Technology Access and Academic Performance

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Introduction

Access to computers and the larger internet is crucial in this day and age where apps from the Google suite like Docs, Slides, and Classroom have become the new norm for the modern class. Lack of access to either of these vital resources jeopardizes the academic performance of any student and as we become ever more dependent on these technologies to advance our students' learning, we must also ensure we do not forget that not everyone has access to these resources. In our paper, we will investigate how strong the links are between access to technology and resulting academic performance.

Literature Review

In general, the literature seems to be broadly positive on the link between digital technologies and academic performance with some minor cons and points to take note of.

In the paper "The Effect of the Digital Classroom on Academic Success and Online Technologies Self Efficacy" their key conclusion was that "academic success of the students in the digital classroom is meaningfully higher than the students in the classroom without any digital technologies" (Mehmet Arif Ozerbas, & Bilge Has Erdogan, 2016). They stated that factors like the material being much more engaging (due to it being on an interactive digital platform) or the use of computer software to teach abstract-based subjects, such as math, in an appealing way through audio and visuals and that using digital software was much more interesting than pen and paper learning.

In another paper, "Technology Problems and Student Achievement Gaps" the authors examine the inequalities in access to technology through "technology maintenance," a term to describe the quality and stability of access to technology. The authors look at the relationship between technology maintenance and academic performance. The authors noted that students of lower socioeconomic status (SES) were more likely to have computers that had hardware issues, phones with little to no service, and disruptions to internet access due to financial issues or hardware issues. This led to students struggling to use the technology and thus it was related to a lower overall GPA. These students, at times, also shared some of the costs of maintaining these services. Students of higher SES had little to no issues with technology maintenance and parents were more likely to fully support their children.

Lastly, the paper "Online Learning: Does It Help Low-Income and Underprepared Students?" The authors describe the potential benefits of online learning by allowing students to study on a schedule that is optimal for them and by reducing the cost and time of commuting. A technology-based approach to learning can benefit low-income students by providing more access to resources at more times, such as office hours or sections, due to not requiring them to be on campus. But the researchers also noted some disadvantages to a technology-based approach such as technical difficulties, a sense of isolation, and a lack of structure. A possible solution that was proposed was to develop a hybrid-based approach to learning to provide the same benefits of learning but with in-person support for the issues that come from online learning.

Online learning and digital technologies can definitely positively impact students' learning when used appropriately, but how severe are those disadvantages when it

comes to lower-income students who don't have the same opportunities as others? A gap we noticed in our research was that while the papers usually split the students into two groups to compare the effectiveness of digital learning, they didn't address the students who were required to be online, but due to their socioeconomic status had difficulties in maintaining that access to perform well in school. Our paper aims to tackle this and see if the digital divide between students massively impacts the academic performance of those at the lower rungs of the ladder for those who are required to be in online classes.

Research Question

How does the difficulty of maintaining sufficient access to a digital classroom environment affect the academic performance of lower-income students?

Research Design

In order to gather the required data for our research, we intend to conduct interviews with nonprofit staff members with sufficient experience with students and their technology usage habits. The target demographic of our research participants will be the age group of the students on the site, Middle schoolers, grades 6 - 8. It will be a mix of males and females, with varying income levels, and they are all comfortable with some technology, either phone or computer. We'd like to get a bigger picture through the staff members of the students that attend the nonprofit and how they utilize the technology there and how that might be affected due to their situation at home. We intend to gather anecdotal information through these staff members and would prefer the larger picture they could provide over interviewing more individual students directly.

We plan to gather these interviews at our service site as there are many qualified employees there to question and we will conduct them in person as it'd be the easiest for them and for us. We will record their responses (with their permission of course) and then transcribe them later to keep things simple during the interview. Below will be the questions we will ask:

- Roughly what percentage of students have internet access at home?
  - What about computer access too like desktops or laptops?
- How important do you think it is for the Boys & Girls Club to provide technology access to its student club members?
- What kind of support do you provide for students who are computer illiterate? Does the school provide any support for it?
- Do you notice if there's a relationship between socioeconomic status and the amount of academic assistance needed amongst students?
- In what ways do computer usage habits differ between those that are struggling academically and those that are successful?
- Do you think schools should be obligated to provide access to hardware if they don't have it at home? Why or why not?

