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**Equal Education for All?: Equity Issues Impacting Physical Education and Physical
Activity During COVID-19 Pandemic**

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Abstract

The focus of this Capstone Project is on improving the equity issues affecting students' physical education and physical activity during COVID-19. Existing and newly developed equity issues have impacted students' ability to connect with their remote physical education (P.E.), leading to decreased levels of physical activity. This is an important issue for students because their health and well-being are being negatively impacted by issues out of their control. An evidence-based argument is offered that students who engage in physical education are more likely to maintain healthier lifestyles that can lead to improved cognitive abilities and academic success.

Considerations of the issue should include the perspectives of a physical education teacher, a classroom teacher, and 16 elementary-aged students who have participated in remote physical education during the COVID-19 pandemic. Three themes emerged from an analysis of the data and were explored as ways to address the issue presented. Family support is argued to be the most effective way to achieve the goals of addressing equity issues impacting students' access to remote physical education and their engagement in regular physical activity.

Equal Education for All?: Equity Issues Impacting Physical Education and Physical Activity During COVID-19 Pandemic

My neighbor Xavier is a fifth-grade student at our local elementary school who is currently experiencing first-hand a lack of resources to his remote learning. Xavier lives on the second story in a two-bedroom apartment building in a well-known low-income neighborhood in Santa Clarita, California. He resides with his two younger siblings and his single mother, who works full-time as a Coronavirus (COVID-19) essential worker. Xavier does not have consistent access to the internet or the use of a device regularly, as he shares the household computer with his siblings. Since he began remote learning, he has been unable to access his classes regularly and feels he is falling behind his fellow classmates.

When the COVID-19 outbreak occurred, Xavier and his family were promised reliable internet access and technology resources by their school. In reality, they were offered access to a mobile Wireless Fidelity (Wi-Fi) bus, which was parked on the opposite side of Xavier's neighborhood, and a reduced internet bill, which his mom could not qualify for due to poor credit. With limited technology options, Xavier is sometimes able to access his neighbor's Wi-Fi but the connection is not always consistent. When he can connect, he accesses Google Classroom which houses his main lesson activities in addition to his weekly physical education assignments. While minimal access is considered better than none, Xavier then encounters other barriers that hinder his ability to acquire an equitable education.

The limited accessibility that Xavier has to remote learning significantly obstructs his ability to perform academically and physically. When it comes to his physical education class, Xavier is given assignments twice a week that he is expected to complete. These activities

typically range from in-home interactive videos to online written assignments. Xavier struggles to complete the physical activity requirements due to the conditions of his home environment. He does not have a yard nor does his apartment have enough space for him to safely complete most of the required exercises/movements. Because of these conditions, Xavier typically does not complete his physical education assignments or engage in physical activity regularly.

After over a year of remote learning, Xavier has readily returned to in-person learning. He never received the promised technology from his school and his mother believes they never will. Xavier is just one of many low-income students throughout the country who have faced significant obstacles during remote learning. As schools, districts, and communities grapple with the return to in-person learning, many students are left still unable to connect to their remote education or access their physical education and engage in regular physical activity. While Xavier is hopeful he will bounce back from the destruction of the pandemic, many other students may not be as lucky.

Xavier was more than excited to finally return to a familiar routine, resume his academic instruction, and engage in physical activity. Yet, he remains unfamiliar with the upcoming pandemic repercussions and the amount of learning lost over the last year. With limited access to consistent education instruction, students similar to Xavier may experience developmental delays leading to deficits in their education as they grow. Physical education is the foundation in which students learn basic developmental skills, advance their fundamental skills, understand the importance of physical health, and gain the confidence necessary to be physically active, in and out of school. With the growing amount of time spent engaged in sedentary behavior, the lack of time spent being active, and an increased amount of screen time children can become at higher risk for serious health issues; for a child's environment plays a significant role in their exposure

to making healthy choices. More importantly, physical education has a beneficial influence on students' academic performance that should be provided to every single student regardless of their socioeconomic status.

Like any other ordinary 10-year-old kid, Xavier did not fully understand why he or his family were not provided with the same resources that most of his classmates were afforded. As a socioeconomically disadvantaged minority student, Xavier is statistically projected to fall behind his peers academically and the past year has only accelerated this projection. The equity implications of the digital divide during COVID-19 have further impacted Xavier's, and other low-income students', rights to an equitable education. Which also includes their access to develop the skills necessary to establish, maintain, and engage in regular physical activity. As schools begin to reopen and remote learning slowly fades, it is my concern that districts and schools will no longer acknowledge the digital divide or take the necessary steps to help those students in need.

Xavier and students alike need the most assistance while obtaining an equitable education. Their economic and social class, unfortunately, dictates the type of education they receive, and it usually is not equivalent to their middle-class white peers. Minimal access to physical education induces higher levels of sedentary behavior, increased chances of health risks like childhood obesity and type two diabetes, and lower levels of physical fitness. As students begin to return to school, equity issues may seemingly disappear but in reality, they have always been present and will continue to exist long after the pandemic. Districts and educators, like myself, are now presented with a unique opportunity to provide an equal education for all students, that promotes the inclusion of physical education at the forefront of academic curriculum.

Literature Synthesis & Integration: COVID-19 Impact & Equity Issues Affecting Remote Physical Education

Equity issues that affect students' learning have always existed but have recently been heightened due to the spread of COVID-19. Students are no longer spending their days on school campuses and are relying on technology to connect with their teachers and fellow classmates. A subject like physical education, which was already being placed on the back burner, is now becoming even more difficult to administer to students remotely, especially when not all students are able to connect or fully engage. Equity issues began in school districts with their differences in funding, curriculum, instruction, assessment, and school-community engagement, but have now crept inside the homes of students and their families (Ferlazzo, 2020). The environments of students' homes now play an even larger role in their education, including their physical education, and the time they spend being physically active.

What is the problem?

