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Boosting Technology Confidence Through Summer Learning

Over 55 million children in the U.S. were sent home to complete the last three months of the 2019-2020 school year via distance learning due to the COVID-19 pandemic. This sudden change to schooling across the country disrupted the educational system and shed new light on long-existing inequities. As districts, teachers, families, and youth were suddenly tasked with planning and implementing at-home learning, inequitable access to technology, commonly called the digital divide, was quickly at the forefront. Research shows the digital divide is not just in access to equipment but also technology self-efficacy, indicating that youth with varied access likely navigate remote learning experiences with different levels of confidence, a key enabler to learning.[1] Recent studies indicate many districts anticipate continuing remote learning beyond the pandemic, with RAND reporting 20% of districts "have adopted, plan to adopt, or are considering adopting virtual school as part of their district portfolio" based on families and students' requests for more online learning.[2] This likely continuation of remote learning makes a focus on technology self-efficacy, confidence, and opportunities to engage even more critical.

2020 Hindsight

At the start of the 2020 school year, The U.S. Census Bureau found 4.4 million households with children lack regular access to a computer for educational purposes, and 3.7 million households do not consistently have internet available for educational purposes. The National Center for Education Statistics (NCES) found barriers to computer and internet access disproportionally affects youth from low-income households, rural school districts, and youth who identify as Black, Hispanic, and American Indian and Alaskan Native.[3] In high-poverty schools, less than one-third (30%) of teachers said all or nearly all of their students had access to home internet.[4]

BellXcel Remote **included the following program elements:**

- Six hours of content per day for a five-week program, with various implementation options
- Modular and flexible sample schedules that could be condensed or expanded as needed
- A blend of instructional time from a teacher and independent work by students and families spanning Math, ELA, Reading Corner, social and emotional learning (SEL), physical wellness, and STEAM enrichment
- Focus on one primary lesson per day, alternating between Math and ELA
- Live instruction plus one-on-one check ins with students (by phone or computer)
- SEL, wellness, and enrichment activities (including virtual field trips) for scholars
- Family engagement opportunities supported by a family guide, family resource portal, and teacher outreach

BellXcel also encouraged the use of various technological tools and strategies, such as Zoom and Google Classroom, to promote engagement in learning and other activities.

1 Huang, K. T., Ball, C., Cotten, S. R., & O'Neal, L. (2020). Effective experiences: A social cognitive analysis of young students' technology self-efficacy and STEM attitudes. Social Inclusion, 8(2), 213-221.

2 Schwartz, H., Grant. D., Diliberti, M., Hunter, G., and Messan Setodji, C. (2020). Remote learning is here to stay: Results from the first American School District Panel survey. RAND Corporation. Link: https://www.rand.org/pubs/research_reports/RRA956-1.html.

3 USAFacts. (2020, October 19). More than 9 million children lack internet access at home for online learning. Retrieved December 14, 2020, from https://usafacts.org/articles/internet-access-students-at-home/ Link: https://usafacts.org/articles/internet-access-students-at-home/

4 Stelitano, L., Doan, S., Woo, A., Diliberti, M., Kaufman, J., Henry, D. (2020). The digital divide and COVID-19: Teachers' perceptions of inequities in students' internet access and participation in remote learning. RAND Corporation. Link: https://www.rand.org/pubs/research_reports/RRA134-3.html

Researchers found that beyond materials, there are also motivational, skill, and usage pattern differences based on exposure to technology. Students are more likely to experience low self-efficacy and high anxiety when using technology, particularly when there is a persistent lack of access.[1] Because self-efficacy is a critical component for learning, the digital divide is important to consider when reviewing the effects of the COVID-related shifts to remote learning. It is likely that many students, on their first day of remote learning, experienced low self-efficacy, not necessarily in the content itself, but in using the technology they needed to engage in it.

How *BellXcel Remote* Met the Moment

While school staff, families, and youth made real-time adaptations to learn at home, BellXcel was also innovating. BellXcel is a national non-profit that offers evidence-based products and services for youth organizations and schools. The learning model was intentionally designed as a product, called *BellXcel Remote*, to meet the needs of all families, including those with limited to no technology in the home.

