

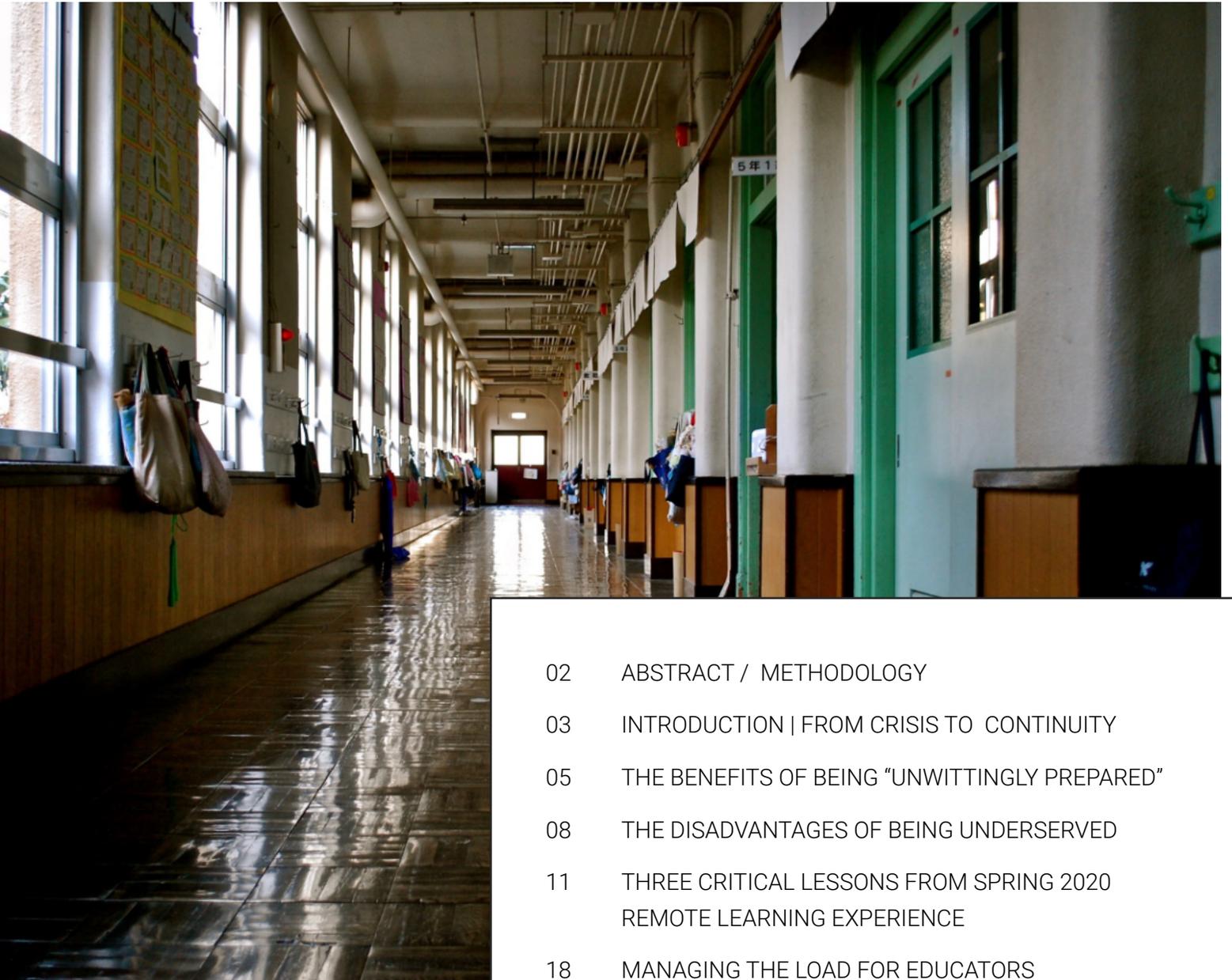
AUGUST 2020

DISRUPTIONS + OPPORTUNITIES

KEY LESSONS from the Spring of 2020



RESEARCHREPORT



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ABSTRACT / METHODOLOGY

In the wake of the novel coronavirus, schools around the world were forced to undergo a radical experiment in remote learning. Now, as the new academic year begins, schools are continuing to evolve their approaches to remote and hybrid learning, and to build new systems and practices for teaching their students. The goal of this research is to help facilitate this continue evolution, by drawing upon the lessons learned from the period of transition and applying them to the present moment, in the hopes of improving the variety of learning and socialization outcomes that schools traditionally provide to students, regardless of age or grade. We surveyed 400 educators and 381 IT professionals working in education to get better insight into the what went right and what went wrong in the move to remote learning in the spring semester of 2020.

It didn't go well, but the degree of difficulty was not evenly distributed. Some schools, it turned out, were more prepared for the transition—not because of active scenario planning—but because of key technology decisions they had made previously.

This research was commissioned by Microsoft through The Christoph Group, LLC and was conducted by Manchester Street independently. The Manchester Street team composed the survey and interview instruments, surveyed educators and IT professionals from their own data sets and used statistical analysis (primarily ANOVA) to evaluate the significance of what was found. Questions regarding the research or the data should be directed to ken@manchesterstreet.com.

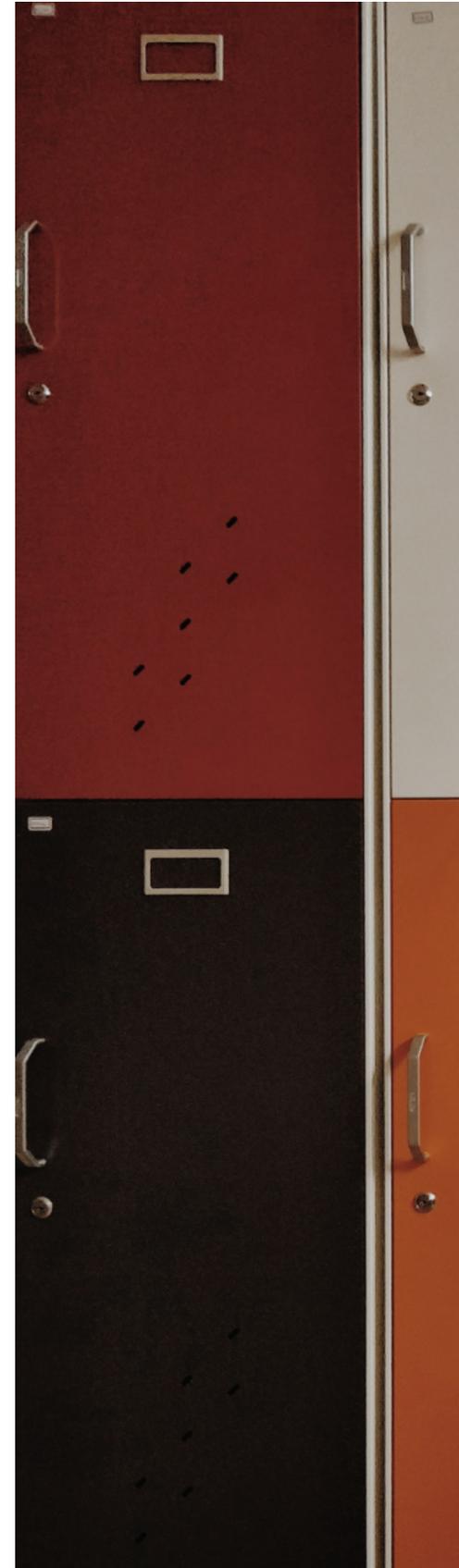
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FROM CRISIS TO CONTINUITY

February of 2020 began much like any other month. It didn't last. Seemingly in a matter of days, everything changed as the world experienced a convergence of economic, humanitarian and health crises with the rise of COVID-19. Precautions about hand washing and covering coughs turned into recommendations for cleaner surfaces and social distancing. As the numbers of confirmed cases of COVID-19 grew, the world found itself turned upside down. Educators and their students, both literally and figuratively, were not immune. According to UNESCO, more than a billion learners have been affected by the 143 country-wide closures, accounting for roughly 1 in every 3 of the world's enrolled learners.¹

For centuries, educators have worked to improve how they practice their craft, how they define their approach to pedagogy. And, although there are many students educated outside of traditional classrooms, and although teaching has involved online or hybrid learning models for some time, the vast majority of educators have worked on their craft with the underlying assumption that the dominant form of instruction would take place within a physical classroom.

In the spring of 2020, this underlying assumption came to a sudden end. Educators around the world embarked by necessity on one of the most significant changes in the history of education: the sudden removal of the physical classroom from the pedagogical equation. Everyone, including administrators, IT professionals, educators, parents, and students worked to manage an inordinately difficult situation as best as they could.





Let us be clear: this was never going to turn out well for most of the participants. This was a sudden change brought on by an existential crisis and not a carefully planned shift to the hybrid and/or remote models that have demonstrated success.²

One cannot reinvent a century of instructional insight, recreate a semester's worth of lesson plans, and completely digitize the classroom in the course of a weekend, in the midst of circumstances that only compound the anxiety affecting everyone involved, without a fair amount of turbulence.