Service Organization

Our group is all serving at the same service site, the Boys and Girls Club of America, Live Oak Clubhouse location. Its mission is to provide a valuable afterschool program to K12 students and provide services like activities and sports, homework help and tutoring, art and projects, and lastly more relevant to us, technology access like desktops and Chromebooks. The overall organization has a mission to provide

equitable access and a diverse safe space as well as having a diversity, equity, and inclusion director to assist the branches in their work. Our service project there has been to service and upgrade any computers so that the kids can use them for their learning and the Clubhouse has plenty of computers to use even after we end our service. The Boys & Girls Club provides technical assistance and access and that falls in line with our topic and research, we'd like to ask their technology directors to get comfortable with their experience on the topic.

Conducting Research

For our research, we conducted interviews with several prominent staff members at the Boys & Girls Liveoak Clubhouse. We interviewed Clubhouse Director Jennifer Sherry, Office Manager & Development Assistant Silka Jewell, and Education Director Manny. All of our staff members interviewed had well over 5-15 years of experience at the Clubhouse and with assisting students with their homework and technology use at the site. In addition, Manny had a prior background at Bayview Elementary as their student aid director.

Findings

From our interviews, we noticed a few trends between all interviewees on certain questions and overall all interviews had a similar theme regarding the importance of access to technology and their club members (the students). Please see Appendices A, B, and C for the interviews with Jennifer, Silka, and Manny respectively.

Starting off, from our first question on the topic of technology ownership amongst the students, all the staff members reported similar percentages of around 80-90% and

that some students still required the technology at the club in order to finish homework due to not having access at home.

On the importance of providing technology access onsite for their students, all three staff members said it's crucial. Silka and Jennifer said that during the pandemic, the club was the only reason many students were able to finish their homework as they didn't have access at home. Manny, as the Education Director, said that in a post-covid world, the students still get assigned online homework and so onsite access is essential for being able to tutor the students.

Regarding the resources that the Boys and Girls Club had to teach students/parents how to use the internet/computers, Manny and Silka responded that they were not aware of any resources they had to offer; however, Jennifer said the organization itself on a national level provided a website dedicated to teaching basic computer and web literacy to students and parents.

The staff members were divided on the relationship between socioeconomic status and the amount of academic assistance that was required from the student. Manny expressed that the educational system tends to label those from lower-income households and place them into supportive programs, which could be another factor to take into account but overall he finds that these students usually need more help. On the other hand, Silka believes that socioeconomic status has little to no effect on whether a student is doing well in school but has found that those students generally need more tutoring. These findings could show that a correlation between study habits is more important than the student's socioeconomic status.

All three staff members had similar thoughts on the habits of successful students versus those that were struggling. Their most successful students were those who were already focused on the task with good habits like logging onto their homework site immediately without being asked and wouldn't keep separate tabs open in the background that could lead to distracting them. Unsuccessful students would keep tabs open and constantly be distracted, Silka mentioning that when she has to manage homework time, having to constantly tell distracted kids to close their extra tabs.

Lastly, the responses were split when asked about the school districts being obligated to provide hardware to students for online work. Jennifer stated that the school shouldn't be obligated but should do everything in their power to get the students the hardware they need. Manny and Silka stated that schools should be obligated to provide necessary hardware, stating that if the school requires students to work online and requests that all students submit work online, then it should be the school's responsibility to provide the resources to do so. This split may be coming from the perspective of their positions. Jennifer is the unit director and she would understand the difficulties and logistics that go into getting and distributing the hardware and would be careful to say that the school is required because she knows how difficult it is, while Manny and Silka are more focused on the students.