In a December 2020 research brief called *Building Bridges During Challenging Times: How BellXcel Remote Summer Programs Kept Youth, Families and Staff Engaged in Learning During COVID-19*, The Sperling Center for Research and Innovation (SCRI) reviewed how *BellXcel Remote* provided opportunities for engagement in learning, and how effective those opportunities were. The findings indicated that by designing the *BellXcel Remote* model to align with best practices in out-of-school time (OST), partner programs across the country successfully built and maintained youth, family, and staff engagement throughout the summer.

Through a qualitative review of post-program stakeholder surveys, SCRI also uncovered an unexpected effect of participating in a summer program: Families, staff, and youth reported that participating in the summer program increased confidence in remote learning and technology, improving preparedness for potential shifts and uncertainties in the school year, and in some cases repairing negative perceptions of remote learning from the spring of 2020.

> "My child is now more comfortable with online/remote learning. His participation with other scholars and the teacher increased as the program progressed. His shyness decreased. His ability to work Zoom and the technology needed for a remote program gave him the confidence he needs to continue working in this type of environment in the fall if needed. The virtual field trips also helped him to realize that online learning can be fun and educational."

This brief explores this theme and looks to uncover why the experience of *BellXcel Remote* resulted in these findings. While increased skills in technology and gains in self-confidence in virtual learning were not necessarily direct goals of *BellXcel Remote*, the findings are consistent. The combination of strong, research-based program elements may have contributed to this unexpected and welcome impact. For example, seamlessly incorporating a strong social and emotional learning curriculum that focuses on trust, growth mindset, and consistent routines and schedules could have played a hand in scholars and families feeling safe to ask questions and make mistakes as they progressed through the summer. Strong teacher professional development may have contributed to their own self-efficacy in virtual learning that equipped them with the skills necessary not only to assist their scholars in virtual learning, but also provide an engaging virtual learning experience. Finally, *BellXcel Remote* was intentionally designed to give scholars an engaging and enriching summer experience regardless of their technology needs or access. Having that flexibility built into the program design allowed BellXcel staff to meet scholars and families where they were, rather than expecting participants to fit a prescribed virtual learning model. Whatever the reason, however, the experience of participating in *BellXcel Remote* gave stakeholders the opportunity to improve their technology skills and feel prepared for virtual learning moving forward.

Discovering Confidence in Technology Skills and Comfort with Remote Learning

SCRI discovered an unanticipated yet wholly positive impact of participating in Summer 2020 *BellXcel Remote*: scholars, families, and staff reported their summer experience improved their technology skills, increased confidence in and comfort with virtual learning, helped repair negative experiences of remote learning from the Spring of 2020, and set families, scholars, and staff up for success in remote learning as they moved into the new school year.

This unexpected theme emerged from an analysis of responses to open-ended questions in the post-program surveys:

- How did you grow or change as a result of your summer program (scholar survey)?
- What positive changes do you see in your child and/or family as a result of the summer program (family survey)?
- What was a favorite or memorable part of your summer experience (staff survey)?
- What is a memorable time you were able to connect with a family or scholar (staff survey)?

> "A student really wanted to join [the program] but struggled with technology. Once I was able to show the aunt how to access the Zoom classroom, the child and aunt were thrilled and the student missed no days after that."

Improved Technology Learning Skills

SCRI found *BellXcel Remote* helped improve technology skills for scholars, families, and staff members. Analysis showed the summer experience provided stakeholders with the opportunity to sharpen their computer and virtual learning skills, both of which are crucial for success in a remote learning environment. As remote learning continues across the country, and potentially into the 2021-2022 school year, these skills will continue to prove necessary.

One scholar reported: "I got…better at using a computer." Similarly, another scholar noted: "I got better at virtual learning skills."

One family noted about their child's experience: "She greatly increased her virtual learning skills, which is important since school is going to be virtual."

Another family noted: "This program helped my child with… using the computer and learning how to behave in the virtual setting."

One staff member said a memorable part of their summer experience was "The students and I becoming comfortable with Google Classroom," while another added "I learned more about Zoom and how to navigate different things on the app!"

One staff member shared a scholar's experience: "A student really wanted to join [the program] but struggled with technology. Once I was able to show the aunt how to access the Zoom classroom, the child and aunt were thrilled and the student missed no days after that."