But not everyone had the same degree of difficulty. We now have just enough distance from the sudden and total transition to remote learning to gather data from which to derive lessons as to what worked and what didn't, and what can work better moving forward. The simple if unfortunate reality is that we owe it to ourselves and to students everywhere to extract from this ongoing crisis the lessons that can continue to move pedagogy forward towards creating flexible, adaptable systems, that promote reimagined hybrid models of education.³

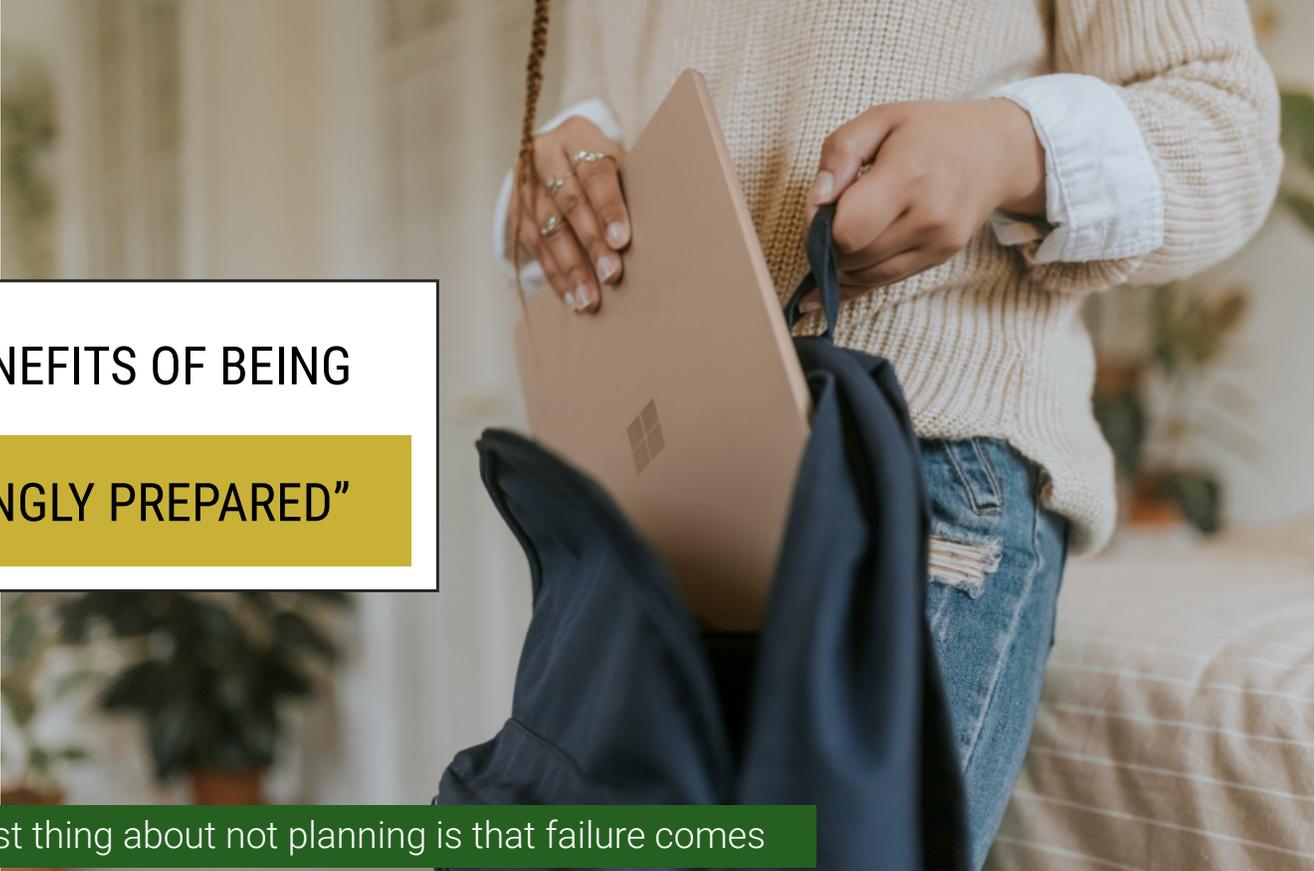
¹ UNESCO, "Education: From disruption to recovery" available at: <https://en.unesco.org/covid19/educationresponse>

² For examples of new hybrid models that could enhance the overall educational experience see Michael Fullan, Joanne Quinn, Max Drummy, Mag Gardner, "Education Reimagined: The Future of Learning," Remote to Hybrid Learning

A POSITION PAPER ON A PARADIGM SHIFT FOR EDUCATION, available at: <https://edudownloads.azureedge.net/msdownloads/Microsoft-EducationReimagined-Paper.pdf>

³ See Michael Fullan, Joanne Quinn, Max Drummy, Mag Gardner, "Education Reimagined: The Future of Learning," Remote to Hybrid Learning

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THE BENEFITS OF BEING “UNWITTINGLY PREPARED”

“The nicest thing about not planning is that failure comes as a complete surprise, rather than being preceded by a period of worry and depression.”

Sir John Harvey-Jones

What John Harvey-Jones once noted about not planning could just as easily be inverted: the nicest thing about planning is that success comes as a pleasant – if not complete – surprise. Although very few educators had scenario planned for an overnight switch to remote learning, some were pursuing plans to optimize for the next generation of learners, with more robust 1:1 device setups or support for a growing mobile population of learners. The data suggests that the most successful transitions happened in places that already had a technology infrastructure in place that could support educators and students for remote learning, and do so to a degree sufficient to circumstances that were largely beyond the scope that motivated the purchase of those technologies in the first place.

Again, to emphasize the reality of 2020, we must again acknowledge that this transition was inordinately difficult for most schools, most educators, and most students. We will not know, for example, until some serious time has passed, if students have had their overall educational journey impacted negatively, even years from now, by the ongoing disruptions wrought by the pandemic. The impact on their social and emotional well-being might take even longer to discern. Still, these difficulties were not universally and equally distributed, as some educators and their students had a better experience than did others.

Many districts and schools throughout the world had already begun outfitting students and educators with platforms and devices that would enhance the learning experience of their students, reduce cost, and facilitate new innovations in pedagogy. These deployments didn't happen with the goal of replacing the classroom, but they made the substitution of virtual, remote environments far easier to manage.

Kathy H, a Director of Technology for her county's schools, explained how her team was able to transition 8,200 teachers and 130,000 students to remote learning in one weekend. Kathy emphasized how her district's investment in a collaborative learning environment – they used Microsoft Teams – was essential to their success. In the three years before the crisis, Kathy's office had been using Microsoft Teams to help facilitate teacher training and curriculum development. As each teacher received a new laptop, they were trained on Microsoft Teams and then put into Teams with other educators teaching in the same areas across the district, enabling peer-to-peer professional development and community. That infrastructure proved essential when COVID-19 hit. According to Kathy,

“In all honesty, it's a crazy thing that in all that time, we didn't know it, but we were preparing for this eventual crisis, because all of that work with Teams made it so much easier for us to actually deal with rolling out Teams district-wide which was essential.”

Leo R is the executive director of his county's Department of Instructional Technology. Leo oversees the blended and online learning initiatives for the district and was on the front lines of their district's transition. In Leo's estimation, “the experience of students varies greatly depending on how savvy and engaged teachers were online with them. Some had courses built and started using Teams and Class Notebook way before the crisis started. So, transitioning to online learning, having online discussions, regular meetings, and variety in course content was solid. Some of our teachers did a phenomenal job with that.”

Leo was quick to admit that not all teachers made the transition as smoothly, but the variable that best explained the success of some teachers was “in the preparedness of teachers, and how they deliver that instruction online.” The more prepared the teachers were and the faster they bought into learning and developing the tools for remote learning, the better the environment was for the students. Leo concludes, “for the students of the well prepared teachers, their learning experience was, I would not say, exactly on par with brick and mortar, but very close, because teachers knew how to create that learning environment online for students to actually function as if they were at school.”

From the perspective of a teacher, preparation was everything.

Rory M., a Spanish teacher, explained, “it was an easy transition.

I'm already very familiar with Teams as are my students, so that was a pretty easy transition. I think that there was almost zero effort on my part to get the students to understand what was going on. It was easy.

One director of digital strategy, David O, summarized their success by explaining, “We were unwittingly prepared for this. The students were using the same device, they were using the same system, they were using Teams, and so apart from not being at school, a lot of the activities are things that they are already familiar with, so the transition was not that large.”

Other educators adapted quickly. Brandon R, a high school history teacher, used a combination of Zoom, interactive slides, and Google Hangouts to attempt to recreate a classroom atmosphere. The students were, in his estimation, engaged and interactive, enough that, as he put it: “If I had to do it this way the rest of the year I absolutely would.”⁴

⁴ <https://www.govtech.com/health/Parents-Teachers-Make-Education-Work-During-Pandemic.html>



THE DISADVANTAGES OF BEING **UNDERSERVED**

Of course, even a cursory glance at national headlines reveals that the transition to remote learning was not as smooth for everyone, and that many of the old fault lines of inequality and lack of access exacerbated an already terribly challenging situation. Many schools were simply not in a position to have devices readily available for every student to take home. Many students did not have reliable access to the internet at home, while other students lacked a home to go to. In New York City alone, there are an estimated 114,085 students experiencing homelessness.⁵

Articles such as, “The Results Are In for Remote Learning: It Didn’t Work,”⁶ and “The Worst Is Yet to Come,”⁷ highlight that there were plenty of districts that did not have the advantage of being unwittingly prepared for the transition to remote learning. One teacher, Eileen P. described her experience as a “rollercoaster” filled with “highs and lows.” Eileen’s school uses Google Classroom and when describing the initial transition, she said, “the schools closed a little abruptly. So, at first there was scrambling, stress, and frenzy.” Over time she was able to use her Google products to help facilitate a basic classroom environment, but the lack of serious student engagement between Eileen and her students made her experience of remote learning very difficult.

According to Eileen, even after she managed the basic transition, she struggled with the fact that her students “settled into a phase where kids started dropping out and it became hard to really connect with a lot of families.” Part of the problem, according to Eileen, was the difficulty in facilitating positive social interactions between the students. As she describes,

“I think we found that kids are social and we are educating them and giving them content, but there's not a safe social space for them.”

Eileen tried to use Google Classroom’s Stream and Edutopia. In her assessment, “I can’t say those efforts were successful. I would say that the experience was a gentle fail. It wasn’t like some big disaster, but we could tell these kids wanted to just see their friends and not just be like in a Zoom call in a class environment, but we never did figure that out. And I still think we need to.”

It is not effective planning or practice to ask administrators, IT professionals, students, and educators to plan as if they have every means at their disposal including infinite time, budgets, and training opportunities. Instead, education decision-makers must examine potential solutions within the constraints of the moment and resources. That requires effectively managing the loads of the stakeholders and technology involved in remote learning.

It is helpful, then, to operationalize that concept more by considering three types of loads: logistical, cognitive, and workloads.

Logistical Loads: these are all the requirements needed to set a system up. For remote learning, this means having devices in the hands of educators and students while making sure those devices can connect to the internet. Additionally, logistical load requirements for IT professionals involve the relative complexity of the software ecosystem ranging from how many different systems have to be integrated and how easy it is to distribute updates/changes to devices.



Cognitive Loads: these are all the requirements that users have to mentally navigate to thrive in the system. For remote learning, this means everything from how many different programs they have to run to how many passwords, tools, and features they need to keep track of. In remote learning situations, we tend to think of the requirements for any given tool or program whereas cognitive load requires thinking of the aggregate experience for the user.

