KENNEALLY: When the COVID-19 pandemic struck this spring, classrooms closed, and instruction went virtual for millions of schoolchildren. The spotlight then fell on educational technology, dramatically highlighting its potential and illuminating its limitations.

Welcome to Copyright Clearance Center’s podcast series. I’m Christopher Kenneally for Beyond the Book. Social and financial inequalities present obstacles for access when it comes to online instruction. Public school classrooms, it turns out, may be great equalizers as much as they are great for education. In a world gone dramatically digital, too, print books and workbooks surprisingly can close the learning gap that digital opens up.

In April, HP, Inc., launched a print-on-demand publishing program through the HP Piazza platform that has delivered blended learning resources to underserved students across the United States. By converting digital content to printed booklets, grade school children now have equal access to materials focused on STEM and environmental topics. Michelle Weir, HP publishing innovation manager, shepherded the innovative program, and she joins me today from San Diego. Welcome to Beyond the Book, Michelle Weir.

WEIR: Thank you, Chris. It’s very nice to be here.

KENNEALLY: Well, we are looking forward to learning about this program. It’s an interesting twist on the story we’ve heard so much about, which is the great power of digital learning. That is true. But nevertheless, there are some wrinkles, and your program has helped to smooth those out.
One of the things that we did discover was that when students left those classrooms, they left their books behind. And it turns out, those students may have needed them as much as they needed their laptops.

WEIR: That’s correct. In fact, more so than they needed their laptops.

KENNEALLY: Tell us why.

WEIR: Well, if you take a look at a map of the United States, you would find that vast, vast parts of it simply do not have access to our broadband technologies. While they may have a laptop, if they can’t get on an internet connection and get into a Zoom room, they can’t learn. So the printed book became even more important, as it assured equal access to the learning opportunity.

KENNEALLY: Of course, the access piece is one that is so important, particularly for those facing financial challenges and other social challenges. What have you learned about the educational situation in the United States? Your program has reached out to school districts around the country – I believe in particular in Miami-Dade County.

WEIR: Miami-Dade, Oakland, Houston, Austin, (inaudible), Canada – Toronto – Haiti. We’ve made a significant impact with our program in all of these areas. We’ve printed almost 300,000 workbooks that we have gotten into the hands of students globally.

KENNEALLY: Of course, the challenges that we all face in COVID-19 is that we’re limited by our mobility. We can’t just run out to the bookstore or run out to anywhere, for that matter. We have to really be very planful where we go. So the HP Piazza platform for publishing has enabled these publications to be made first and then distributed. Tell us how all that works. It’s a cloud-based set of services for publishers.

WEIR: Right. So we decided to deploy what we call Piazza Café on top of our Piazza platform. Piazza – it’s a cloud-based services platform developed for the publishing industry. It’s a secure repository and a print network – a global print network. So we decided to work with five different publishers. We secured content. We built a repository inside of Piazza. And then we stood up an ecommerce engine in front of that that let the school districts place orders for the content. The school district would place an order, we would receive that order in Piazza, and we would route it to our print partner, which was Command Web in New Jersey. They printed the books in order of receipt. They were packaged by
school and then shipped by our partner UPS to the different school districts for distribution.

KENNEALLY: Well, you just described a pretty extensive workflow and supply chain to get these books from production into the students’ hands. It’s important to emphasize that all the various participants and partners with HP did so free.

WEIR: That’s correct. So UPS supplied all the shipping. They shipped books all over the country. Command Web printed all of the product at their cost. We had International Paper donate the paper. And then HP stood up the platform and supplied all the infrastructure in order to make that happen.

KENNEALLY: All of those partners are important, but the critical one, of course, is the content provider in that supply chain. Tell us who some of those content providers are and how they participated – what kinds of publications they offered.

WEIR: When we started this program, all of them had digital content. Time for Kids, as an example, Encyclopedia Britannica, NASA, the United Nations – they all had digital content. But they needed to transform that digital content into actual workbooks.

So I have a team of people that I work with internally inside of our graphics solutions business. We converted all of their content into a print format, created workbooks for the products, and then loaded all of that into Piazza. Time for Kids was amazing, Encyclopedia Britannica was amazing, NASA, all of them.