Based on the findings of the interview we concluded that students who did not have access to internet and hardware at home were more likely to have difficulty maintaining good academic performance and required more support to help them be successful. They had to finish assignments at the Boys and Girls Club due to not being able to work from home. This changed once the school began offering hardware and

internet access at home through hotspots but then they needed to learn how to use it because they did not have the knowledge to navigate the internet or how to use a laptop. The Boys and Girls Club also provided support for this through programs, websites, and in person support. Without this assistance, students of lower income who did not have access to the internet at home would struggle to maintain good academic standing.

In summary, one major theme was that the staff all placed a major importance on having access to computers at their site, stating that the pandemic brought the digital divide to the forefront of education and even after the need for stable access to computers is still relevant now. Access to technology is critical, but even amongst the students with sufficient access, study habits and what the students end up actually doing on the computers tend to be more telling in their academic success. Another theme was on whether schools should be mandated to provide resources to kids because of the increased dependence on online learning. On one hand Manny and Silka were supportive of the idea while Jennifer was against it, which could be because of Jennifer's experience and knowledge being the director and understanding of the difficulties in acquiring resources.

Conclusions

In conclusion, we believe that yes, there is a solid relationship between the difficulties surrounding access to technology and academic performance. From our research data we found that generally those that needed assistance were from a lower socioeconomic background and that students from affluent backgrounds needed less support than their peers. We also found that habits play an important role in the success of students and that this wasn't strictly solely tied to socioeconomic status, but that there could be links there to investigate. One of the staff members mentioned that the habits may be related to how students spend their time away from school. Students whose families are able to afford it can have access to after school programs, sports, and extracurricular activities and being in these structured settings constantly allows them to continue practicing those habits. Our conclusions reflect on the issue of the digital divide topic we learned from this course, that those who cannot afford the technologies required for modern classrooms end up worse off than their affluent peers.

If we were to do further research, a recommendation would be to focus on what types of habits led to academic success amongst the students. We would investigate how student's habits could be different or if they were taught differently depending on their socioeconomic status. Research on habits can be used to develop plans for students who struggle with focusing in class. For recommendations for our site or the general populace, because habits can be something anyone can utilize regardless of socioeconomic status, we would suggest that implementing strong habits like focused work, eliminating distractions, etc. and ensuring they know how to build those habits which should be taught to most students or parents.

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Appendix A

Interview with Jennifer Sherry, Clubhouse Director of the Boys & Girls Club, Liveoak Branch conducted by Warren

Warren: Okay, so to start off, our first question is, we're just trying to figure out roughly what percentage of students have internet access, home computer access. We're just trying to get an idea of the demographics.

Jennifer: Yeah. I would say probably about 80, 85% have internet access at home. I'd say 80, 85% Do not have it. Probably 15% don't.

Warren: Okay. The next question is just how important is it for the club to provide technology access to like the students?

Jennifer: It's crucial. Most since the pandemic, you know, like during the pandemic we were open for essential workers and we had to have internet access so the kids could get to online school while their parents were working. You know, we had children of nurses and grocery store people and PG&E people and firefighters and all of the stuff coming here. So we had to have it then. And since then, the schools have assigned more and more online homework. So in order for them to get their homework done, They need to have internet access here and they need to have reliable computers to use to get on there to be able to do that IXL and their Clever and their Leia and their Google classroom and things like that.

Warren: Okay and then we have problems with this question, but do you provide any support for students who are computer illiterate? Like, don't know how to use the computers?