The outbreak of COVID-19 in 2020 has had a severe impact on education. The quick spreading virus, in addition to its unknown attributes, caused rapid school closures and a switch to remote learning. However, the subject of physical education can be difficult to administer online to students, and even more difficult to track participation rates. What makes the situation even more challenging is the range of students encountering socioeconomic barriers that affect their right to an online education. Some students do not have reliable access to the internet or lack the appropriate technology needed to connect them to their online classes. In fact, Lynch (2017) states that an estimated five million households with school-age children do not have broadband internet access at home. Unfortunately, the students most affected by these inequalities are minorities that come from low-income families (Lynch, 2017). With limited or

unreliable access to physical education, students are then faced with new challenges, or equity issues, that can affect their personal well-being, physical health, and overall academic performance.

Before the COVID-19 pandemic, school districts were faced with their own equity issues. Not all districts receive the same amount of financial assistance and therefore cannot provide their students with the same technologies used to support advanced learning. The inequalities in local school systems, because of the lack of technology, funding, or parental involvement, have been exacerbated by schools' remote learning and hybrid plans in response to COVID-19 (Povich, 2020). This lack of reliable, high-speed internet only further emphasizes the digital divide, meaning many disadvantaged students may now have to fight against the gap between students with internet access and those without (Lynch, 2017). In addition to accessibility, students engaged in online physical education classes sometimes cannot secure enough space to effectively and safely take part in physical activity and may also have limited access to supplies and equipment needed to follow online physical education classes (Jeong & So, 2021). All of these inequalities and challenges present in today's COVID-19 schooling system amount to the equity issues that ultimately affect students' access to physical education and their engagement in physical activity.

Why is it an issue?

Physical activity plays an important role in children's development. During the early elementary years, children develop the competency of sufficient fundamental motor skills that are critical to their physical and cognitive development (Lee, Zhang, Chu, Gu, & Zhu, 2020). Dwyer, Sallis, Blizzard, Lazarus, & Dean (2001) hypothesizes that physical activity improves social and moral development of children, as well as academic performance. The U.S.

Department of Health and Human Services recommends that children and adolescents six to 17 years of age receive 60 minutes or more of moderate-to-vigorous physical activity daily (CDC, 2019). At the elementary level, physical activity is mainly administered through lessons in physical education and recess.

Pre COVID-19, students spent approximately half of their waking day at school, which represents an important setting for promoting physical activity and reducing sedentary behaviors (Morton, Atkin, Corder, Suhrcke, & van Sluijs, 2015). This includes allotted time spent towards physical education and engaging in physical activity. However, despite the widely known benefits of physical activity, many young people do not meet the recommended levels (Drenowatz et al., 2010). In fact, only 24% of children actually achieve the recommended amount of 60 minutes each day (Mastrili & Schneider, 2021). In today's remote learning environment, it is almost impossible to hold student's accountable for their engagement in physical education and the physical activities that follow. The last year has produced new barriers that hinder a child's access and ability to engage in physical education, which in turn, poses a threat to the child's physical and mental health, cognitive capacity, and overall academic performance.

The digital divide prevents disadvantaged students from achieving the same academic successes of their counterparts. During a time when so many students are relying on technology, barriers like unequal access, unstable housing, and unsafe environments can affect students' ability to connect online and engage in their education. In regard to physical education, if students are unable to gain access to lesson plans and activities it significantly decreases the chances they will engage in any form of physical activity. It also increases the difficulties of developing new motor skills and enhancing skills previously established. This can ultimately

prevent students from achieving the confidence and necessary skills to be physically active for a lifetime and engage in healthy behaviors (CDC, 2019). The home environment poses more challenges for students that include enhanced distractions and mobility issues that can lead to sedentary behavior. Physical inactivity can lead to an energy imbalance and can severely increase health risks like obesity and cardiovascular disease, amongst others (CDC, 2019). Sedentary behavior and physical activity are part of a movement continuum and understanding the potential impact of the home environment on these behaviors of children is vital for developing effective interventions (Maitland, Stratton, Foster, Braham, & Rosenberg, 2013).

The importance of recognizing the impact Coronavirus has had on students' access to physical education becomes more prominent when evaluating the severe disadvantages it poses to students' physical and mental health and academic performance. Simple things like internet access, a computer, or a living room are often overlooked as a barrier to physical education, yet, they are now becoming major equity issues for students and their education. All students have the right to a public education and that should include virtual instruction or remote learning when necessary. This means that all students should have the same accessibility and resources as their peers, regardless of where they live or the income of their family. It is for these reasons that immediate action must be taken towards addressing and overcoming the equity issues students are facing that hinder their capabilities of developing the necessary motor skills, knowledge, and behaviors, all of which are provided through physical education instruction.

What Should be Done?

The U.S. Department of Education has appropriated billions of dollars in funding for all levels of education since the Coronavirus outbreak. According to Jordan (2021), The Coronavirus Aid, Recovery, and Economic Security (CARES) Act, which was signed into law in

March of 2020, provided \$30.75 billion for education to be distributed between K-12 schools and higher education. The author details more specifically that \$13.2 billion is to be spent on the Elementary and Secondary School Education Relief Fund, with \$1.6 billion going towards California schools alone and with very specific stipulations met under 12 allowable usages.

Jordan (2021) states that law number nine requires the funding be spent towards:

Purchasing educational technology (including hardware, software, connectivity) for students who are served by the local educational agency that aids in regular and substantive educational interaction between students and their classroom instructors, including low-income students and students with disabilities, which may include assistive technology or adaptive equipment. (p. 9)

This funding was quadrupled in December 2020 by the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA), bringing congressional funding close to \$54 billion (Jordan, 2021). This can allow for school districts to assess their students' specific needs, but more importantly, the equity issues students face in accessing their online physical education.