The United Nations book was interesting that we were actually to do what we call a flip, in that it was English and Spanish combined into one product. So we were able to also reach the Spanish market for children who English is a second language. It was really, really important to work with our content providers to get the right content into the system and then enable that for printing.

KENNEALLY: The content you’re describing ranges from kindergarten to fifth grade level. Those are some of the most important grades to reach, I would assume, and perhaps some of the most vulnerable students, too.

WEIR: Absolutely, especially the K-3, right? Sitting a six-year-old child in front of a computer for eight hours a day is simply not possible nor feasible nor recommended. Also, learning is very tactile at that age. So having a workbook that they could color in and actually do their work in and work with their parent or their teacher with and learn something from was really important to these children.
KENNEALLY: All together, I understand you have produced in this program, the HP Piazza Café, over a quarter of a million books, many of those for Miami particularly. How do school districts participate? How can they create an order, for example, to receive some of these books?

WEIR: Right now, we’re working mostly with the Title I schools, the schools that we’ve identified as real need. They simply would go onto the Piazza Café site, they would place an order – how many students they need for particular books – and then the order would come to HP. HP routes the order. This is all done automatically, by the way. So it’s pretty much hands-off from – the time the school district places the order until the time it’s printed and shipped is about three days.

KENNEALLY: So, Michelle Weir at HP, you’re helping get some lessons into the hands of students, but there are some lessons here for publishers as well about the business benefits of print-on-demand. What are some of those?

WEIR: Well, I think that when we started this, it was really designed to solve a very critical need at a certain point in time – how do we help these students in the April/May/June timeframe through that end of school year? But our go-forward opportunity is to broaden the reach with additional content from additional publishers and also to enable print-to-order or print-on-demand in the school districts, because as we’ve seen, the students are not going back to schools. Schools are still struggling with how do they open, and what are the components to opening?

Print becomes even more critical here, in that the school districts are now telling us they’re looking for content that goes both ways, that is online as well as in print, that is blended. It’s that blended delivery. So when a student can come in, they can have the same kind of materials available for both sets of circumstances.

We’re seeing an opportunity to expand beyond our original push here, which was to get this content out for free, into more of – how do we now transition to a business model where publishers can work with the school districts to get their content in a printed form into the students’ hands in a timely manner, and also into like a workbook? Imagine a school would print a month’s worth of content, almost like content as a service, into a workbook, and then that would be what they would work from, whether they were online or offline.

KENNEALLY: All right. Michelle Weir, we will be speaking in just a moment with Karthik Krishnan, who is the global chief executive officer of Britannica Group,
one of the content providers that you’ve worked with. I wonder if there’s a particularly memorable or just enjoyable piece of content that Britannica provided that you want to tell us about.

WEIR: Yes, so they were very, very supportive of the program. We have one of their books that we actually created with them. We took content from multiple sources, and we created a STEM-focused book. They’ve been very supportive. In fact, their book is one of our top sellers, in that everybody has wanted – all of the school districts have wanted that particular product.

KENNEALLY: Michelle Weir, HP publishing innovation manager, thanks so much for joining me on Beyond the Book.

WEIR: You’re very welcome. It’s been my pleasure.

KENNEALLY: Among the publishing partners for HP Piazza Café Turn to Learn Initiative is Britannica Group, publishers of the flagship encyclopedia, Merriam-Webster, and many educational titles for schoolchildren. Karthik Krishnan is the organization’s global chief executive officer. He joins me now from New York City. Welcome to Beyond the Book, Karthik Krishnan.

KRISHNAN: Thank you, Chris. Excited to be on your show.

KENNEALLY: Well, we’re looking forward to learning about Britannica’s participation in Turn to Learn. I guess that’s really the place to start. What was so interesting? Why did you decide to join this program?

KRISHNAN: Reshaping education globally as a sustainable path to prosperity was a challenge pre-COVID. I think the COVID situation has really exposed the underlying challenges that we have. So part of the reason Britannica stepped into this situation is to really help address the learning gap and the remote learning challenges to ensure that students don’t lose their edge, and teachers aren’t overwhelmed by the sudden switch to remote learning.

KENNEALLY: What kind of materials has Britannica contributed to the project, and what’s the response been?