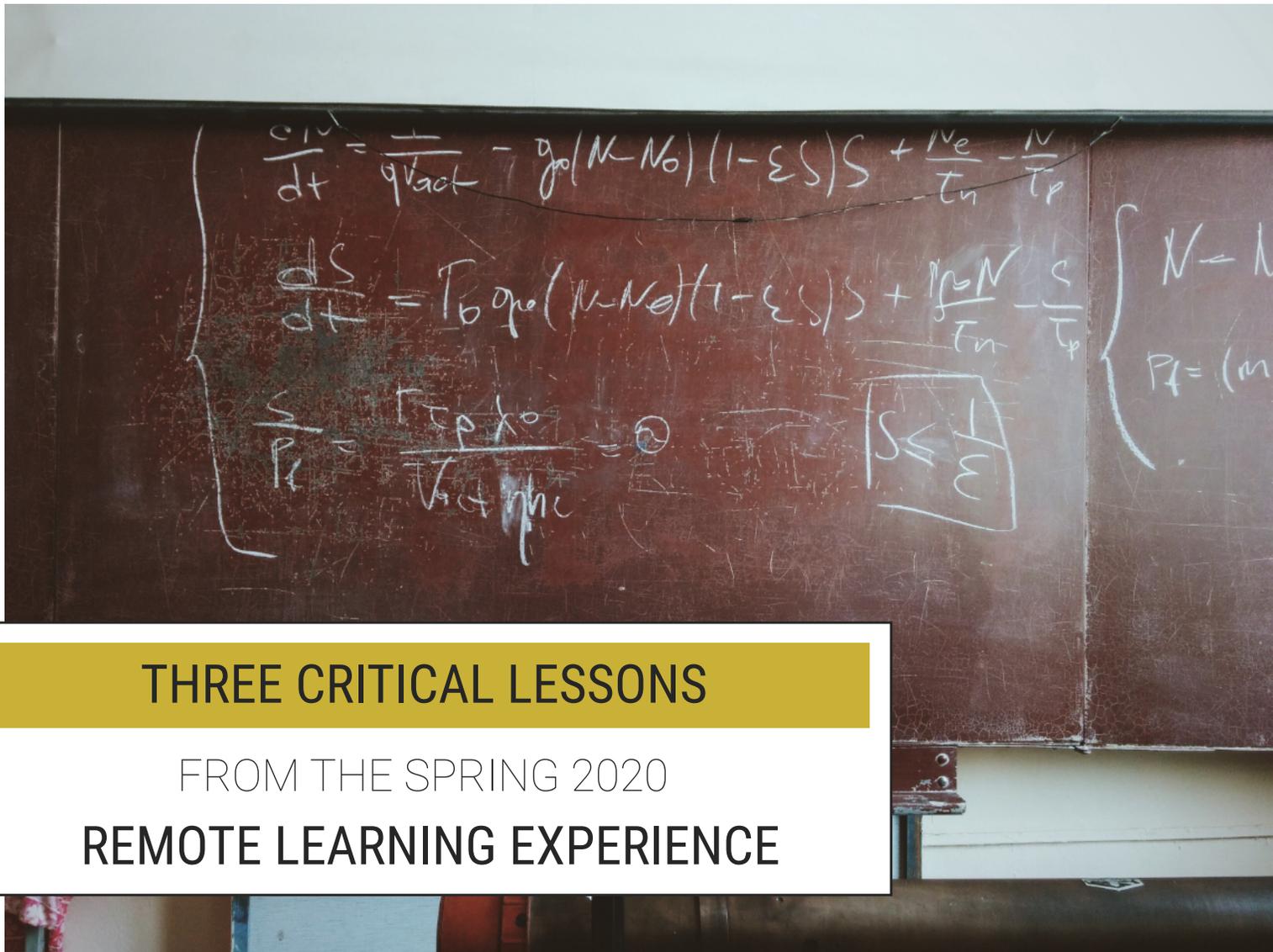
Workloads: these are all the requirements that users have to execute to accomplish the goals of the system. For remote learning, this means how much work does an educator have to do to effectively teach and how much additional work do students have to do to effectively learn. In a remote learning context this could mean anything from manually entering rosters to keeping track of attendance to uploading assignments to grading homework.

Our research revealed that when it comes to preparedness, the choice of platform was not as important as the commitment to using it. There were countless institutions throughout the world that had invested in technology but had not invested in the other resources needed to make that technology effective. Preparedness requires an investment in training, scenario planning, and doing the work to get buy in from administrators, educators, students, and parents. The crisis forced all of those stakeholders to adopt remote learning, but that does not mean they were all equally prepared for the task.

⁵ Reema Amin, "Number of Homeless NYC Students Remains Stubbornly High," *The City*, October 29, 2019, available at: <https://www.thecity.nyc/education/2019/10/29/21210727/number-of-homeless-nyc-students-remains-stubbornly-high>

⁶ Tawnell D. Hobbs and Lee Hawkins, "The Results Are In for Remote Learning: It Didn't Work," *The Wall Street Journal*, June 5, 2020 available at <https://www.wsj.com/articles/schools-coronavirus-remote-learning-lockdown-tech-11591375078>

⁷ Robert Pondiscio, "The Worst Is Yet to Come," *Education Week*, June 10, 2020 available at https://blogs.edweek.org/edweek/rick_hess_straight_up/2020/06/the_worst_is_yet_to_come.html



THREE CRITICAL LESSONS

FROM THE SPRING 2020 REMOTE LEARNING EXPERIENCE

Although it is tempting to think of Spring 2020 as a particularly chaotic inflection point, we should nevertheless take heed of Albert Einstein's famous adage that "out of clutter, find simplicity. From discord, find harmony. In the middle of difficulty, lies opportunity." Although we do not know the future, we cannot let our uncertainty about what comes next become an excuse to overlook the data that we do have from this tumultuous transition to remote learning. Here are three lessons available to us based on the experiences of administrators, educators, students, and IT professionals.

First, prioritize empowering teachers to help teachers. Educators remarked that developing a community of support between fellow teachers was critical to developing best practices, solving problems, and providing the confidence needed to venture into the new world of remote learning. Yolanda M., for example, said that when it came to educators teaching educators, "we were each other's lifeline." She described how teachers were sharing, "Okay, I'm doing this. What worked for you?" and "Oh, this worked for me. Let me share it with my other teacher friends." According to Yolanda, "that's pretty much how this last 11 weeks have gone." The key, for Yolanda, was that the sharing took place with teachers from other schools across the district. Although teachers have always shared tips of the trade with each other, in the chaos of the transition, the educators needed access to community that extended well beyond the school break room (which they could no longer visit) to find creative solutions.

Surveys reveal that many different technologies were used for teacher collaboration, but one tool, Microsoft Teams, facilitated more teacher collaboration and support than others. For example, Holly L., a technology innovation specialist, describes how Microsoft Teams helped facilitate communication beyond pre-existing interpersonal relationships. According to Holly, their group immediately thought of Microsoft Teams as a way to facilitate peer support by setting up a homeroom support Team just for teachers. In this Team, educators could ask questions about tools, seek advice from other educators, and watch instructional videos. According to Holly they have 2,500 teachers in this team and Holly and her team now spend 90% of their time in this team supporting teachers in ways that cannot be captured with a phone call or email. It works because teachers share lessons learned with their peers while Holly and her team continue to advance the conversations about what is possible. As Holly explains, "It has been so exciting for me to be able to see the support system teachers have built together amongst themselves. Teachers are in there not only asking questions but responding to each other." According to Holly, "we have not had one negative response, not one complaint and, in fact, it has built an amazing community among our teachers."

After seeing the success of the homeroom support team, Holly and her team have now created teams for specific curriculum areas such as a math team, a world language team, etc....According to Holly, the experience the teachers had in the homeroom support team have now translated into these subsections in ways that actually reduce the need for Holly's team to be involved, "teachers were already used to communicating and collaborating within a team, and that really made the difference. Teachers already knew how to go into a team and ask for help and collaborate." Whether remote learning is a mandate of the short term or a part of the educational experience of the future, the lesson here is important: helping teachers support teachers pays massive dividends for everyone.

Second, providing direction is better than providing options. IT Pros who provided a recommended or required set of tools to use were more successful at supporting their school's transition to remote learning than those who provided many options for teachers to choose from.

IT professionals and administrators faced an incredible challenge when they had to communicate to their educators and students that the switch to remote learning was both immediate and non-negotiable. Given the speed of the transition, it appears that some administrators and IT professionals decided that the best short-term solution was to let the educators choose whatever platform, application, and/or interface they preferred. Other administrators and IT professionals removed those decisions in the name of uniformity. The data now reveals that when it comes to remote learning, too many options can actually herald negative outcomes. David O., a district director of digital strategy, remarked,

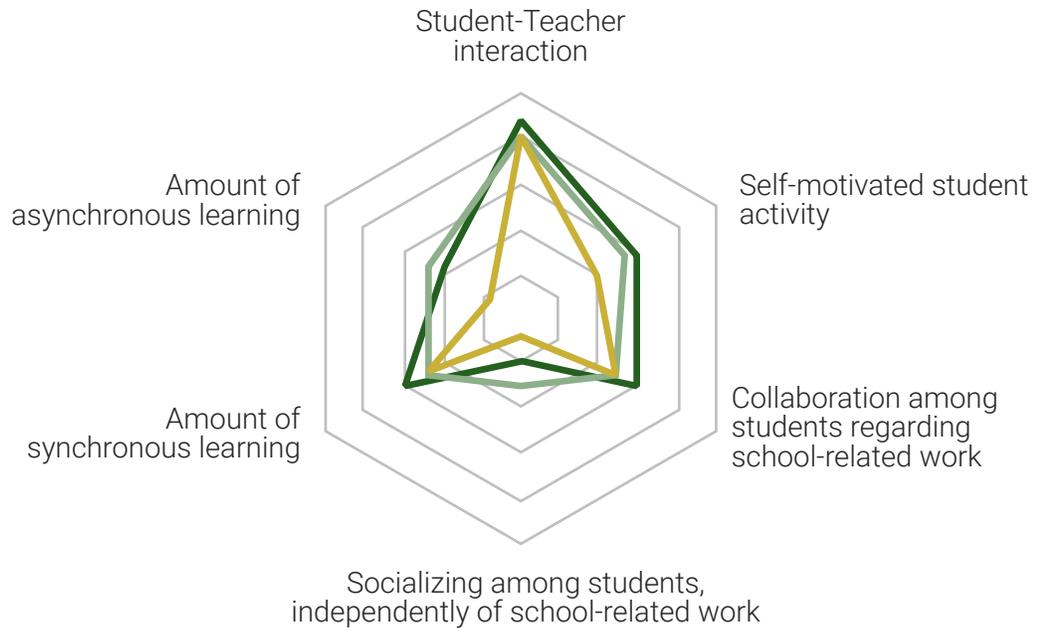
“I consistently find that the schools that are most disorganized are ones who let the teachers drive the tech.”