Federal funding opens the door to addressing students' needs in this critical period of time where most are relying on technology to learn. The CRRSA includes seven billion dollars to be spent specifically on the expansion of broadband access with a focus on educational equity (Jordan, 2021). Currently President Biden is working towards issuing the American Rescue Plan, which Jordan (2021) states, would provide another \$130 billion towards K-12 education and would also allow for the purchasing of hardware and software needed to conduct remote and hybrid learning. According to Richards, Aspegren, & Mansfield (2021) it will also include up to \$50/month for low-income families to pay directly for broadband service. The bulk of the money allotted throughout these federal funding packages goes directly to school districts based on the

proportion of funding they receive through Title I of the Every Student Succeeds Act. This means that Title I schools, or school districts with large concentrations of low-income students, will receive the bulk of the funding in order to provide for their disadvantaged students. Since most students who experience the digital divide are socioeconomically disadvantaged, they and their districts will benefit the most with this funding by being able to obtain equal access opportunities in order to achieve academic success.

In order to ensure students are all receiving an equal opportunity to achieve academic success, one must first address the barriers that prevent this from happening. In relation to students' access to physical education this includes barriers such as accessibility, technology, and mobility. With the assistance of more federal funding in the last year, districts should be able to further address students' needs on an individual basis and provide them with the tools and resources necessary to close the achievement gap. This includes providing broadband service to students at home, so they are able to connect with their teachers, physical education lessons, and activities. It can also allow for devices like laptops and tablets to be distributed to students who lack reliable tools to engage in their requirements of physical education. Finally, it can authorize teachers to develop and distribute alternative curriculum, like Health-Based Physical Education which helps students develop healthy lifestyles far beyond the schools' walls, for those students who lack the available space to engage in physical education and its recommended activities (Fernandez-Rio, 2016).

Conclusion

To help combat the equity issues students are facing in accessing physical education, money is a huge factor. Most schools, especially Title 1 schools, lack adequate funding to assist in meeting their students' educational goals. This becomes even more apparent during remote

learning as kids are continuing to struggle with keeping up and connecting with their teachers, lessons, and activities. Therefore, a large portion of the solution comes down to supplemental funding and how it is distributed throughout the school district. With billions of dollars in COVID-19 relief aid being disbursed, school districts should better analyze students' individual equity issues and provide them with the necessary tools and encouragement to engage in physical education and the skills to remain physically active.

Method

Physical education is an important aspect of ensuring children receive the necessary recommended levels of physical activity. Since the COVID-19 outbreak, equity issues have made it difficult or impossible for students to access their physical education class or be able to engage in physical activity. For this Capstone Project, I investigated how local education professionals currently view the equity issues students are facing and the suggestions they have for ensuring all students have equal access to physical education. Based on an analysis of the data and the relevant research literature, I used what I had learned to formulate an action that responds to the focus issue in a way that inspires, informs, or involves a particular audience.

Context

Ella Baker Elementary School¹ is a Social-Emotional Learning pilot school that is committed to provide students with a safe, caring place to enjoy learning, be intellectually challenged, make lasting friendships and master essential standards of learning. It is located in Almond City, California and is part of the Almond City Unified School District. Situated in the suburbs, Ella Baker Elementary School is in the midst of a residential neighborhood and is composed of a community of resilient individuals equipped with the knowledge and skills to

¹ Pseudonyms have been used for the names of people, places, and organizations.

create pathways to opportunities in life. The facility has a “good” repair status, according to the School Accountability Report Card (SARC), with the restrooms, water fountains, and electrical system being in “fair” condition. Relevant demographics include; 814 total enrolled students, 22.5% Black, 19.5% Asian, 41.5% Hispanic or Latino, 2.7% White, 1% American Indian or Alaska Native, 2.9% Filipino, 5.9% Native Hawaiian or Pacific Islander, and 3.9% representing two or more races. Over 94% of the school population is socioeconomically disadvantaged, 27.1% are English Language Learners, 16.2% are Students with Disabilities, 1.4% are Foster Youth, and 0.9% are Homeless.

Participants and Participant Selection

Ella Baker Elementary School was chosen because it is a Title I School with a high number of socioeconomically disadvantaged students that I had previous connections with and is currently teaching students remotely. My sister, Mrs. Smith was invited to participate due to her relevant experience and role as a first-grade teacher. The physical education teacher, Mr. King was also invited to participate due to his knowledge and current facilitation of the subject. All students in Mrs. Smith’s class who participate in P.E. were invited to participate in this study, in addition to all of Mr. King’s elementary P.E. aged students. These groups of students were invited to participate because of their first-hand experience in the subject and because of their potential of being personally affected.

Lydia Smith: Third year first grade teacher at Ella Baker Elementary School. She has been teaching remotely since March 2020 and plans on returning to in-person classes, starting in April 2021.

Kurt King: The physical education teacher for all elementary students (K-5) at Ella Baker Elementary School. He feels unfamiliar/uncertain about teaching physical education

remotely and looks forward to returning safely to in-person classes.

Researcher

Physical education administered throughout a child's schooling career, especially in the primary years, ensures that children are provided adequate time to be physically active, develop the necessary motor skills, knowledge, and behaviors for physical activity, and minimize their potential health risks, while maximizing lifelong competency. As a future educator of children, I believe all students should have equal access to P.E. and be allotted daily time to be physically active. With the COVID-19 pandemic and the switch to distance learning, children are now facing new and existing equity issues preventing them from accessing their online P.E. class and a means of maintaining an active lifestyle. As an avid runner, active lifestyle enthusiast, and with a current education emphasis in Health & Wellness, I know first-hand the benefits that physical activity can provide to oneself. The skills to become physically active and the ability to sustain an active lifestyle were established through learned motor skills and confidence building throughout my public schooling P.E. classes. Maintaining an active lifestyle has positively affected my mental health, my academic performance, and has helped reduce any potential health risks. The COVID-19 outbreak, however, has had a significant impact on P.E. and, therefore, students' physical activity levels. These new equity issues are out of children's control, yet dictate their abilities to further develop the knowledge, skills, and confidence to be physically active. As I moved forward with this research project, I remained open-minded to receive feedback on an issue I felt passionate about and am committed to documenting the authentic feelings, thoughts, and data presented by the participants. I was mindful of the particular thoughts and feelings that the students project towards the current equity issues being addressed in their home environments and personal lives, and I also remained neutral and without any bias. Ultimately, I

hoped to raise awareness to an issue that is potentially being overlooked or has fallen second to more scholarly subjects and to establish a possible solution that ensures all students have equal access to P.E. and can establish a stable and safe environment to participate regularly.