Jennifer: Yeah, so the Boys and Girls Club of America has a website called My.Future.net. And we can help a child set up an account. And then there are games that they can play on the website that teach them how they teach them about internet safety. Teaches them how to use a keyboard, like typing practice type things. How to, how to look things up on the internet, you know, how to change their password. The importance of not sharing their password with people. So we have that kind of support that we provide at the national level. And then just in person, it's really just about helping them remember how to log in, helping them, you know, by a program called B Y O D, bring your own device policy and this is for kids who bring phones and iPads and things like that, and so that they don't go on social media sites where they shouldn't be, you know, like. Like, Okay, you know what? We know they're gonna get on Snapchat. We know they're gonna get on TikTok, but you know what? We need you to stay off Omegle, stay off of chat roulette, you know? And we have also printed out documents for parents that show them different social media platforms and the calculator app the kids can hide their apps in. Oh, okay. So you can download those. You download this thing and it looks like the calculator on there. But if you punch in the code so it looks like you're, you know, it looks like you're doing a math equation, boom, it opens up and you can see all the social media that they're hiding from their parents. So that's kind of how we support the parents and just let them know, you know, I've got kids, I've had kids over the years whose parents let them do chat roulette or get on 4chan or Discord, and it's like those are not appropriate for small children.

Warren: Do you notice if there's a relationship between like, Socioeconomic status and the amount of academic assistance needed to provide to like a student?

Jennifer: All, all of Yes. Yes. So like the families that don't have the internet at home, a lot of them are, are undocumented families. Because you know you need certain paperwork in order to get certain utilities at home. So we, you know, we have families that are undocumented and they couldn't get internet, which is why, you know, we provided hotspots for them during the pandemic so that they could have internet at home. If a family can't afford a new computer, you know, every time a kid breaks one and kids break 'em a lot, they break them a lot. Then, you know, then the child can't do their homework at home. They gotta do it here. So yeah, I would say yes, there is definitely a correlation between socioeconomic status and I've noticed, like, is a horrible thing to say, parents who have a little more comfort with their finances tend to allow their kids to be on their computers more often. And, and then these kids don't they don't interact well. So they're social-emotional development because like, you know, a parent will be like, Oh, okay, hand the kid an iPad. You know, waiting in line at the grocery store or riding in the car, or they just use it to keep the kid busy so that they don't have to deal with whatever the kid needs right then, and they don't allow their kids to get bored and boredom is where creativity is born. It's important to let 'em be bored sometimes.

Warren: Yeah, I agree. I've seen a lot of that in my own family too, but yeah. In what ways do computer usage habits differ between those that are struggling academically and those that are successful? Like general habits.

Jennifer: That's a, Well, I would say like some of our kids who do more extracurriculars like soccer or tennis. You know, they, they're at the club for an hour and a half, but then they're going to another lesson because their families can afford to keep them in youth sports or keep them in youth theater or music or any of the extracurriculars because

their parents can afford to send them to that. Whereas the kids whose families are struggling, they're here and they're on the computer because it doesn't cost any extra money to, to sit on a computer and, and play videogames. I don't wanna make it sound like there's no value in playing video games. There's a lot of value in video games. It just depends on the game. Depends on, yeah. And it depends on how that game, cuz you know, it can be a toy or it can be a tool depending on how they're taught how to use it and considering how everything is. So computer and internet based. Moving forward into the future, it's gonna be more important that these children are computer literate than they have a college degree because you can. Jobs in tech, if you know what you're doing in tech, you don't have to have a master. Yeah. If you can, you know, you know what I'm saying? And my daughter has a friend, he was just a high school graduate. He went into the Air Force. They, you know, they test you in the Air Force to see where your skills are at and he, he's in for life and he's working in IT in the air force. He didn't go to college, but you know, he's on a national security level because he had a natural affinity for it. And the Air Force recognized that and taught him what he needed to know. So it's, he thinks, you know, it's all because he spent an enormous amount of time playing games.

Warren: Okay, our last question. Do you think schools should be obligated to provide access to hardware if they don't have it at home? Like internet Chromebooks?

Jennifer: You know, I don't know if schools should be obligated, but I know they are doing everything they possibly can to get children the hardware that. During the pandemic, every kid was issued a Chromebook, you know, and if they, when they ran outta Chromebooks and they were something like 12 Chromebooks short of being able

to give one to every kid in the school district, and they ran out and they got 12 more Chromebooks to make sure that every kid had a Chromebook issued. So this school district, that we work with does do that because they feel it is important that the kids have the hardware. They do have rules. If you've lost your computer a certain number of times, then they do take it away from you. And you can only use it at school. They don't allow them to take it home anymore. You know, I do think, I don't know about required, but I do think that school districts should make every effort because it's just so, it's so critical. They're not going to be employable in the future if they don't know how to use it. That's just the reality.