I think oftentimes teachers think about ‘Well, this is what I need for my class to work,’ as opposed to ‘What do our students need to have a great experience overall?’ Disorganization during a chaos affects every part of the remote learning experience. IT Professionals are strained as they navigate multiple platforms, students are strained to navigate multiple interfaces, and the educators themselves become more dissatisfied with the remote learning experience.

The disadvantages of the more ad-hoc approach were not limited to educators. Attempting to navigate multiple platforms, software programs, and all of them having different login and passwords made dramatic demands on their cognitive loads during a time of crisis. Yolanda M. noted that when it came to her students, “I have noticed the difficulty for a lot of the kids is all the different platforms that the teachers have in relaying information to them. That has been really difficult for students and for parents.” Dr. Diaz echoed the same sentiment, “what we have heard from kids and parents is that one of the bigger struggles is just the use of so many different tools and platforms. Especially with our younger kids, where they are going to all sorts of different things for platforms, tools.” Another teacher, David Z, summarized, “the teacher only has to know one platform, but we are requiring our students to know multiple platforms, have multiple logins, and I think is a terrible decision. It creates a really bad experience for students. It makes it so that they can't access things and it also makes it so administratively, the school can't monitor stuff.”

MS Teams only
 Google Classroom only
 Both

IDEAL REMOTE LEARNING SETUP



The data reveals that when it comes to the ideal remote learning setup, educators that attempted to navigate multiple primary platforms ended up with the significantly smaller ambitions for student engagement than educators who were using only one of the primary two ecosystems, no matter how many other applications they deployed.

This was true independently of whether they used Zoom as an optional video platform, perhaps because Zoom serves primarily as a video platform, rather than a more intuitive classroom replacement. When multiple primary ecosystems are available, it appears that educators lose out on opportunities to focus their own learning and to help each other, and students lose out on opportunities for more focused, innovative engagements. As the chart shows, the data reveals that educators who work on multiple platforms end up envisioning the bare minimum of engagement.

3 LESSONS

from the Spring 2020 REMOTE LEARNING EXPERIENCE



EMPOWER TEACHERS
to
HELP TEACHERS



PROVIDE DIRECTION
rather than
OPTIONS



OPTIMIZE
for accountability

In short, platform coherence is a value that should be prioritized over a more buffet style approach to technology selection. Providing lots of options to teachers is a great idea in theory, but in practice more options means less innovation and a much greater cognitive load for the students. As Rory M. stated,

“It’s so important for the students so that they don’t have cognitive overload.”

Coherence comes from investing in an ecosystem that has all the essential capabilities while also providing room for future innovation. As teachers and students grow in their understanding of a platform, they can then share their innovations across classes and facilitate a learning environment that focuses on the lesson at hand, and not another delay for a password reset email to come through.

Third, optimize for accountability. Administrators, IT professionals, and educators were all in agreement that failure was not an option despite the speed of the transition and the daunting task at hand. When asked whether or not anyone thought about just cancelling school for the year, one assistant superintendent in academics, Dr. Silva D, replied, “there was never a thought to write it off. No one ever said, “oh my God, let's just end school now, this is not going to work.” Instead, administrators worked tirelessly to collaborate with every stakeholder available to provide the best remote learning options possible.

Jim C, Chief Information Officer for a school district in the southern US, describes their launch by recounting that his “superintendent was on the phone with me at 10 o'clock, 11 o'clock the night before we went live, just concerned. “Are we sure we're going to be okay?” Yes, we're going to be okay. “Will everyone be able to login?” Yes, everyone is going to be able to log in. It's going to work. Meanwhile, I'm just holding my breath and hoping and hoping and hoping that everything is truly going to work. But then amazingly,

We went online the first day and we had 85,000 students log in within the first hour. So, everyone was just completely blown away.

There are countless stories from educational leaders like these that highlight success in the face of a seemingly impossible challenge to move students to remote learning in a matter of days. Although there are lessons to be learned from these individual success stories in the face of complexity, we also need to sound a note of caution, because much of Spring 2020 was, in effect, graded on a curve. According to Drs. Megan Kuhfeld and Dr. Beth Tarasawa, “Preliminary COVID slide estimates suggest students will return in fall 2020 with roughly 70% of the learning gains in reading relative to a typical school year. However, in mathematics, students are likely to show much smaller learning gains, returning with less than 50% of the learning gains and in some grades, nearly a full year behind what we would observe in normal conditions.”⁸ Of course, without the unbelievable efforts of administrators, educators, and IT professionals, those numbers would be far worse.

⁸ Megan Kuhfeld and Dr. Beth Tarasawa, “The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement,” NWEA Research Brief, April 2020. Available at: https://www.nwea.org/content/uploads/2020/05/Collaborative-Brief_Covid19-Slide-APR20.pdf

Nevertheless, these numbers might be difficult to identify if one was looking at typical measures like grades. The reality was that technology that might have been “good enough” to supplement the classroom was not ready to substitute for it, and so many school districts enacted policies designed to protect students’ grades. The goals were admirable given the tumultuous nature of the transition. Educators, however, noted that when students discovered that they were not going to receive a poor or failing grade any real sense of accountability disappeared. The remote learning environment became all that much more difficult when students were not as engaged. According to Jim M, a music teacher, the policy that prohibited failing grades meant

“The level of participation in some classes was very low. In some classes, it dropped to near zero by the end of our school year.”

The question, therefore, for all stakeholders in the educational system is how to best prepare for remote learning that includes substantive accountability. Kelly W, a middle school teacher and teacher coordinator, is already thinking through future remote learning might be different when it comes to accountability, “we didn’t have big participation from the students that we will still teach in the fall. And I think that it will be interesting to see how the students are going to react to the new policy changes.”

Educators, administrators, and IT professionals need to use their energy and creativity – and their wallets – to move the expectations for remote learning up and beyond “good enough” to the same standard of excellence that they have come to expect from their students within the classroom.

More robust investments will likely be needed, and with them, more peer-to-peer community building, as teachers work to expand and improve their remote and hybrid pedagogies as quickly as possible.

In addition, and like it or not, the simple reality is that schools will need to become as data-savvy as many small or mid-size businesses, because they no longer have the visibility into student attitudes and progress that a physical setting provides. Investing in systems that includes analytics will be a big part of standardizing the hybrid learning experience for educators and for students, and in moving pedagogical approaches from mere experiments in one semester to best practices the next.



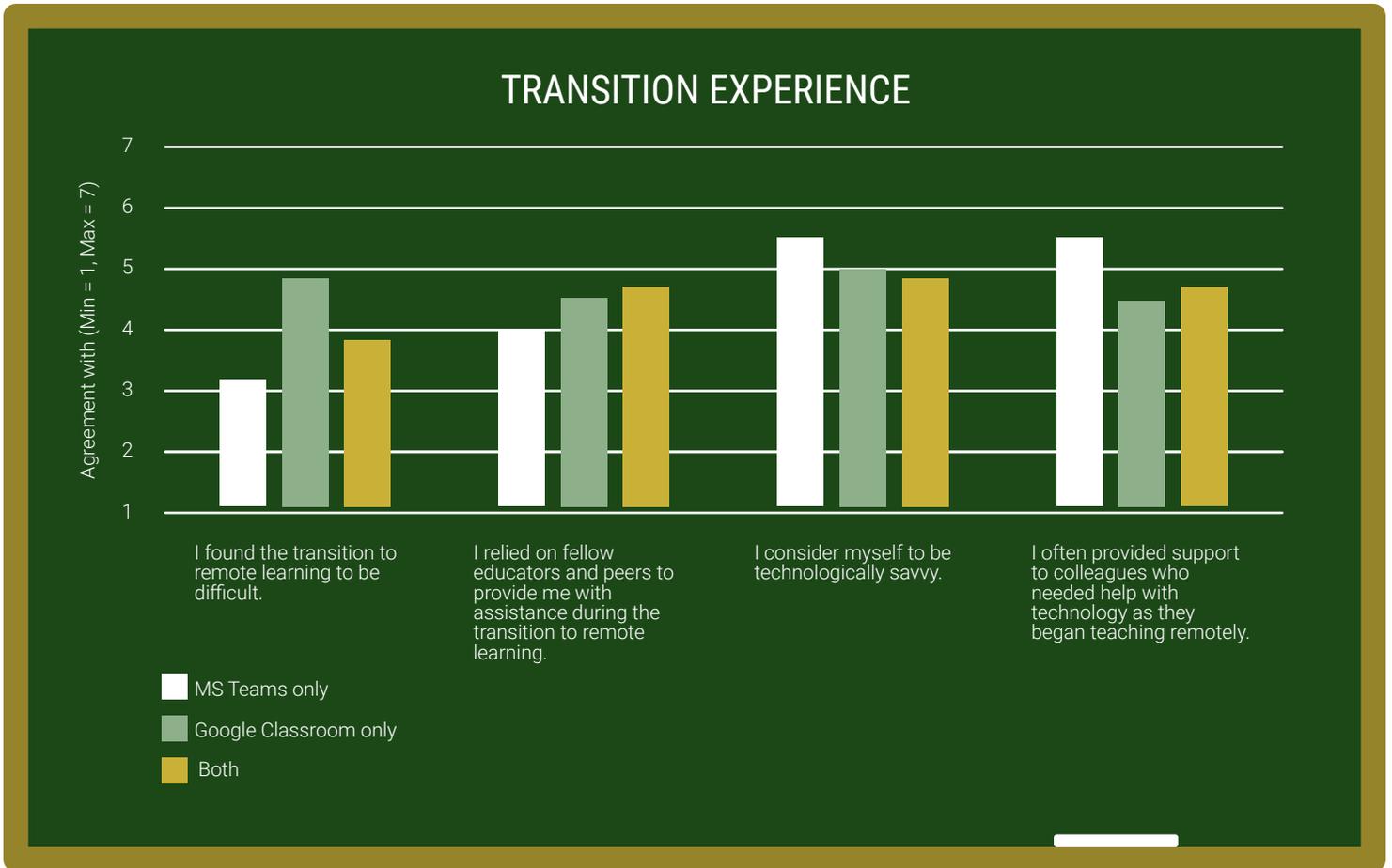
MANAGING THE LOAD FOR EDUCATORS

When it comes to educators, Kathy H said it best.

“Nobody signed up to be a virtual teacher.”