Semi-Structured Interview and Survey Questions

Teacher Interview

The following questions were asked to one first grade teacher from Ella Baker Elementary School.

1. What do you know about students' equity issues affecting physical activity during online P.E. classes? What are you most concerned about when it comes to accessibility and home environment conditions affecting physical activity?
2. What is currently being done to improve the equity issues affecting students for P.E. classes? By whom? What are the strengths and weaknesses of these efforts?
3. What do you think should be done about equity issues affecting physical activity during online P.E. classes?
4. What do you think are the challenges to doing something about accessibility and equity issues affecting these students?
5. Is there anything else that you would like to say about the equity issues affecting student's physical activity and/or the improvement of physical education during remote instruction?

P.E. Teacher Interview

The following questions were asked to one elementary P.E. teacher from Ella Baker Elementary School.

1. Tell me about teaching P.E. remotely.

2. What do you know about students' equity issues affecting physical activity during online P.E. classes? What are you most concerned about when it comes to accessibility and home environment conditions affecting physical activity?
3. What is currently being done to improve equity issues affecting students for P.E. classes? By whom? What are the strengths and weaknesses of these efforts?
4. How much P.E. are your students receiving a week?
5. What do you think about the amount of P.E. your students are receiving?
6. What are some of the obstacles and/or difficulties to providing students with more P.E.?
7. What do you think should be done about equity issues affecting physical activity during online P.E. classes?
8. What do you think are the challenges to doing something about accessibility and equity issues affecting these students?
9. Is there anything else that you would like to say about the equity issues affecting student's physical activity and/or the improvement of physical education during remote learning?
10. Is there anything else that you would like me to know about P.E. at your school?

Student Survey

The following questions were asked to volunteer first grade students from Ella Baker Elementary School.

1. Do you always have access to the internet and your school activities? If you do not, how come?
2. Where do you complete your P.E. activities?
3. What are some reasons you cannot complete P.E. activities?

4. What could make P.E. better for you?
5. What are you doing to stay active?
6. Is there anything else that you would like to tell me about P.E. or staying active?

Procedure²

All participants were interviewed. The teacher interviews were done individually, and student surveys were distributed individually. Each student received a code, provided by either Mrs. Smith or Mr. King, to complete the Nearpod survey at their own pace. The teacher interviews were conducted through email and each teacher was provided a set of questions to complete and send back. Email interviews took less than thirty minutes to complete and were conducted in a comfortable manner, where interruptions and distractions were minimized. A semi-structured interview format was used for email interviews. A follow-up email was conducted to allow for questions to any unclear, interesting, or unexpected responses. All interviews/surveys were scheduled at the convenience of the interviewee and took approximately 30 minutes to complete in one-sitting.

Data Analysis

Transcribed interviews were coded and analyzed for emergent themes.

Results

For this Capstone Project, one first grade teacher, one elementary school physical education teacher, and approximately 16 elementary aged students were interviewed to see what they think could be done to improve the equity issues affecting students' physical activity during online physical education classes. This is important because physical education plays an important role in ensuring that children receive the necessary levels of physical activity to maintain a healthy life. Since the COVID-19 outbreak, equity issues have made it difficult or

² <http://my.ilstu.edu/~jhkahn/>

nearly impossible for some students to access their online physical education course or have hindered their ability to engage in regular physical activity in a safe environment. Physical education can help to increase children's physical activity levels, reduce potential health risks, and improve cognitive abilities, leading to better academic performance. 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: availability, cost, and effectiveness. Availability is an important factor to consider, as resources and techniques may not be readily available to all participating parties. Cost plays a crucial role because every school district operates on a budget and student households function on different levels of income. Therefore, either participants may not be able to afford any unexpected or additional expenses. Finally, effectiveness can determine the potential success and to what intensity upon implementation. Based on the evaluation of each Action Option an action will be recommended and justified.

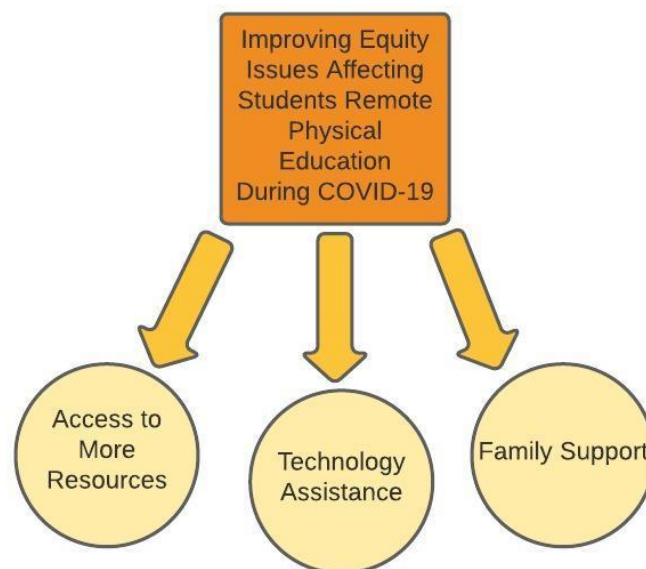


Image 1. Themes which emerged from the data and literature.