Appendix B

Interview with Silka Jewell, Office Manager & Development Assistant of the Boys & Girls Club, Liveoak Branch conducted by Yukio

Yukio: Do you know roughly what percentage of students have internet access at home?

Silka: Oh, percent have it? Yeah. I know a few that do not, so I'd say maybe 85% have it, and about 15% don't.

Yukio: And just don't have access to either hardware or wifi or?

Silka: And my parents don't have the internet. Can't afford it. They just don't have any internet at home. We have a couple of kids who during the pandemic, They had to get all of their online learning done here while they were here because parents absolutely had no way of having internet at home.

Yukio: Okay, that's good. How important do you think it is for the Boys and Girls Club to provide access to technology to its student club members?

Silka: I think it's very important. Just kind of ties back into, we were the reason they were able to get their online schooling done during the pandemic because we actually had access to it.

Yukio: Okay. What kind of support do you provide for students who are computer illiterate? If it does, does the school provide any support for it? Meaning did you ever come into a situation where students didn't know how to navigate a computer, Didn't really know how to navigate the web? Like they weren't really familiar with doing it?

Silka: The kids seem to be smarter at that stuff than any of us could ever imagine. I mean, a few times they got a little confused with some of the programs, but usually, they

pick it up pretty fast and understand it, especially with some of the programs that have,

if it has the words, they have the little speaker and they can push on it and it'll read it to

them. What it says, but I honestly think that children pick it up faster than most adults

do. Okay. That kind of makes sense. You know, I mean, they, they've had it their whole

life. Some of them. Played with cell phones once they, since they were babies, and so

they kind of just know how to do it.

Yukio: Even those few students that are, that didn't have internet access at home or

hardware even them?

Silka: They were yeah, because they're exposed to it in other places, you know, I mean,

the couple that I'm thinking of, they've, you know, eight, eight years old or so, they've

already had a few years at school where they'd already been using computers and

things like that. They have friends that use 'em. We've had 'em always available to them

here, that they've always had computer time here that they can get on and do it. So they

do seem to pick it up pretty fast. Okay.

Yukio: Do you notice if there's a relationship between socioeconomic status and the

amount of academic assistance that is required?

Silka: What do you mean by required to, like from the school?

Yukio: So the students sometimes do homework here, right? Do you kind of think that

there's a connection between like students that are a little bit more affluent and if those

require less help with homework?

Silka: Yes, less help with homework? Definitely. I mean, there's, there's some that of

course need a little more help tutoring-wise just because. I mean, socioeconomic status

doesn't really have anything to do with if, how well they're getting their homework done

or things like that. But I do notice that it does seem the ones that do seem to struggle do seem to be lower on the socioeconomic status, definitely.

Yukio: Mm-hmm. Okay, in what ways do computer usage habits differ from those that are struggling academically and those that are success? So with those people that do well in school and those that do not, do you kind of see a difference in how they use computers and what they do on the computers?

Silka: Mm-hmm, definitely some, you know, are mostly get on just to game. They're, it's not about education, looking things up, doing their school work, things like that. They get on the computer. I come around to check and see what they're doing and they're sneaking in YouTube videos here and there.

Yukio: And those are for people that are struggling in school?

Silka: Usually? Yeah. Yeah, Usually That's what I find. The ones that are struggling are the ones that won't be doing what they're supposed to be doing. Don't stay on task. You know what I mean? Yeah, It's hard for them to remain focused on the homework. They get sidetracked. They'll look up something, then they'll start getting into doing that and forget that they're even working on homework. So it's kind of keeping them on track. When you got too many other things, or I'll have to be like, Will you close some of those tabs? Because they've got like 10 tabs open at the, and like one's a YouTube video about this game and one's a YouTube video about this, or one's a little gamer game. You know what I mean? So yeah, I'll have to be like, you're supposed to be doing homework. Those tabs should not be open cuz you know they'll, soon as you walk away they'll go back.