Still, in the absence of alternatives, educators soldiered on, finding the transition both rewarding and incredibly taxing. Yolanda M., for instance, highlighted how after “21 years teaching, I have learned more in the last 11 weeks that I never would have imagined learning. When they say you can teach an old dog new tricks. Well, yeah, I never thought that I would have a classroom digitally, ever, ever, ever. But I can tell you that I have not worked this hard since my first-year teaching too. Everybody I talk to feels the same way, that they can't believe everything they've learned, but they've also haven't worked this hard.”

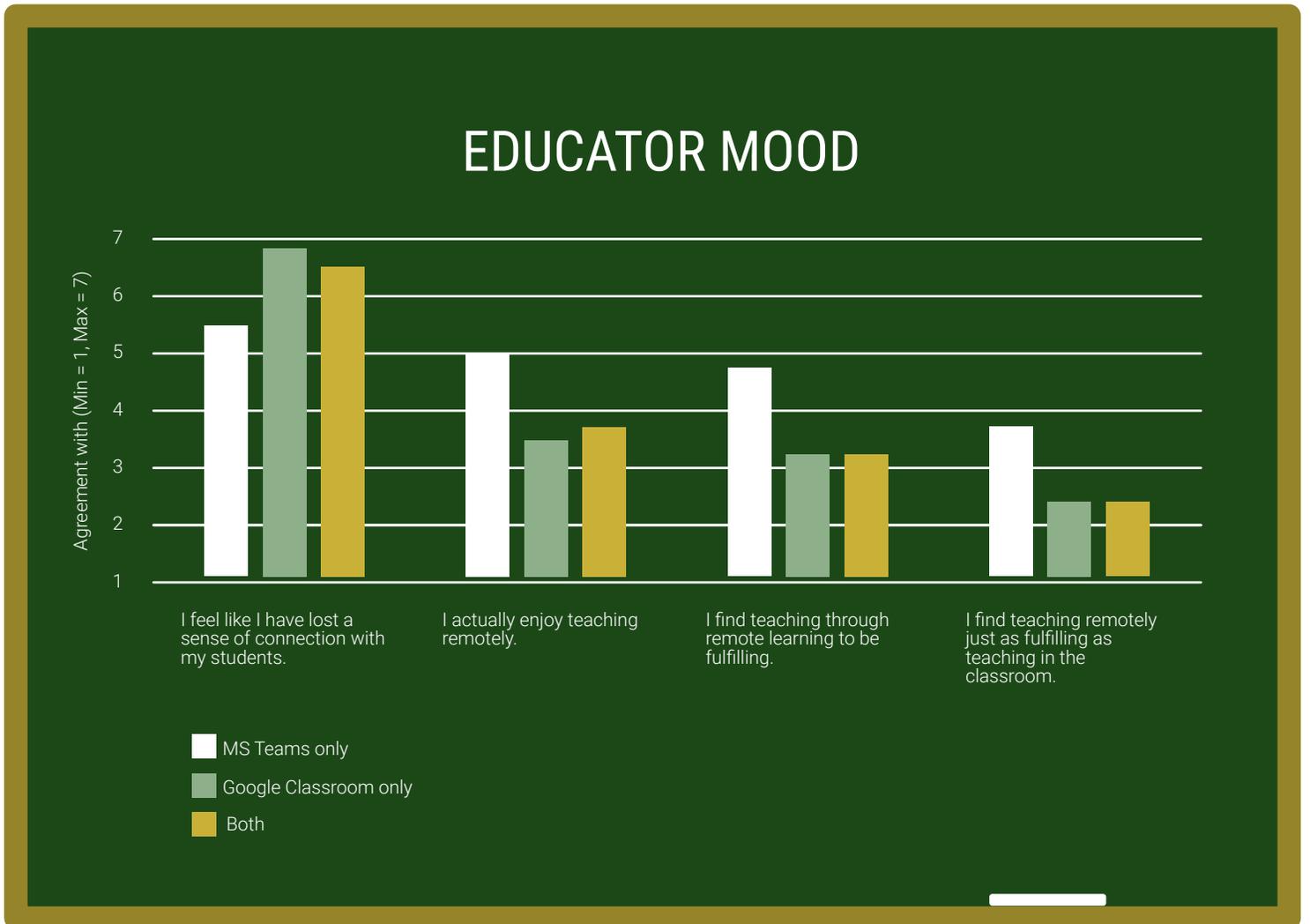
Ryan H, an English teacher with more than twenty years of experience shared a similar experience, “It was the hardest thing I've done professionally. Just because I was also down, not seeing my kids, not wanting to work, I was having trouble finding that rhythm and that routine. I liked that I had so many options, but I found the whole thing hard to balance and hard to juggle.” Ryan and Yolandi's experiences highlight the importance of considering both cognitive loads and workloads when considering educators.



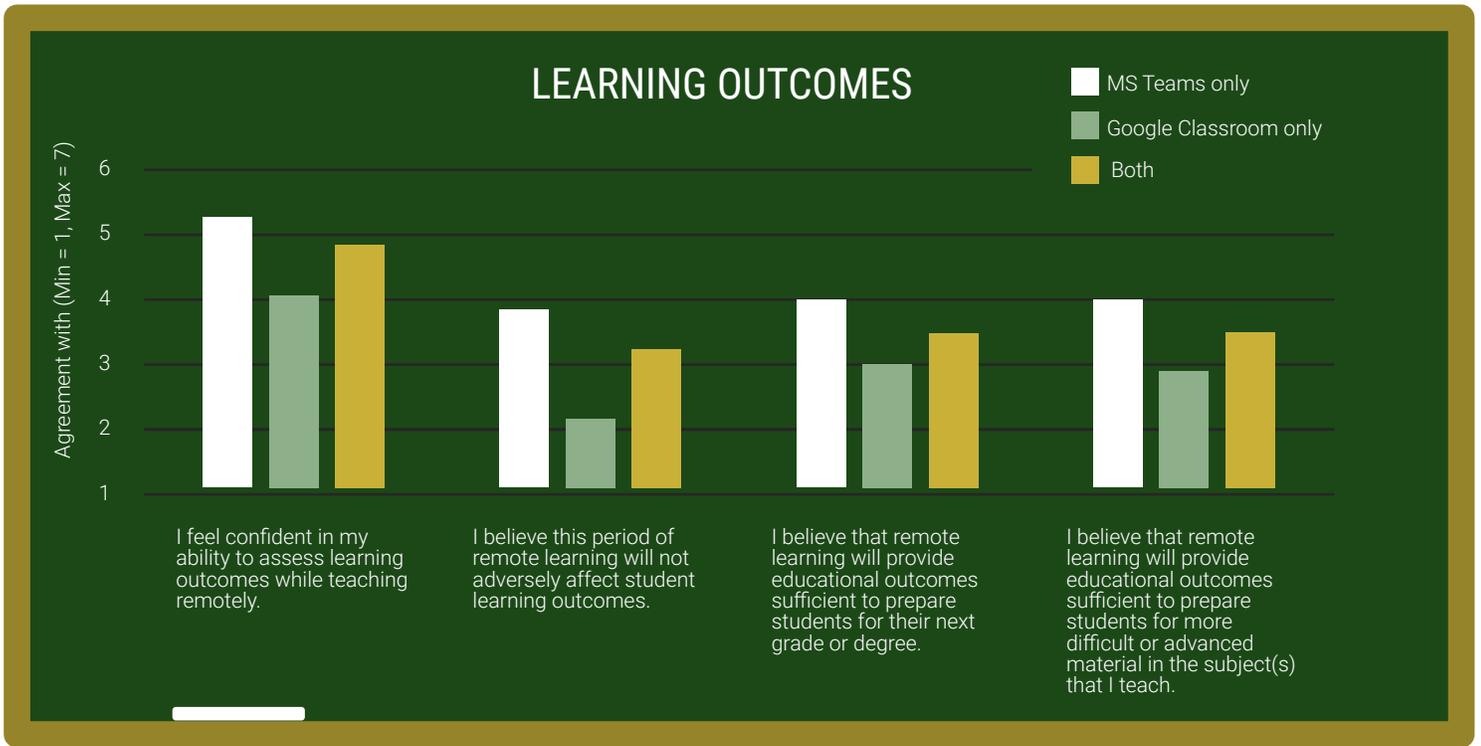
Survey data suggests that educators benefited from the primary interaction platform that they used. While there were little statistically significant differences between those that included video platforms like Zoom as an additional resource, there were interesting divergences between schools that relied primarily on Microsoft Teams and those that relied on Google Classrooms. These differences were echoed by similar correlational differences between educators who used primarily Microsoft educational solutions (OneNote, Office, Teams, etc.) and those that used primarily Google educational solutions (G-Suite for Education). While more Google users supplemented with Zoom than did those using Microsoft solutions, we found that the use of Zoom did not impact survey results, positively or negatively, in any statistically significant fashion. Nor did the use of lesser known technologies like Panopto or Canvas, to name two examples.

The differences between users of different platforms are worth noting, because they suggest additional insights for schools as they negotiate this new normal. Teachers that used Microsoft Teams were more likely to report an easier transition and to provide support to their peers while simultaneously relying less on their peers and feeling more confident in their technological capabilities. Although it's difficult to tell from the survey data, we suspect that the correlation here is dispositive: having the same platform used for peer collaboration as for teaching made both the provision of support and the confidence using the technology more robust simultaneously. Indeed, Microsoft Teams users were 42% more likely to provide support to their colleagues than were Google Classroom users, though this difference was slightly less pronounced when comparing users who primarily relied on Microsoft technology to those who oriented toward Google offerings.