Table 1

Evaluation of Action Options

	Availability	Cost	Effectiveness
Access to more resources: computer literacy programs & ELL support	Medium	Medium	High
Technology assistance: free internet or Wi-Fi, faster connections	Low	High	High
Family support: help & encouragement	Medium	Medium	High

Access to More Resources

For some young children, remote learning during COVID-19 has been their first real experience with technology. At Ella Baker Elementary School, kindergarten students are not provided with access to Chromebooks, which differs from the higher grades. As a result, some students entering Smith’s first grade class lack any formal experience with technology. To many, it is usually the first time they have been on a computer and, yet, are expected to successfully attend class, complete coursework, and navigate through different online platforms. Many of these students and families are English Language Learners (ELLs) and in combination with unfamiliarity with technology, as one teacher interviewee stated, they found it challenging to access online education programs, including their physical education, due to their knowledge of English as a second language (L. Smith, personal communication, March 19, 2021). Ella Baker Elementary school, and schools experiencing similar disparities, would benefit greatly from additional available resources that include computer literacy programs, ELL technical assistance,

a network of district provided interpreters, or more designated areas where students and families, with limited living space, can safely engage in physical activity.

This theme emerged across the teacher interviews, even though it was not an anticipated response. The literature, however, reveals that policymakers are presented with a chance to provide new opportunities for students from diverse backgrounds that help to encourage engagement, promote physical activity, and foster academic success (Ferlazzo, 2020). It also provides a chance for educators to become more familiar with teaching remotely. As P.E. teacher interviewee King stated, “this is such an unfamiliar territory for everyone and I am still learning how to teach virtually every day” (K. King, personal communication, March 4, 2021). As a result of examining both the literature and interview data, availability to new and more resources can be made possible. As for cost, school districts operate on limited or fixed budgets. Due to increased expenses pertaining to COVID-19 health and safety regulations, schools may not be able to afford to implement these new resources or increase salaries for those asked to take on more responsibilities. However, with a new COVID relief bill being passed by Congress, additional funding is readily available to districts to help assist with expanding educational opportunities that meet the needs of all students (as cited in Jordan, 2021). Therefore, the availability and cost of this action option remains at an intermediate level. Despite the uncertainty of affordability, the effectiveness of providing better access to resources is high. Students, especially ELLs, are already in need of additional support in order to be successful in school and, therefore, it is no surprise that this support would still be needed beyond the school walls. This action option ensures that students and families in need of additional assistance would have a strong probability of successfully maintaining communication, connectedness, and understanding throughout remote learning.

Technology Assistance

Maintaining a stable and reliable internet connection plays a crucial role in remote learning. This was a common theme seen throughout both teacher interviews and many student surveys. The inequities became obvious when nearly 200 P.E. students at Ella Baker Elementary School were asked to participate in an online survey and approximately 16 responses were received. The disparities disclosed by both teacher interviewees and participating students enabled an action option to present itself. In order to ensure all students are able to access their physical education, school districts should provide technology equipment to those students and families in need. In teacher interviewee Smith's words, "the school district should provide families with the internet if they expect students to participate in distance learning to begin with, including physical education instruction" (L. Smith, personal communication, March 19, 2021). This can entail giving out or loaning laptops to students, providing routers and Wi-Fi hotspots, or increasing designated learning zones for students. It should even extend to include households that may already have one computer or tablet because some families might only have that one device for multiple children all day long. This parallels with the literature research as Lynch (2017) proposed that programs sponsored by the government and other organizations can help to provide low-income families with internet access. Yet, instead of providing technical assistance, Smith stated that "[her district] said P.E. would be optional this year" (L. Smith, personal communication, March 19, 2021). Rather than postponing education that can be critical to students' health and wellbeing, successful implementation of technical assistance can allow for a more equitable education, therefore, producing high effectiveness. It also, however, raises concerns over whether or not the technical assistance would be used appropriately. Just because students are provided with technology to connect to the internet does not mean they will use it

efficiently. Nonetheless, if more students are able to connect online their prospects and capabilities may increase and the internet or computer, in this context, may have the potential to act as a catalyst and change the course of a child's academic path. This action option, however, presents additional complications over cost and availability.

Ensuring that every child enrolled in public education is afforded with technical assistance can be a costly endeavor. School districts operate with limited funding to be directed towards addressing students' needs, but the latest COVID-19 relief package provides some monetary aid to address relevant education issues (as cited in Richards, Aspegren, & Mansfield, 2021). With more help from the state and local school districts, distribution of this funding can be made possible to support families in need. Yet, in order to provide technical assistance, the appropriate equipment needs to be readily available. The demand for hotspots and similar devices is high and, therefore, many providers have sold out of their existing stock resulting in extremely low availability. While this action option ensures quality effectiveness, limited supplies and high costs are significant barriers in its path to success.

Family Support

As students transitioned to remote learning the role of the home environment became even more important. This resulted in a third theme that became even more apparent during the research process. Both teacher interviews and one student survey showed that family support is necessary for students to participate successfully in online physical education. One teacher stressed the desire for family support by saying, "if each student had a parent or guardian supporting them during P.E. Zoom, they would most likely participate safely and maximize their needs" (L. Smith, personal communication, March 19, 2021). This was supported by the P.E. teacher who claimed one of his major concerns in students' equity issues when accessing P.E. is

family support (K. King, personal communication, March 4, 2021). This data coincided with the literature stating the importance of the home environment, especially the role of the parents, on the influence of sedentary behavior and physical activity of children (Maitland et al., 2013). Additional literature is also in agreement stating that students who have parents engaged in their school lives are more likely to have healthier behaviors that include; a higher likelihood of being physically active, decreased odds of smoking cigarettes, and less probability of consuming alcoholic beverages (CDC, 2019). The term support may seem broad, but in this context family support would include parental or other supervision, engagement to classes and coursework, assistance with technology, help with physical activities, or encouragement to successfully attend class or follow teacher-given instructions. In correlation to this theme, one student commented that they have remained inactive for most school days as they have had no one available at home to engage with (S. Nye, personal communication, March 4, 2021). These claims align with the literature as well when Fernandez-Rio (2016) explains that students' family is needed in order to create truly supportive health communities of learning and practice. However, a complication was noted with this option. Individual households contain too many variables to consider who is and who is not available to assist with their child's remote learning and, therefore, produces an intermediate level of availability. Unfortunately, it is usually socioeconomically disadvantaged students that are more school-dependent and require more support from their working-class families.