A Boost of Confidence in Virtual Learning

SCRI discovered families and scholars gained confidence in virtual learning as a result of participating in *BellXcel Remote*. Analysis showed stakeholders ended their summer experience feeling more comfortable with the idea of virtual learning, and anxiety around virtual learning had decreased as a result of participating in the summer program.

One family noted their child had a "higher level of comfort with online/virtual instruction which will be used when the school year begins."

One scholar shared they felt "more comfortable with online classes" as a result of their summer experience.

One family noted about their scholar: "She is more confident with remote school learning. I am glad she was able to experience how remote learning works before the new school year begins."

Another family said: "Prior to starting this program, my son had anxiety about using Zoom and interacting with new people in this format. After starting the program, he has gained confidence in participating on Zoom."

One family shared: "My child is now more comfortable with online/remote learning. His participation with other scholars and the teacher increased as the program progressed. His shyness decreased. His ability to work Zoom and the technology

needed for a remote program gave him the confidence he needs to continue working in this type of environment in the fall if needed. The virtual field trips also helped him to realize that online learning can be fun and educational."

Reshaping Negative Perceptions of Spring 2020

SCRI found *BellXcel Remote* helped families and scholars repair negative perceptions of virtual learning from Spring 2020. Analysis revealed the experience of *BellXcel Remote* provided an opportunity to experience a positive, engaging remote learning environment that served as a reset for a chaotic, sudden shift to virtual learning in Spring 2020. Survey respondents noted this transformed perception of virtual learning was a positive change for their families and scholars as a result of participating in *BellXcel Remote*.

> "I enjoyed working with a co-teacher. We shared our best practices and I feel much more confident teaching in a virtual classroom in the fall."

One family noted: "I liked that it gave my daughter something to look forward to everyday this summer. Also, her end of year virtual experience was really bad with our school district so it was nice to see a positive experience for her with virtual learning through this program. Gives me hope with the difficult times we face for this coming school year, in the event she would need to do more virtual learning."

A staff member shared: "An eighth grader's mom reached out to me before the program to share that her son had been very resistant to logging onto his spring school-based distance learning. She was worried that he would have a hard time participating in the virtual program. We worked with his teacher to create small weekly goals, and by the end his mom sent me a message about how confident he felt going into this distance learning school year."

A family noted: "I find that my child has been much more engaged and I have seen a significant willingness to engage in an online forum. Much improvement from the distance learning school year."

Another family reported: "I feel that my child's elementary school was lacking in remote learning and did not orient the children properly. [Redacted name] did an excellent job and now I am confident my child will do well in a remote environment in the future."

One family also noted *BellXcel Remote* was, "better than the spring online learning from school. It renewed my faith in remote learning."

> "I find that my child has been much more engaged and I have seen a significant willingness to engage in an online forum. Much improvement from the distance learning school year."

Increased Readiness for Fall 2020

SCRI found *BellXcel Remote* prepared families, scholars, and staff for a continuation of virtual learning in Fall 2020. Analysis showed that as a result of their summer experience stakeholders felt they were ready for the upcoming school year and gave them the confidence that they were prepared to handle virtual learning again.

One family said: "It was a great introduction to what school will look like in September. It helped me to see what the learning/teaching process looks like and helps me to manage expectations."

Another family noted: "I think it was a good jumpstart to the online school year. It got him used to the format and presentation of online learning."

One staff member noted about their own experience: "I enjoyed working with a co-teacher. We shared our best practices and I feel much more confident teaching in a virtual classroom in the fall."

One staff member noted about a scholar's experience: "One parent was concerned that her daughter did not have the technological experience to start the new school year remotely. However, on the program's last day, the parent texted me to say that she is 100% confident that her daughter is more than prepared to properly navigate Zoom when school begins."

One family said: "This was very helpful because it prepared my daughter for online learning, and created a set schedule with the "live" teacher setting. It was very helpful for me as a parent to have this program and I hope that it can be continued next year."

Conclusion & Recommendations

Research on digital inequities has shown the technology gap includes more than just a lack of access to resources and tools. It can also include a lack of the knowledge, skills, and confidence needed to use those resources and tools effectively. As students across the country moved to virtual learning in Spring 2020, and as many continue on in the same manner, the need for self-efficacy and confidence with technology became more crucial than ever, particularly for those who may have less experience with educational technology.