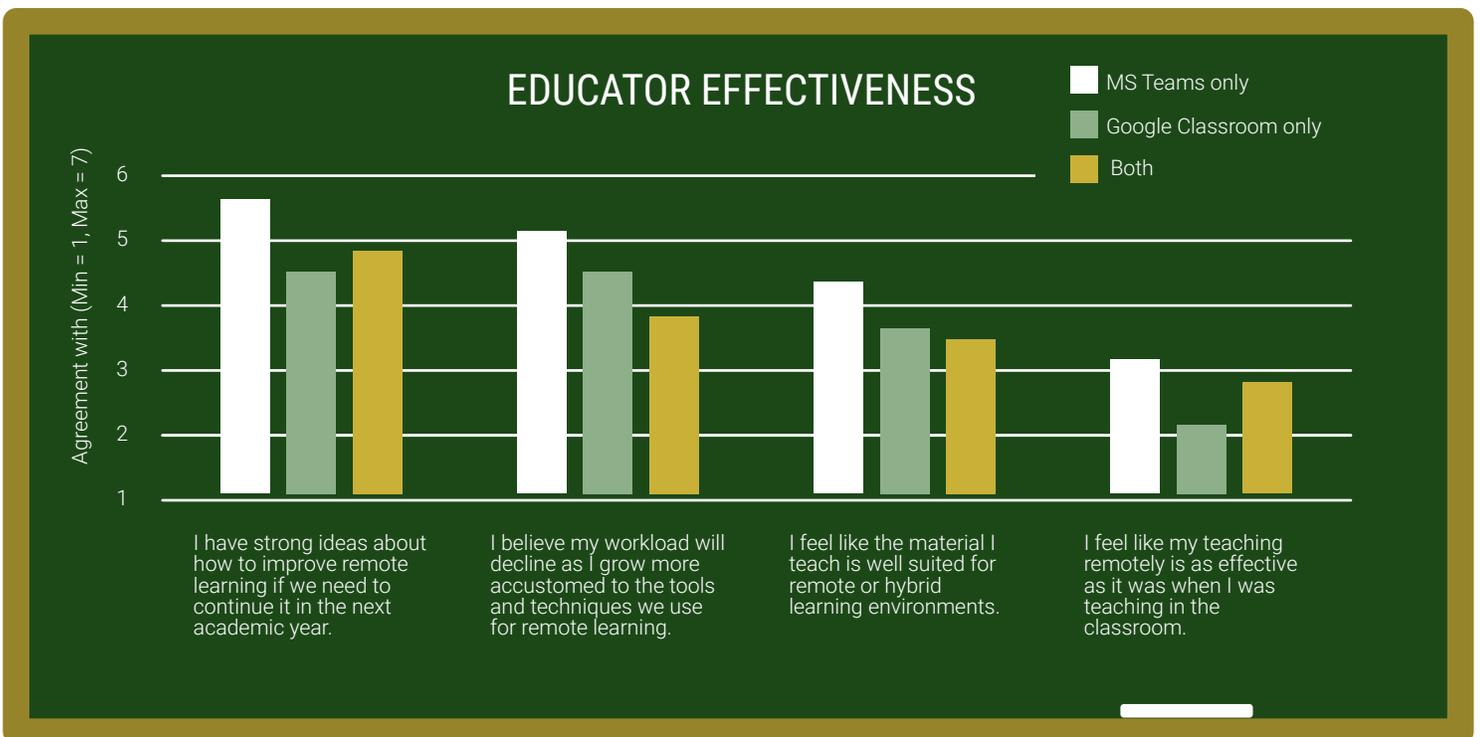
Additionally, Microsoft Teams users were more likely to feel a sustained connection to their students, to report enjoying their remote learning teaching experience, and to go so far as to say that their remote learning experience was just as rewarding as their in-person experience. To be clear, these numbers were still low. It would be easy, too easy, to dismiss the differences as unimportant, though; in a situation that was likely to be experienced as a negative, the salient point is that not all educators felt it went as poorly as did others.



When it comes to learning outcomes, Microsoft Teams users were more confident in their ability to assess learning outcomes remotely, while also believing that remote learning was still providing students with essential learning opportunities that were sufficient enough to prepare them to advance to even more difficult materials and classes.

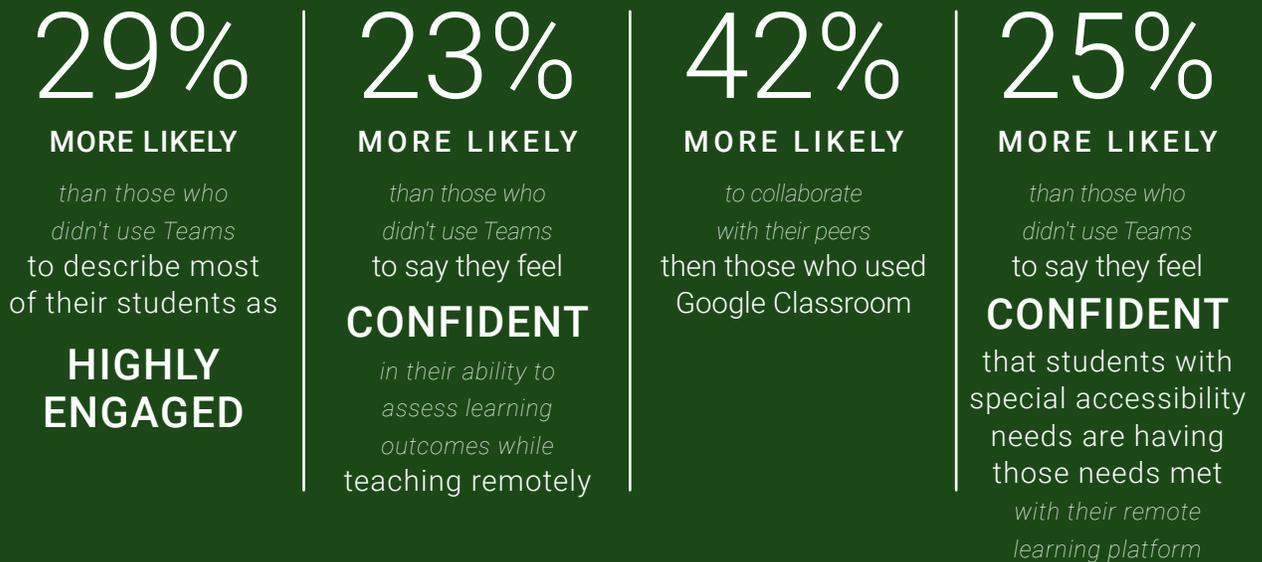


Finally, when it comes to the overall sense of effectiveness and plans for future innovations, Microsoft Teams users were more likely to report having strong ideas about how to improve their remote learning courses, to believe their workload will decline over time, to believe the material that they teach is well suited for remote learning, and that their overall teaching was as effective as when they were teaching in the classroom.



The survey and interview data confirm that educators struggled with both the cognitive loads and workloads associated with the transition. That being said, survey data reveals that the teachers using Microsoft Teams were better positioned for the transition resulting in a stronger confidence in their own teaching, in the learning outcomes for their students, and for their ideas for innovations going forward.

Microsoft Teams users were on average



All four statements have a p<.05.

The exact causality for these differences is difficult to determine from correlative data, though the qualitative interviews we conducted do shed light on some priorities and practices that might account for some of the difference in perception, and they hint at what technology platforms should iterate on if they wish to enhance remote and hybrid learning in the future. First, in an environment in which consistent access was already a particularly substantive challenge for many schools, the need for a platform that included accessibility features appears to have been quite important. Second, having the same application used for administration, peer-to-peer collaboration, and community-building on the one hand, and for the actual classroom instruction and organization on the other, likely reduced cognitive load and allowed educators to focus more clearly on the act of student instruction.



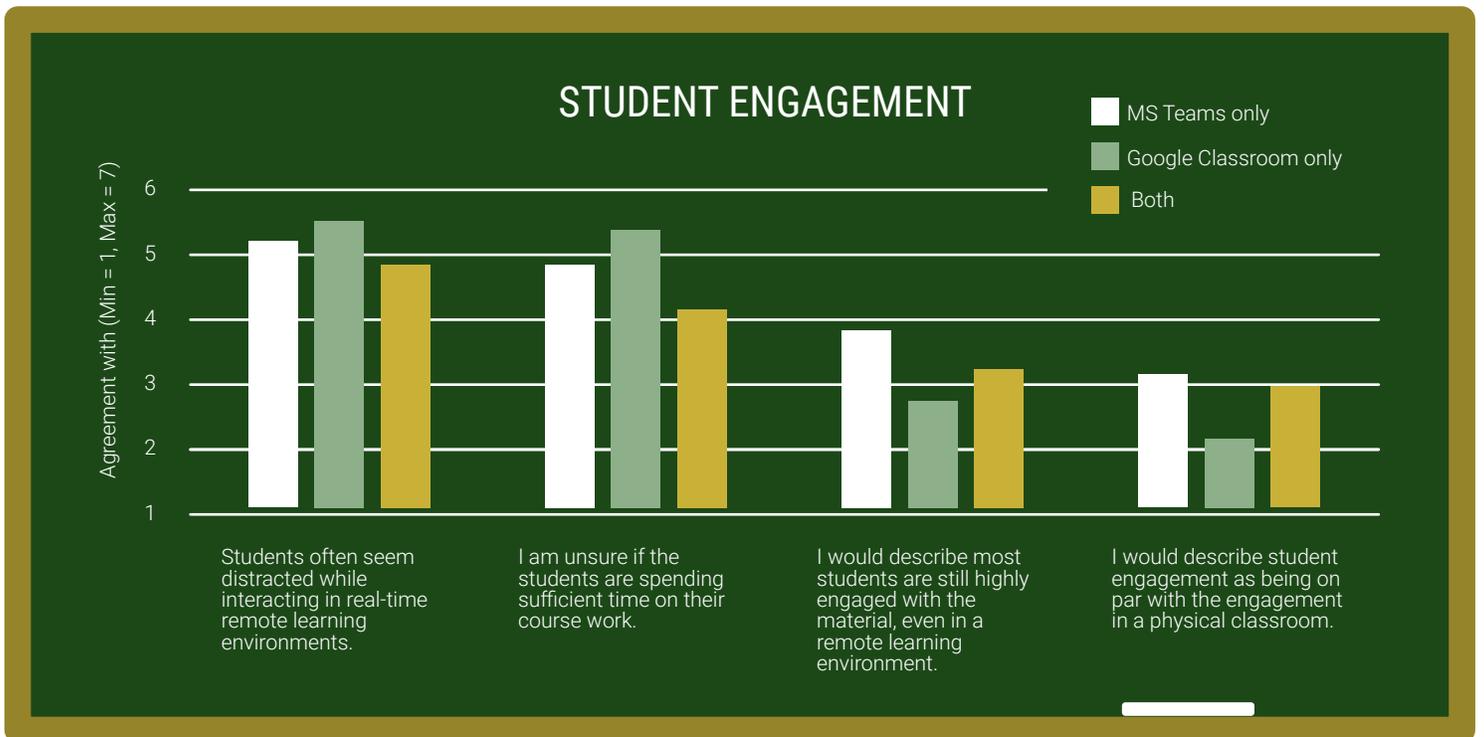
MANAGING THE LOAD FOR STUDENTS

For students, the transition to remote learning involved more than just navigating technology. It meant losing access to interpersonal relationships, mental health resources, access to food, and so much more. As school districts focused on solving the need for food and remote counseling, teachers found themselves trying to help students adopt responsibility for time management in ways that are typically reserved for late high school and college students. As Dr. Diaz notes of Miami Dade students, “we were asking kids to manage their time, to figure out how they were going to get those assignments done over the course of the week. They are having to take more responsibility. When you’re in class, the teachers reminding you, ‘Hey, this is due tomorrow. Have you worked on this?’ The teacher is looking for parts and pieces, sometimes, of assignments. They break it up, right? This part is due today. The next part is due tomorrow. In this environment, the kids are not benefiting from that type of oversight, organizational management by the adults.” The solution, as noted by many educators, was increased student engagement.