KRISHNAN: Britannica has been traditionally a 100% digital organization, but given the fact that people were struggling to reach students who are affected by the digital divide, Britannica decided to dig deeper into its print roots to really create a curriculum that can be printed and distributed to these students.
In this particular case, we actually created some material on climate change, things related to social emotional learning. So these were the two things that we tested out with the teams. And the general feedback has been pretty positive. Part of it was not just to regurgitate content that we had, but the way the instructions were laid out in terms of explaining the concept, then moving them into an activity and being able to experience certain activities even sitting at home, that’s the way the whole material was structured. This really paved the way for this to be an engaging learning experience.

At Britannica, we take key pride in making a distinction between education and learning. Education is extrinsic, and it’s driven by a curriculum. Learning, on the other hand, is intrinsic and curiosity. So even in all this print content that we put together, we ensured that learning was not lost. The goal was not to check the box and give them some material to work on. It was much more about inspiring the curiosity and the joy of learning in these students.

KENNEALLY: I like that distinction you’ve drawn, Karthik Krishnan, between education and learning, so I do have to ask you about what Britannica is learning from this experience. We’re all in a very new environment. We’ve all moved from the physical space to the digital space and are learning as we go. What did you discover through working with HP on this project that you think is going to be of lasting significance?

KRISHNAN: First off, in order to break the digital divide and create equitable education opportunities, most of us have to start taking a medium-agnostic approach. Medium-agnostic doesn’t mean that we just look at print versus digital. It also means that for digital solutions that we put together, how do we think about low-bandwidth type of solutions? Second is are there offline digital capabilities that need to be built? That’s one of the key learnings.

The second is any time you have a situation that creates a structural change, like the current pandemic, it provides us an opportunity to break with the past and imagine and shape a new world. To me, it’s a portal and a gateway into a new world and a new way of thinking. That’s the intrinsic motivation that we’ve been pushing into, and we looked at it and say even prior to COVID, we were nowhere close to achieving the Sustainable Development Goals in education set forward by the UN. But with remote learning becoming such a mainstay, that provides us an opportunity to create remote learning opportunities for students who did not have access to a school system in their countries.
The second opportunity or learning that’s come out is the fact that you could have the best teacher in California teach somebody in New York. The fact that now we are able to tap into the best teachers all across the world and bring that learning experience into somebody’s home is something that’s very exciting. So the question I have for my team and we think about is how do we use this opportunity to improve access and quality in education?

KENNEALLY: Well, Kartik Krishnan, in addition to your role as global chief executive officer at Britannica Group, you’re also an adjunct professor at the New York University Stern School of Business, and you teach students about the media industry and all the disruptive forces that are shaping our business. I want to ask you, if you would, to sort of reflect on this, because it seems to me – and you’re already indicating that this is something you’re watching closely – this is a potential case study, on the one hand, for the power, the potential of print-on-demand technology, but also a reaffirmation of the lasting persistence and attraction of print.

KRISHNAN: That’s true. As I said, we try to take a medium-agnostic approach. Particularly in the course that I teach, which is The Business of Media, we talk about multiple factors, including how digitization and user-generated content is really changing the supply side of things. On top of it, how business models are changing.

In this particular world, the big message is that the way you deliver information to people will change as the world evolves. Today, it might be a mobile device. Five years from now, it could be a skin or a membrane that’s attached to your skin through which we could be consuming information, or it could be a glass through which you’re consuming information.

So the big message that I leave my own business school students to engage with me is the fact that – how do we build as many engaging channels with the audience, and how do you create differentiated experiences in each of these channels? If you can focus on both and take a medium-agnostic view, I think whether it’s print-on-demand technology today or deliver-on-demand technology that we might have five years from now, I think we’ll be in a better position to consume that information, but more importantly, be in a position to process that information to create better outcomes, whether it’s learning or in a professional setting.

KENNEALLY: Karthik Krishnan, global chief executive officer with the Britannica Group, thank you so much for discussing the issue with me on Beyond the Book.
KRISHNAN: Chris, great to be on the show.

KENNEALLY: Beyond the Book is produced by Copyright Clearance Center. Our co-producer and recording engineer is Jeremy Brieske of Burst Marketing. Subscribe to the program wherever you go for podcasts and follow us on Twitter and Facebook. The complete Beyond the Book podcast archive is available at beyondthebook.com. I’m Christopher Kenneally. Thanks for listening and join us again soon on CCC’s Beyond the Book.

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