Analysis of open-ended responses to Summer 2020 post-program survey questions revealed an unexpected finding: *BellXcel Remote* helped scholars, families, and staff improve their technology skills, feel more confident about virtual learning, heal negative perceptions of virtual learning after a chaotic Spring 2020 experience, and prepare for the virtual learning in Fall 2020.

While there is no direct line to draw between specific *BellXcel Remote* program components and these outcomes, deliberate and intentional planning to provide an engaging and positive learning experience undoubtedly contributed to the unexpected impact on stakeholders. The seamless incorporation of an SEL curriculum that focused on trust, routines and schedules, relationships, and growth mindset helped create an emotionally safe and supportive learning environment. Strong teacher professional development gave staff the skills to feel successful and ready for continued virtual learning. Meeting scholars and families where they were in their skills and comfort with virtual learning allowed for room to grow in technology self-efficacy. Whatever the cause, *BellXcel Remote* gave stakeholders an invaluable experience that helped set them up for success in virtual learning moving forward.

Recommendations

BellXcel Remote was intentionally designed to provide an engaging and positive summer learning experience that met the technology needs of each of its families. Through this deliberate planning and engaging learning experience, participating in *BellXcel Remote* gave its stakeholders the opportunity to improve their technology skills and feel more confident about virtual learning moving forward. As a result, *BellXcel Remote* can serve as an example for other educators hoping to provide a positive virtual learning experience.

Allow for flexibility in how your families and youth engage with virtual learning

Not all families, youth, and staff will have the same level of comfort or experience with virtual learning. Providing flexibility in how participants will engage in virtual learning and understanding that there may be a learning curve among participants will help lessen anxiety around virtual learning, encourage strong engagement, and allow for authentic learning opportunities for all participants.

Assess youth and family confidence in technology prior to program start

Proactively identifying youth and families who may require additional support in understanding and utilizing technology can provide a jumpstart to addressing any skill or confidence deficiencies. Identifying those participants can also help staff to meet them where they are in their technology experience and comfort levels and set the stage for a supportive and caring virtual learning environment.

Encourage engaging and supportive learning environments

Creating a safe and supportive learning environment is critical for any programming, but even more so in a virtual learning environment. When participants feel supported and safe, they will feel more comfortable asking questions and making mistakes. This emotional safety can help staff mitigate obstacles to virtual learning, and allow for mutual feedback between all participants about their experiences. For youth, families, and staff with limited educational technology experience this safe environment will help develop self-efficacy, confidence, and motivation around remote learning.

Make engaging and enriching activities a priority

In a virtual learning environment, engagement and participation can be a challenge, but by making sure enriching and fun activities are part of the experience, those challenges can be avoided. When participants are provided with enriching opportunities, motivation to engage

in remote learning is increased, which enhances their ability to develop in many areas, including improved technology skills and confidence.

Incorporate SEL in virtual learning

Youth who participate in programs that incorporate SEL show a number of positive results. Meeting social and emotional needs in a virtual environment can be a challenge, but with intentional design and planning programs can successfully meet those needs. Promoting key SEL skills, positive behavior management techniques, and growth mindset even in a virtual setting can result in a myriad of benefits for participants.skills and confidence.

Open-ended survey questions can lead to unexpected findings

Including open-ended survey questions, focus groups, or one-on-one interviews as part of a program's evaluation tools can unearth nuances and details about participants' experiences that are unexpected. These tools have the power to show findings that otherwise might not be revealed through the sole use of quantitative evaluation methods.

Conclusions

As COVID cases continue to rise across the country and schools are forced to serve students in a virtual learning environment with no predictable timeline for returning to full in-person learning, it is essential that school districts and other youth-serving organizations find ways to reach and engage all youth and families, regardless of their technology access and skills. Providing a safe, supportive, and engaging virtual learning experience will help ensure the learning needs of all youth are met in this challenging and uncertain time. If youth don't feel confident using technology and learning in a virtual environment, the nation could face an entire generation of youth a year or more behind in their learning, resulting in untold consequences for years to come. Meeting the needs of all youth during this chaotic time isn't easy, but without self-efficacy in technology and the confidence to continue learning in a virtual environment, the detrimental impact on youth across America could be catastrophic.