A positive role of family support is that it does not require any monetary funding from school districts. It can, however, require certain families to lose out on potential income by remaining at home in order to support their child(ren). This can cause stress, frustration, or resentment as families are taking on new roles with little experience and no pay. As Smith

explains, “asking families to participate in distancing learning is hard enough without asking for financial support, even though when they can assist younger students daily it helps them to succeed” (L. Smith, personal communication, March 19, 2021). Because families vary with financial obligations and household responsibilities the cost remains at a medium level. Based on household finances, this action option may be plausible for many families just as much as it may not be for some. The effectiveness, however, is high because the literature research and interview data help to support the influence of the family in student engagement and success.

Recommendation

Given the three action options, I recommend that parents or guardians engage in family support methods with their children to better engage and facilitate their online learning in a safe and effective manner. The literature research and interview data help to support this solution and I am confident that it is the best option to help at-risk students, in addition to, improving the equity issues affecting their access to physical education and physical activity. The following section will discuss the concessions, limitations, and possible negative outcomes associated with this action option.

Concessions. My recommendation of family support as the necessary action option moving forward should not discredit the significant strengths of the other two alternatives. For example, the action option that implements technology assistance aims to directly address the relevant equity issues affecting students' remote physical education. Unlike the other action options, this is the only one that guarantees students access to the internet and their ability to connect to remote physical education. The literature signifies the importance of internet access at home and its direct connection to students' academic performance (as cited in Lynch, 2017).

Providing students and families with modems, routers, hotspots, or computers would help them to remain connected to their education. After all, without any direct connection to the internet the academic gap between students who are able to connect and those who are not, only widens. As for the accessibility to more resources action option, there are notable strengths worth mentioning as well. Distributing or providing students and families with more access to learning resources can help to contribute to a more equitable education for at needs students. It would help to ensure that students and families are comprehending linguistically or at least have direct access to help translating materials. This is extremely beneficial as the more tools and resources available to students and families only fosters more knowledge and better ensures an understanding of the material. It can also provide a safe physical space to those children who lack an appropriate physical environment to safely take part in physical activity. Additionally, this action option allows for educators to address students' individual equity issues that are acting as a barrier to their academic, social, and physical success. It is clear that both of these action options provide students with an opportunity to address the specific equity issues affecting their access to physical education, physical activity, and overall, academic success.

Limitations. While choosing family support as my recommended action option seems to be the best solution, there are still limitations that should be considered. For example, the term family support may represent something different in each household. This action option is assuming that every student has a parent or guardian available in their household to provide them with support methods. It may not be appropriate for students who are in foster care, experiencing homelessness, or have household dynamics that vary from common parent/guardian-to-child relationships. Another limitation arises regarding the availability of the parents or guardians. Many working-class parents are not present for their child's remote learning or cannot provide an

adequate substitution that can help to engage their child in the curriculum or actively participate with them. The final limitation concerns the amount of effort needed for this action option to be successful. Parents or guardians will need to dedicate time, energy, and resources to providing the necessary support for their child(ren) and without adequate levels of each, the action option would be deemed useless.

Potential negative outcomes. For this action option, there are potential negative outcomes to consider. For example, family support methods may not be received well by some students. Parents or guardians must take on a new role when supporting their student from the home environment. Methods involve more dedication and active involvement and it is possible that their child(ren) may not be receptive of this change. This may encourage students to act out behaviorally or engage in more sedentary behavior. Additionally, this action option may cause some families to experience financial hardship. For example, families may decide to reduce their household income in order to place more emphasis on supporting their child(ren). This may cause parents or guardians to feel resentment or experience more stress due to extenuating circumstances that include their newly adopted role or a decrease in income. Furthermore, it may cause less support from family members and result in the child's withdrawal from academics and physical activities.

Conclusion. Despite the limitations, concessions, and potential negative outcomes, I still recommend family support as the best action option to help reduce the equity issues facing students that affect their physical education and physical activity. This action has a high possibility of effectiveness, in addition to, intermediate levels of availability and cost that can be debated based upon individual household dynamics. The literature research and interview data help to establish the importance of the family role in facilitating a child's success while learning

in the home environment. Additionally, the literature further establishes the significance of parental involvement in increasing physical activity levels and decreasing sedentary behaviors. This is the only action option that may guarantee increased levels of physical activity amongst children during remote learning. Furthermore, teachers may have minimal or limited opportunities to help their students or to encourage their engagement in physical activities. With family support, however, having in-person help and encouragement can significantly increase the likelihood of children participating in physical education. For these substantiating reasons, this action option rises above the others as the best solution moving forward.

Action Documentation

New equity issues have emerged throughout the last year, which have impacted many students' access to an equal education. These new issues, in combination with pre-existing equity issues, have also impacted a student's access to remote physical education and, in turn, directly influenced their levels of physical activity. The COVID-19 outbreak has had significant ramifications for students, which has put their health and education at risk. This becomes an issue of concern as the literature shows the direct correlation between physical education and student health and academic success. After researching the literature, conducting two interviews with knowledgeable elementary school teachers, and surveying several students, three action options emerged. The first action option is to provide more access to student/parent resources that include: computer literacy programs, ELL technical support, district provided interpreters, and safe designated learning areas outside of one's home that are conducive to physical activity. The second option is to supply students with technology assistance, such as internet modems, routers, hotspots, and computers and laptops. Finally, the third option is to increase the amount of family support in the home environment. This option of increased family support was the

recommended course of action. This was the only action option that ensured students could receive the necessary encouragement and help needed to access, engage, and participate in their physical education. It also increased the likelihood that students would be more willing and excited to engage in regular physical activity and healthy behaviors. Moving forward with this recommendation, a letter was written and sent via electronic mail to Mrs. Smith and Mr. King of Ella Baker Elementary School. A copy of this letter can be found in Appendix A. The letter explained that after analyzing the literature and interview data, an action option emerged that would help their students with accessibility and participation in remote physical education. Additionally, attached to and immediately following the letter, was the inclusion of the action option itself; a parent/guardian resource toolkit promoting family support in the home environment. The resource toolkit included firsthand information on the direct benefits of physical education and physical activity, indoor and outdoor activities, creative ideas and activities to engage the whole family, technological resources, and parent/guardian remote learning tips and tricks. A copy of the parent/guardian resource toolkit can be found in Appendix B. All in all, the letter asserted that the resource toolkit was merely one possible solution to address the equity issues impacting students' physical education and activity and should only be accepted as a suggestion. As of yet, there has been no response from either of the teachers.