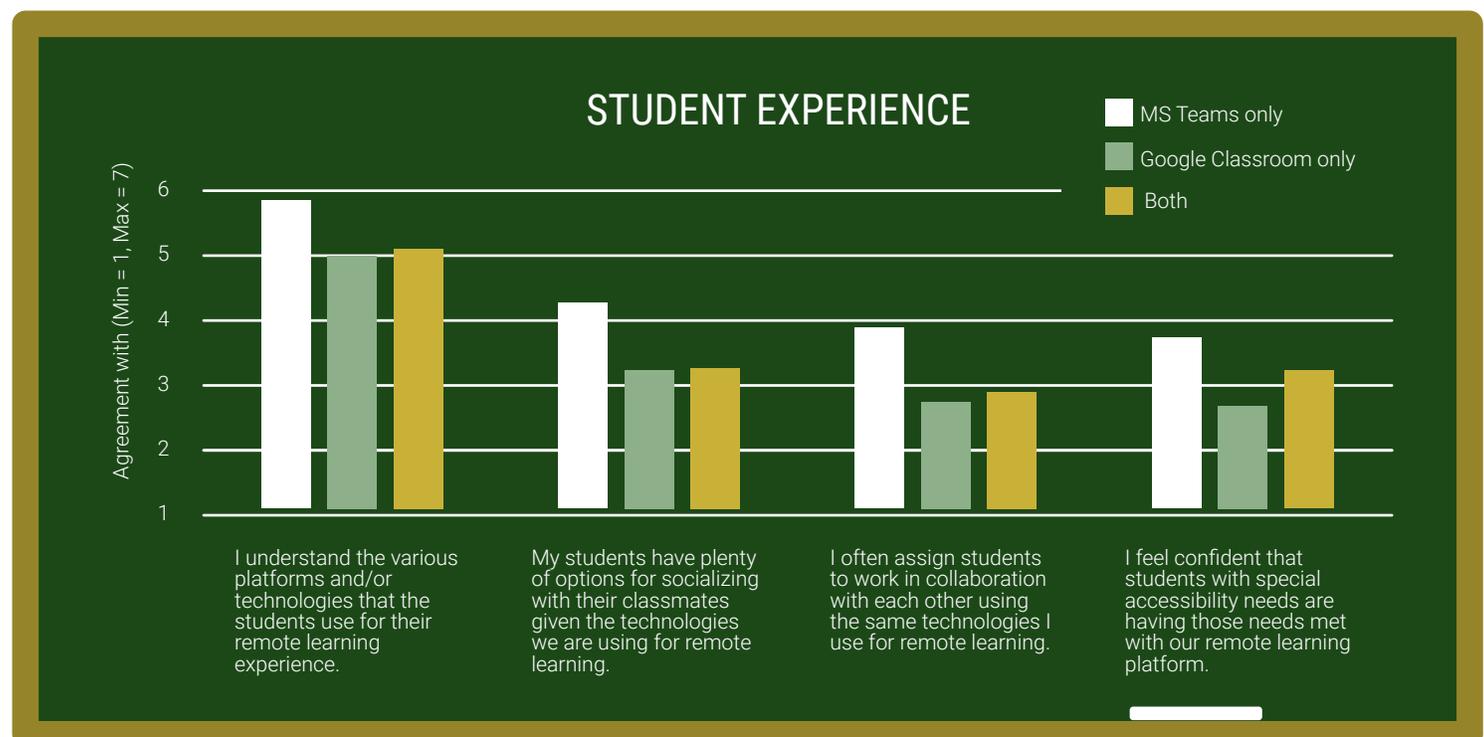
When discussing how he uses Microsoft Teams for student engagement, Rory M. described that he “can still present new material, I can still have them do in-class practice, we still go over our homework in the same way I call random students and they respond. I can still do most of the things that I do on a regular basis, and that’s been really neat.” Beyond engagement, educators are working hard to establish student collaboration. Rory notes, “I was really impressed with their collaboration. They were working on their own and then popping back into our primary meeting to ask me questions, or some of them were posting questions in the chat. I thought it was a really great way that I could communicate with all these groups at once and make sure they were on task, and from what I understand other teachers have also really liked that function of channels for group projects.” According to Rory, that engagement and collaboration has also been essential for accountability, “our parents are really grateful that we have a system in place and that their children are getting up and they know what to do. I guess

Our principal was saying that our parents are seeing other teenagers in the neighborhood, they don't have anything to do, they're walking around, they're just hanging out. So, our parents are really grateful for what we have in place.

The survey data confirms Rory’s experience and reveals that platform choice can improve student engagement. Teachers that used Microsoft Teams reported less distracted students, more confidence in knowing what their students were doing at any given time, and an overall sense that the students are engaged in the remote classroom setting. In particular, Microsoft Teams users were more likely to report that their student engagement was on par with the engagement from their face to face classroom experiences.



The data also confirms that the overall student experience was improved when the teachers used Microsoft Teams for remote learning. Teacher felt like they better understood the platform and how to engage the students on it, that the students had options for socialization, that there was room for collaboration, and that students with special needs are having them met through the remote learning experience.





Managing the cognitive loads and workloads of the students is an essential element in their success with remote learning. As Dr. Diaz reminds us, “I think for a lot of the children too, it’s been overwhelming. The amount of change. They are going online; they’re using a whole bunch of different tools. Some that they’re familiar with, perhaps some that they’re not, and they are dealing with adults who could be communicating with them and not seeing them. Especially for younger children, that’s challenging. I think in some cases, kids have been overwhelmed with lots of assignments and in other cases they’ve struggled without having that adult there with them to explain when they don’t understand.” Students are an essential component of successful remote delivery and managing their load through engagement and choosing the right platform is essential as well. The interview data and survey data support choosing Microsoft Teams to facilitate student engagement, collaboration, accountability, and socialization.



MANAGING THE LOAD

IT PROFESSIONALS

For educators and students, cognitive loads and workloads play a central role in their experiences with remote learning. For IT professionals, they also have the added dimension of logistical loads as they worked overtime to deal with the logistical load issues. IT professionals were tasked with solving as many problems as possible because every problem they anticipated and resolved had a magnifier effect throughout the educational system. If the IT professionals could solve device distribution and connectivity before parents called teachers, then they could reduce anxiety for everyone while saving time and energy to focus on training and innovation. The logistical demands were immense to say the least. The data reveal that preparedness for the IT professionals echoed throughout the remote learning environment which makes sense given the implications for each major IT decision.

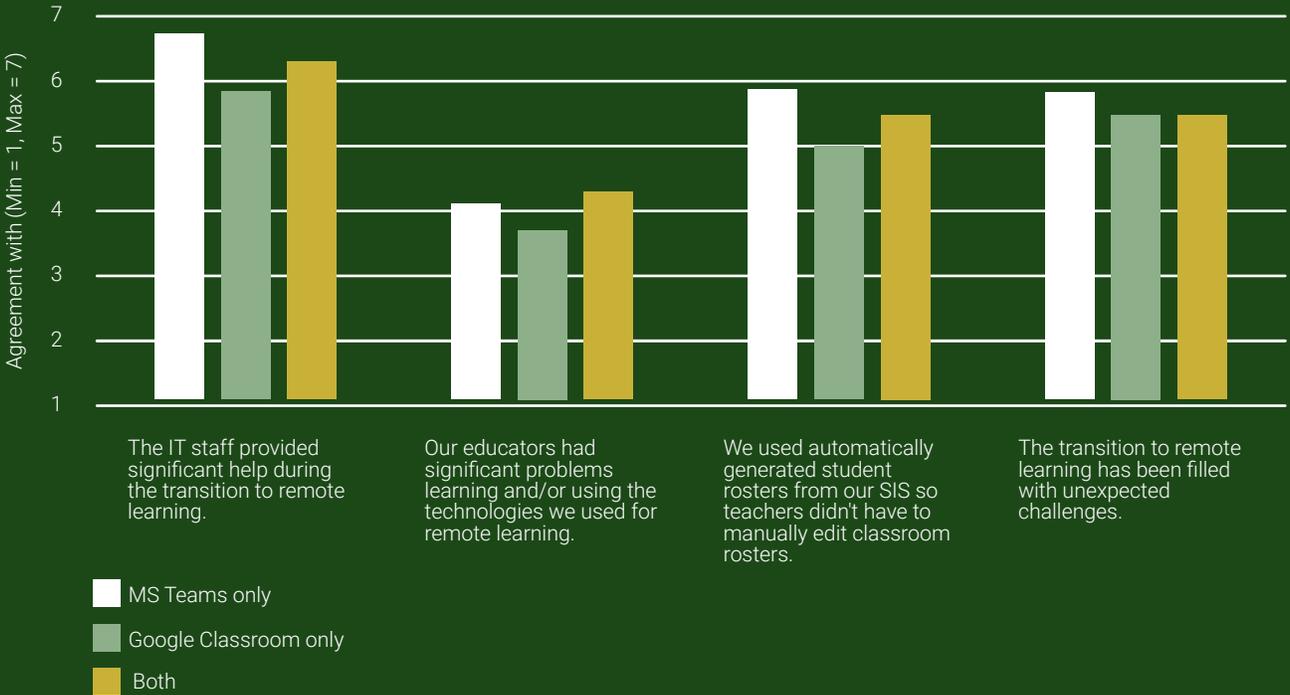
When answering the question, "Our IT staff felt unprepared for the transition to remote learning."