Yukio: That makes sense. Do you think schools should be obligated to provide access to hardware if they don't have it?

Silka: Actually, yes. Absolutely. Especially if they're asking it. Most of the things that kids are doing in school now are on computers, even post covid. Yeah, they're still doing it every day. Kids have homework on the computers. Alexia, lexcel. they're all programs that they're doing. So they have Chromebooks that the school still gives them, and they have homework daily on the computer. So yes, I definitely think they should be supporting it. They are supporting it right now and they're giving kids Chromebooks. I know my son goes to Harbor and he has a Chromebook from the school right now. And they have also told us in the past that if I wanted a hotspot, they would give us a hotspot so that if we didn't have internet or if we were out and about and he needed to get his homework done. So I mean, the fact that they are supplying those to kids is at least that they are making them have homework online and everything else, and they check their grades online. They do everything online now.

Appendix C

Interview with Manny, Education Director of the Boys & Girls Club, Liveoak Clubhouse conducted by Luis

Luis: Okay. So the first question we have here is roughly what percentage would you say of students that come here have access to the internet at home?

Manny: Hmm. For here at the Boys and Girls Club? I would say from what I've seen, and I've heard it, it's probably a good like 90%. Because I know that a lot of the school districts in the area have actually given their students a laptop from the school and they actually get to keep that laptop throughout the school year. The thing is some families don't have wifi or some families are in transition so that means that they're going from home to home or just from placement to placement in the community and so they might not have access to tech. They might have like a laptop with them, but that doesn't mean that they have access to wifi or to the internet in general. Now I know that some districts, I'm not entirely sure about the Live Oak District, actually give out, what is it called? Uh, Mobile Hotspots. To some students, like I know at my last district over at Bayview, we were able to get mobile hotspots through like Verizon and some other company. It wasn't AT&T, I'm forgetting what it was. But we were actually to get able to get mobile hotspots to us. So those students that were in transition, the students that had no access to wifi but did have some, some sort of device, they were able to actually join us through the mobile hotspot. So yeah, but to go back to the question, I would say anywhere between like 90 to 95% of us have access to technology here.

Luis: So if the kids ever need access to it and they could come here and just use the computers from here.

Manny: Yes, when we're open. I would just say that if they need access, they're more than welcome to join our wifi here. Cause the wifi here is connected to, I forget how the wifi works here to us, but they should, they all have access to the internet here because, I think the WiFi's like under like Live Oak School District or something like that.

Luis: So how important do you think it is for the Boys and Girls Club to provide technology access to its students?

Manny: Club members? Oh, super important. Very, very important. I think for a lot of reasons. Mainly the one that I'm in charge of is access to their homework.

So a lot of what we saw during Covid is still carrying out over to our students now, where they'll have, assignments on their Google classrooms or they'll have to do like Zearn lessons or IXL lessons or they'll just need access to the internet. So I think it's super important that they all have devices here and have access to those devices. That way they can continue with their academics here. I would also say just for fun too, I know that a lot of our students come in and just play a lot of games with each other on these computers. So during their free choice time. But that's all I can really think about off the top of my head right now. But yeah, I would say it's definitely important for their education, just continuing their education here.

Luis: What kind of support do you provide for students who are computer illiterate? Does the school provide any support for it? Those are two different questions.

Manny: Not that I'm aware of, no. I have not come across that scenario or that issue really, at least here. I know that some schools will kind of like type up a printout or like make a presentation of like how to navigate some of the stuff, but when you say

computer illiterate, is it kind of just mean like they don't understand how to navigate like online platforms and stuff like that?

Luis: Or how to use a computer or.