Critical Reflection

I started this semester with a strategic plan for executing my research topic in my LS400: *Senior Capstone* course. However, the topic I had chosen nearly two years ago quickly became irrelevant as the COVID-19 pandemic was still applicable. I took some time to brainstorm a new topic that would be relevant to remote learning and found one that addressed some of the most critical issues students had been facing in their education. I chose to address the equity issues

that have impacted students' access to physical education and physical activity during the COVID-19 pandemic because of the likelihood that sedentary behaviors were increasing amongst students at home. The importance of this topic is crucial for students' health and academic success during remote learning. What I discovered during the interview process that surprised me the most was the number of student issues prohibiting them from participating in physical education or engaging in regular physical activity. I had started the research process with the idea that accessible technology would be the largest and most prominent issue students had, but quickly realized that some home environments had additional issues that were affecting students' participation in healthy behaviors. These issues were more complex and were also deemed to be detrimental to students' health and their well-being. This information, in combination with both teacher interviews and the literature, led me to identifying the three emergent themes and their correlating action options. The chosen action of writing an electronic letter which promoted the theme of family support was the best way to approach Mrs. Smith and Mr. King with my action option of a parent/guardian resource toolkit. The toolkit was designed to be an accessible and hassle-free resource that parents could easily turn to when seeking additional help. It was also created to help assist households that have parents or guardians who work full-time and may have time restrictions or other day-to-day responsibilities, which restrict their time to seek out additional student activities or local parks and playgrounds. As the COVID-19 pandemic begins to fade from the schooling system, I found the electronic letter to be the most beneficial and respectful way to send my suggestion, as Mrs. Smith and Mr. King, both have geared up to return to in-person instruction. I recognized that during this stressful time my passion about students' physical education and activity levels may not be at the forefront of their educational concerns and, therefore, a more professional approach had to be taken. Nevertheless,

I hope that my findings and action option recommendation are found to be useful to Mrs. Smith, Mr. King, and the fellow staff and students at Ella Baker Elementary School. Regardless of the outcome, I have learned that what may be important to one person may not be to another. However, a professional level of respect must be maintained when hearing someone else's passions and concerns surrounding education inequities. Moving forward, as a future educator, I must maintain an open mind and keep an open heart surrounding every educational issue brought to my attention, even if it is not at the forefront of my own concerns. Finally, it is crucial to remember that change can always be made possible with enough passion, patience, and persistence.

Synthesis and Integration

My undergraduate education at California State University Monterey Bay has been inspiring, to say the least. Of course, there were times where I felt overwhelmed and defeated, but the sheer excitement of my future as an educator is what kept me going. The required coursework, the Liberal Studies Major Learning Outcomes (MLOs), in addition to this action research project, have helped to positively impact and prepare me for my professional development. Beginning with MLO 1: Developing Educator, I am confident that this course, LS400: *Senior Capstone*, has helped to further my skills, knowledge, and responsibilities as a future California public educator. The pedagogical skills I have acquired are reflected in this action research project. More specifically, this project provided me with an opportunity to think, write, and speak critically about the subject matter and strategize on how to incorporate the perspectives of the educational foundations within my future classroom. Additionally, in terms of MLO 2: Diversity and Multicultural Scholar, this action project has allowed me to explore and compare different perspectives regarding contemporary socioeconomic issues in the public

schooling system. By having critically examined the equity issues students face in remote learning, I have evaluated the different concepts and theories regarding diversity from a historical perspective and explored the ways that I can help implement change as a multicultural scholar. In terms of MLO 3: Innovative Technology Practitioner, I used different technology methods in order to effectively investigate, design, and collaborate with other education professionals. The role of technology played a crucial role in my action research project by helping me to successfully communicate with my community research partner, create and send surveys to students, investigate the literature research, and design an action option parent/guardian resource toolkit. MLO 4: Social Justice Collaborator, has allowed me to combine my disciplinary knowledge with newly adopted community experience in order to address and reflect on the severe equity issues that have impacted students' physical education. The focus of this action research project was to pursue a path for social change and ensure that all students have access to an equal educational opportunity. Being able to collaborate with my community partner and stakeholders allowed me to advocate for access, equity, and justice in the public education system. Finally, in terms of MLO 5: Subject Matter Generalist, I demonstrated subject area competency within my action research project, with a complete and coherent depth of study focusing on a major socioeconomic issue in the California public education system. Furthermore, analyzing and documenting the literature has deepened my understanding and inspired me to advocate for social changes that promote equal education for all. To move forward toward the professional career of educating youths, I believe it is necessary to continue to expand my knowledge regarding inequities in education and extend my capabilities as an advocate for social justice. My greatest takeaway after completing this project is that change can be made possible if

we can successfully connect schools, parents, and communities to work together for the betterment of our children and their futures.

Appendix A.

To Mrs. Smith and Mr. King:

I would like to thank you for your time and energy put forth in participating as my community partner. I benefited greatly from each of you and appreciate your insight, input, and recommendations. I was able to conduct the necessary research and gather data that helped to focus on what can be done to improve the equity issues students are facing during COVID-19 and how it has affected their access to physical education and regular physical activity. After careful examination of the literature and interview data, I would like to share a suggestion that I believe is to be helpful in addressing the pertinent equity issues students are facing. The purpose of this letter is to share the information with you and your school faculty, with the hope that you find it useful.