- + were also more likely to say that the educators felt unprepared for the transition ($r = 0.44, p < 0.001$)
- + were more likely to say that the transition was filled with unexpected challenges ($r = 0.38, p < 0.001$)
- + were more likely to state that educators complain often about RL setup ($r = 0.35, p < 0.001$)

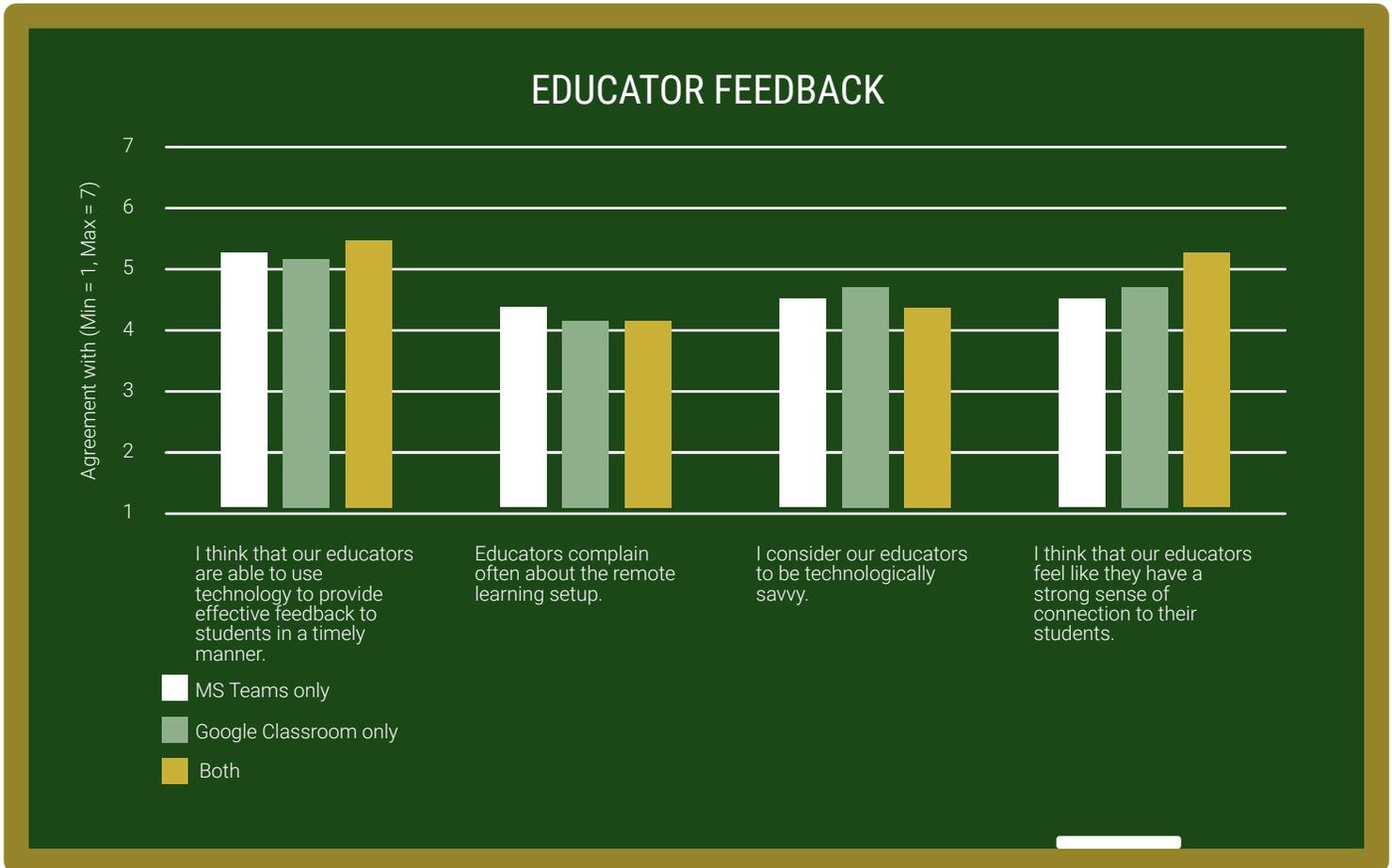
These correlations highlight that administrators cannot overlook the investments needed to help prepare their IT professionals. The more prepared the IT staff was, the more positive the results for educators and the less challenges for everyone.

Although there was less variance across the results, the survey data shows that different platforms had strengths and weaknesses when it came to the logistical load requirements for IT professionals. Microsoft Teams, for instance, was reportedly better at class rosters while Google Classroom users reported less significant challenges in the transition and less time with IT professionals providing significant help.

TRANSITION EXPERIENCE



For educator feedback, Microsoft Teams users reportedly slightly more effective feedback while Google Classroom users reported less complaints and a slightly stronger connection to their students.



IT Professionals also face cognitive load and workload constraints, but they have a more substantial logistical load constraint as well. Every problem that they can anticipate saves time and energy for everyone else. Every problem that they cannot anticipate generates larger challenges for remote learning. The platform choices mattered less for IT professionals, while the level of preparedness mattered as their decisions reverberated throughout the remote learning environment.



FINDINGS + LIMITATIONS

Our research reveals important differences between the perspectives of educators and IT Professionals when it comes to the Spring 2020 transition to remote learning. IT Professionals were more likely to say that the Google ecosystem represented a smoother and overall easier transition to remote learning. Educators were more likely to say that Microsoft Teams facilitated student engagement and educator to educator learning. On the whole, both groups reported better outcomes when administrators made a choice for one platform rather than leaving it to the educators to pick a platform of their preference. The data supports that both Google and Microsoft have room to grow their platforms to help facilitate twenty-first century goals for education that are likely to involve a reimagining of hybrid and remote models.

We arrived at our focus on Google and Microsoft organically as a result of asking IT Professionals and educators about their experiences and which platforms they used. One limitation of this study, therefore, is that we did not collect quantitative data for comparisons to other education delivery platforms. The limitation stemmed from the difficulty in finding a big enough sample size of respondents for other platforms to make substantive claims. Future research should attempt to compare more platforms.

Additionally, although the research reveals key differences in how IT Professionals and educators evaluated Google and Microsoft products, the study did not examine why each group articulated those distinctions. Focus group research would enable a greater degree of explanation for the differences between educators and IT Professionals. One important variable, for example, is to what degree familiarity plays an essential role in the experiences of IT Professionals and educators. Research already suggests that educator's familiarity with a technology plays an essential role in their likelihood of successful adoption.⁹

Finally, this research was limited to the experiences of IT Professionals and educators during and immediately after the transition to remote learning from the Spring of 2020. New investments in features and advanced innovations in platforms have the potential to make a substantive difference in the experiences of IT Professionals and educators going forward. Subsequent research should be done to determine how new features have impacted the experiences of students, educators, and IT Professionals.

⁹ "MINDING THE GAP: The Role of Familiarity in Predicting the Ability of Technology to Improve Learning Outcomes," available at: <https://info.microsoft.com/rs/157-GQE-382/images/EN-GB-CNTNT-eBook-Education-MindingtheGap.pdf>

REMOTE LEARNING + TWENTY FIRST CENTURY LEARNING

The spring of 2020 was not the moment to sit back and think through all the ideal conditions for remote learning. Administrators, IT professionals, educators, parents, and students all had to find a way to make remote learning happen in a matter of days. The data reveals that, on the whole, everyone worked hard and facilitated one of the greatest changes in educational delivery in history...and they did it faster than anyone could have imagined. As Leo R, executive director of the Department of Instructional Technology in a rather large county summarizes,

“To me, the biggest revelation was that I have been around instructional technology for the past twenty years, and things that we could not accomplish in the past 20 years, we’ve managed to do in four weeks.”

Now is time to use the available data to learn the lessons of the spring 2020 remote learning transition. As Leo suggests, much was accomplished in a short period of time. Now we need to start figuring out what worked and why. The future is too uncertain to forecast exact scenarios, but we now know enough about our short-term issues that we can start to imagine long-term disruptions. Our new normal will likely involve elements of remote learning for any number of reasons. We will not solve these issues in a semester or even an academic year, but we have now a stronger sense of what comes next.

Already, the big technology platforms have made feature announcements designed to at least address the bigger issues. Google Meet and Google Classroom will see additional functionality, including Q&A and breakout rooms, which will bring it in line with Teams breakout rooms and raising hand functionality. Zoom is working on improving some of its larger security issues and will likely continue to play a key supplemental role in remote and hybrid learning. In addition, Microsoft Team's new Together mode offers the closest approximation we've seen to something that resembles an actual classroom environment online, and will no doubt continue to iterate as will the teachers who use it.

Michelle H. has been a teacher for over twenty years and now works as an education interventionist which means focusing on the students that need the most help. In her assessment, "We are not going to get back to brick and mortar and say, okay, now we're not going to use this anymore and throw it away. I don't believe that, so

I want to be in the know and I want to be in line with a 21st century educational model.

Being in a leadership position, I feel like when September comes around, new teachers and veteran teachers are going to have a lot of questions and I want to be able to be in a position to answer them instead of saying, "I don't know how that works." I don't want to do that."

Today, in the wake of COVID, and in the face of our new landscape for education, we know that all of us confront a newly transformed educational landscape. Hybrid models of learning that blend remote and classroom education, new approaches to pedagogy, and new ways of doing the work of education, from the macro-issues of administration to the everyday lesson plans, are going to be rebuilt and reinvented as we go. This will not be a simple task, and it is incumbent on decision-makers to offer platforms that can make a difference, no matter how subtle, because the task before us is tremendous, and it will not end with the coming of a viable vaccine.

The good news is that we can count on teachers throughout the world to continue to innovate in new and exciting ways that will once again help center the conversation on the needs of the learners.

The challenge, for admins and IT professionals, is to support them.

ABOUT THE AUTHORS



Jarrod Atchison, Ph.D. is the John Kevin Medica Director of Debate and Associate Professor of Communication at Wake Forest University in Winston-Salem, NC. He has been a key writer and thinker at Manchester Street since its inception and is also the teacher of the Great Courses class on the value of argument within the business world.



Ken Rufo, Ph.D. has been working in strategic communications, marketing research, and thought leadership for nearly a decade. He is the owner and principal at Manchester Street, a consulting agency focused on grounding marketing strategy and business transformation in a more rigorous approach to differentiation and best practices for go-to-market.



Manchester Street is a marketing consultancy focused on strategic marketing, differentiation, and change management. Its team boasts significant experience in a variety of industries – primarily B2B – as well as decades of academic and scholarly expertise. The team brings both academic rigor and best practices to bear on problems confronting key industries and verticals, including education. As former and current educators, the authors of this paper have experienced remote and hybrid learning first hand, and know all-too-well the scope and scale of the challenges and pedagogical struggles wrought by the novel coronavirus in the Spring of 2020.