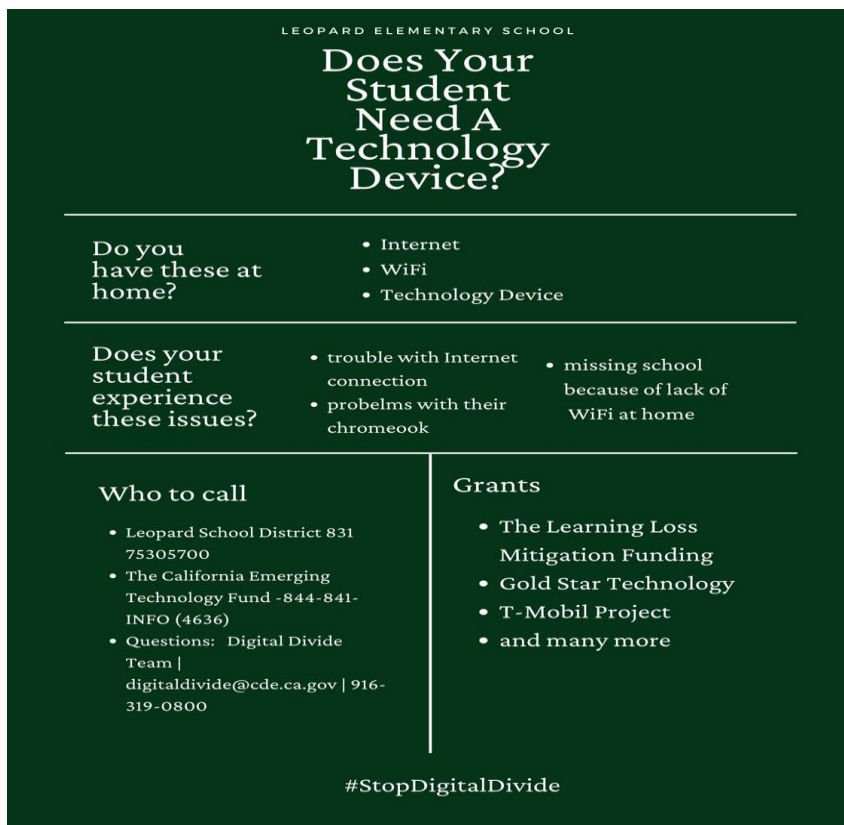
and look into what schools are doing about the digital divide, especially during COVID. The results of seeing what teachers and parents are doing to help with distance learning gave me a better understanding of how important the issue is and what we can do to help improve it. It also gave me a better understanding of how I could help my students with the digital divide. In order to make sure that students are successful and not falling behind academically due to the digital divide is to make sure that all stakeholders are made aware of the digital divide. Many people are not aware of the digital divide therefore cannot help. When all students have the same equal access to technology resources they will have better academic performance.

Thinking about what the next step I need to take in order to become a great teacher, a few things come to mind. The first thing that comes to mind is being understanding. I realize that students do not have the same access to certain resources, the students in low income areas tend to suffer the most. I need to make sure that every student has the opportunity to have the same resources as any other student. When a student fails, a teacher fails no matter what the reason is. The second thing is being aware of when students are falling behind academically and getting them the resources they need to succeed. Being aware of how students feel when they are struggling with missing assignments and school due to not being able to login into class. From my personal experience, I want to share with parents and students that I know the struggle and I will do my best to help them in any way I can. The final step that I need to take is to be an open minded person. I have always been a shy person, but with this capstone project I was able to break out of my shell and use my voice for a good cause. The reason I said open minded is because I generally do not like to ask for help or take advice from others; by asking for help or advice it will make a better teacher. By doing all these steps, I know I will have been a better teacher. The one goal I have is to be a teacher who students remember, I want to be the teacher that students

think of when they are asked about their favorite teacher. The career path I chose is not an easy one, but I look forward to being the best teacher I can be.

*Image 1.* Copy of the flyer that was emailed to parents and teacher. This flyer indicates a solution to the digital divide. The purpose of this flyer was to get attention on the availability of grants that parents and school districts could apply for. The flyer could be emailed to parents or used as a handout for those parents who do not have an email address.

*Image 1*



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