In both of your interviews and one study survey, it was made clear that students need more support at home in order to be engaged in their physical education and participate in regular physical activity. Additionally, this correlated with the literature on the subject. Therefore, parent or guardian engagement, encouragement, and help at home can be some of the most beneficial solutions. There is room for creativity in the implementation of this action, which can be beneficial for parents or guardians who have time restrictions or other responsibilities. One example, which I've put together for you, is a parental resource toolkit that includes information on some helpful websites and resources for parents assisting with remote learning. This includes technology resources, outdoor and indoor activity ideas, and ways to promote physical activity and healthy behaviors for the entire family.

In closing, I would like to once again thank you for your help. You have both been extremely welcoming and caring, which was also reflected by your students who participated in the student survey. I hope you find this resource toolkit to be helpful and inspiring and hopefully it can be used as a positive way to encourage family support for your students.

Sincerely,

Gianna Pinotti



Image A1. A copy of the letter sent to Mrs. Smith and Mr. King.

Appendix B.

Benefits of Physical Education

- improves physical fitness
- reduces the risk of heart disease
- improves academic performance
- increases interest in learning
- improves self-confidence and self-esteem
- promotes healthier lifestyles

Benefits of Physical Activity

- improves cardiorespiratory fitness
- builds strong muscles and bones
- controls weight
- reduces symptoms of anxiety and depression
- reduces the risk of developing health conditions

Resources for Outdoor Play

"Playground Buddy"
A free app that helps you find the nearest playgrounds!


SCAN ME


"Park Finder"
Website geared towards helping you find the right park near you!


SCAN ME


Image 1B. A copy of page one of the parent/guardian resource toolkit.


Indoor Activity Resources


"Go Noodle"
Web-based videos focused on indoor physical exercise!

SCAN ME

"PE Central"
Ideas for developmentally appropriate indoor P.E. practices and programs!

SCAN ME

"Wide Open School"
Fun at home physical activities to get you moving!

SCAN ME

Family Fun!
Activities & creative ideas to help connect as a family!

SCAN ME


SCAN ME






Image 2B. A copy of page two of the parent/guardian resource toolkit.

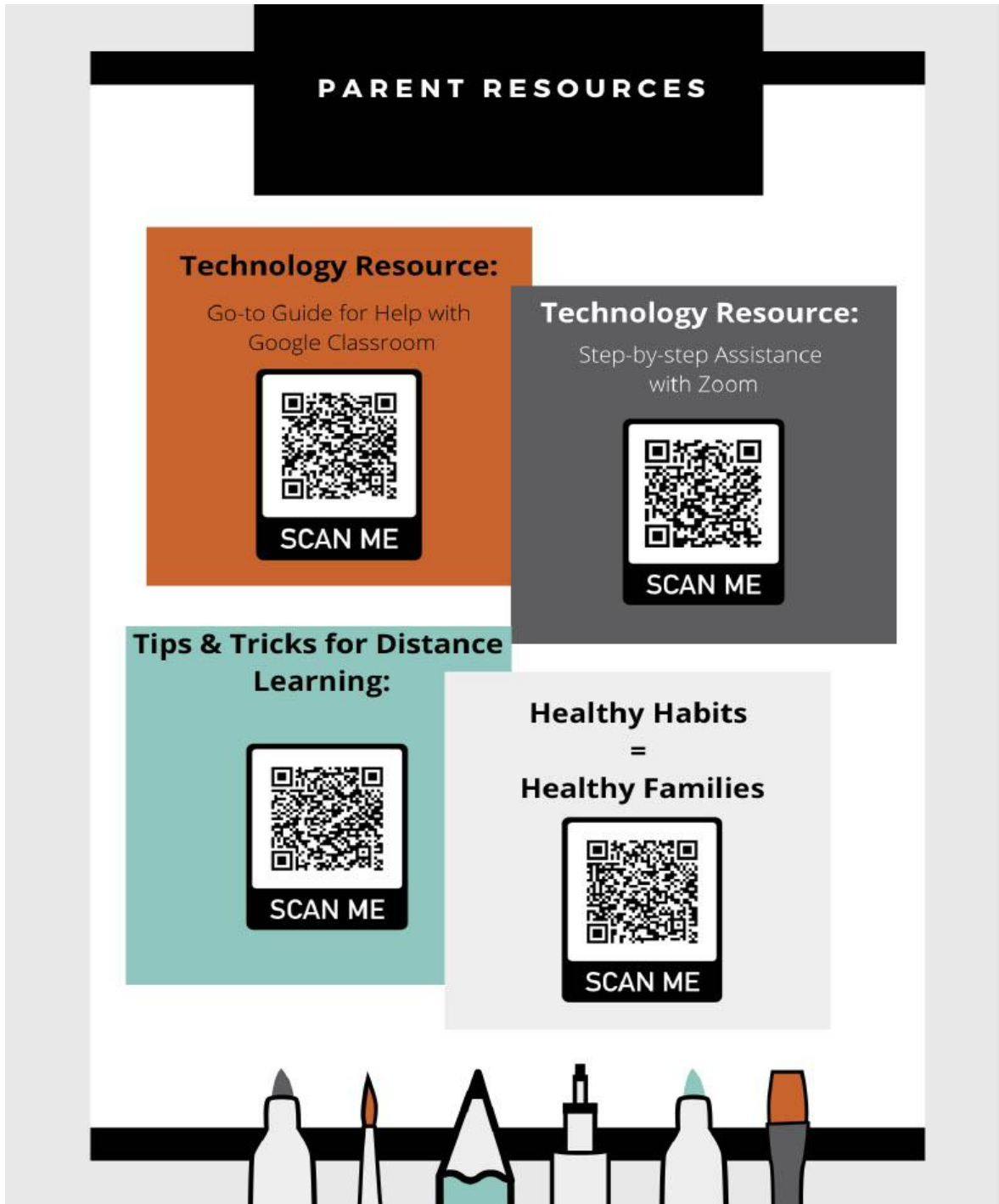


Image 3B. A copy of page three of the parent/guardian resource toolkit.

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