Manny: Yeah, yeah so I know that in my school district, I'm not sure if they do it here, but I wouldn't be surprised if they did it here too. Especially during covid. I saw a lot of like real simple guides and manuals, that were being made and printed out and sent to families like, this is how you log on. This is how you find your kid's email. This is how you find your kid's work online, but we also had, kind of like seminars on like how to do those, how to do that as well. So I know that there was our family coordinator who would gather people in person and online and they would kind of just like show you, okay, this is how we turn on the computer, this is how we charge our computer, this is how we log into the computer, this is how we go to their email and have access Google Classroom and all that stuff. So yeah, I would say there's like printed manuals out and some seminars for sure that exist and I wouldn't be surprised if they were over here as well, but as far as for the Boys and Girls Club, we have not had that issue arise yet though.

Luis: So the students are pretty comfortable using the computers?

Manny: Oh yeah, dude. Students from what I've seen both here and in school districts, kids nowadays are very, very literate when it comes to technology. I would say that they are the ones who probably like teach their parents how to use stuff too, or like show their parents how to do some other stuff too. But I would say, for the most part, most kids are pretty comfortable navigating online and the technology too.

Luis: So the guides and the seminars are more targeted towards the parents?

Manny: Parents, definitely towards parents. I would say those were definitely targeted more towards our less affluent families, and more of our immigrant families too. From what I saw, a lot of the people that were within those seminars and a lot of the people that we contacted in regards to getting them that supplemental information, like the manuals and stuff, were more of our lower socioeconomic families and a lot of those people were a lot of our immigrant families. Our more affluent people, I feel like they had a lot of technology already and so they already knew how to navigate it. So like, once Covid hit, they were perfectly fine with their transition cause they both had access to technology and they knew how to navigate it as well. So online learning was very easy for 'em. On the flip side, the lower Socioeconomic families and our immigrant families had no access to technology and when they did get access to technology, they didn't know how to use it. So that's why a lot of the seminars and a lot of the manuals and a lot of the supplemental information that we tried to get was more geared towards our lower socioeconomic families.

Luis: I see. Do you notice that there's a pattern between socioeconomic status in the amount of assistance needed among students?

Manny: I would say yes, but I'm really hesitant to say yes because that question, just in general, the education system, labels a lot of lower socioeconomic students as needing more help or like special needs, or they'll have IEPs or 504s compared to white or Caucasian or higher socioeconomic families. But I would say from what I've seen, yes. Especially here, the students that I work one on one with and that I provide additional support to have been on the lower Socioeconomic scale. So yeah.

Luis: All right. In what ways do computer habits differ between those that are struggling and those that are successful? Here primarily and like in the, when they're using the computers in the clubhouse.

Manny: Okay. From those that are struggling and those that are successful, my successful students, I don't even have to tell them like, Okay, get on your computer and go here and do that. They already know how to do it. I feel like they're very comfortable doing so and that's shown in their academic progress as well. I feel like those students since they have an understanding and like good habits of like how to get on, they do really well with online work. I feel like, for our students who struggle with computers and who have bad habits with computers, they get really off task and like they'll have their homework pulled up, but they'll also have another tab of like YouTube or another tab of, cool math games, whatever there is. So that's kind of like the patterns that I've seen, yeah, I would just say those are the patterns that I've noticed so far here.

Luis: Do you think schools should be obligated to provide access to hardware if they don't have it at home, or why not?

Manny: Yes, and I think because Covid definitely put a bright light on the disparities between higher socioeconomic families having a whole bunch of access to hardware and to the internet as well, and our lower socioeconomic families having virtually. Zero access to any hardware aside from their phones. I would say that it's very important for schools to keep that in mind, especially as we've seen a lot of the components that were developed over covid, so like a classroom and all that stuff. It's still being used to this day and as we know, our students are on campus still, but a lot of their homework is still

getting assigned through those online platforms and if we're, if a school district is requiring students to do online work, I feel like it's their responsibility to provide hardware for them to access that outside of the school.