A Year Apart: Adapting Curricula for a Pandemic

Educational Resources in U.S. K-12 Education, 2021

Julia E. Seaman and Jeff Seaman

Bay View Analytics®

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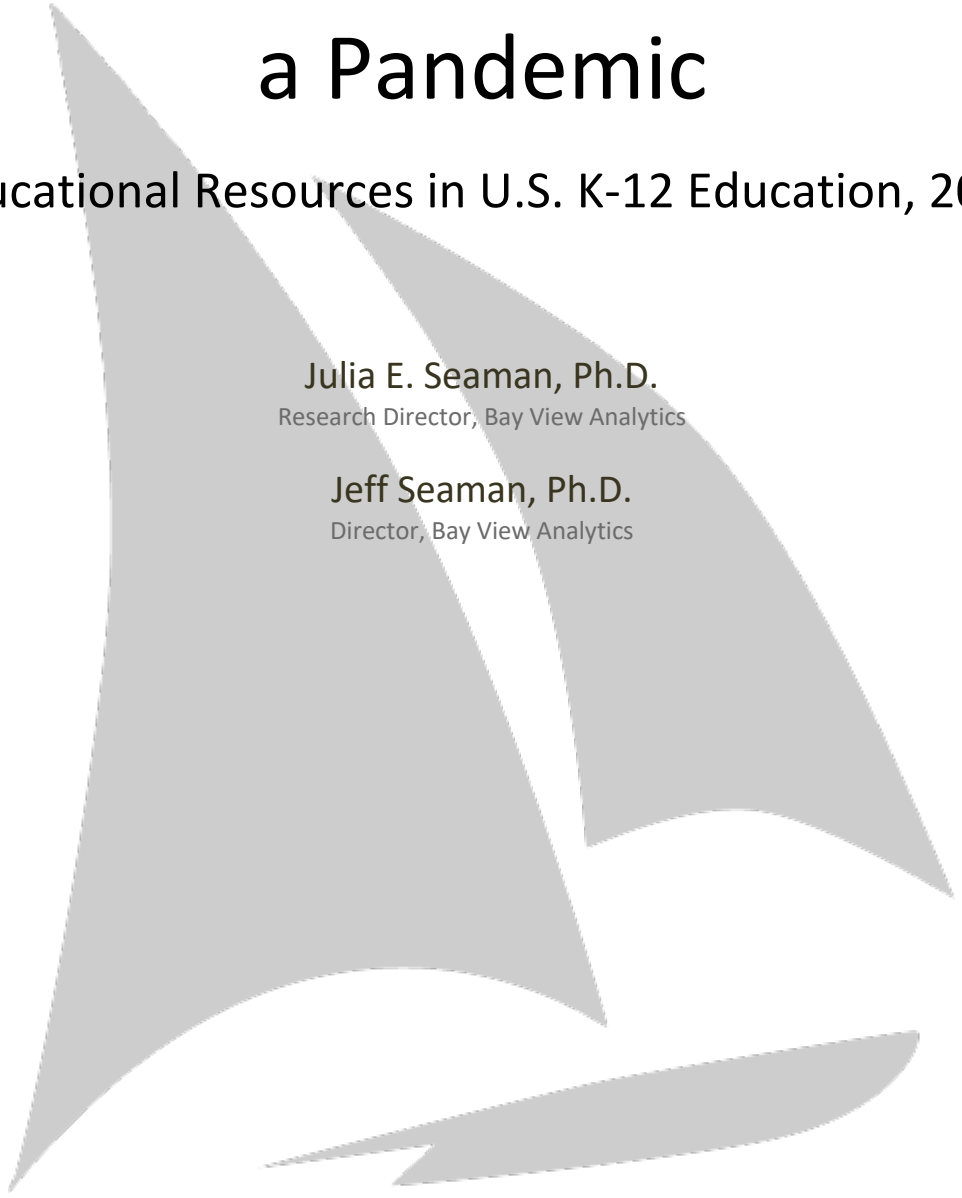
Julia E. Seaman, Ph.D.
Research Director, Bay View Analytics

Jeff Seaman, Ph.D.
Director, Bay View Analytics



2021

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ACKNOWLEDGMENTS

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We would also like to thank the Online Learning Consortium for their assistance on this project. In addition to administering the Hewlett Foundation grant, they also help with outreach, host multiple presentations at their conferences, and include Bay View Analytics OER research in their webinar series and research networks.

Our work is only possible because of the many respondents willing to take the time to share their thoughts with us. Teachers and administrators responded to our many questions during what must be one of the most challenging of times of their careers. Many quotes are provided throughout the report, taken from their detailed open-ended responses in the survey. The included quotes were selected from those who provided permission for us to quote them. The quotes are as close to the original as possible; the only changes made are to remove personally-identifying information, or to correct obvious typos.

The open education community continues to provide constructive feedback to enhance all our reports. We have also received feedback from both commercial and non-commercial publishers, that have improved the final product.

We are lucky to work with an excellent team. We thank Nate Ralph for his excellent copy editing, I. Elaine Allen for her review and feedback, Betsy Berkey for the design of the accompanying infographic, and Mark Favazza, whose graphics skills are evident on our report covers.

Finally, we want to thank our readers. Your comments and feedback have helped guide us, and this report is better for your input. Please continue to let us know how we can improve.

Julia E. Seaman
Jeff Seaman
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EXECUTIVE SUMMARY

This year's survey continues to study K-12 curricula in U.S. schools through the lens of the COVID-19 pandemic. The survey was conducted in March of 2021, in the midst of the pandemic, as teaching styles shifted to accommodate federal, state, and local health and safety guidelines. A lack of national-level guidance and disparate rules across the country resulted in a wide variety of adaptations to instruction between districts, schools, and even classrooms, with distinctions in how and when classes were taught, and what was being taught.

The COVID-19 pandemic forced widespread changes across the educational landscape, though a shift to digital and online tools was already trending. It is too early to determine the full impact the pandemic had on the adoption of digital tools and exposure to OER across classrooms. Still, it has become clear that schools, teachers, and administrators may not decide to return to pre-pandemic habits.

Some key findings from the survey include:

- The COVID-19 pandemic spurred a major shift to remote instruction, causing major changes to classroom curricula.
- Most teachers had no prior experience teaching with remote instruction.
- When designing curricula during the pandemic, survey respondents took a "mix and match" approach, combining materials from multiple sources.
    - 45% of respondents incorporated open-source supplemental materials into their curricula.
- The majority (93%) of full or partially remote classrooms used some form of video (full-class, small group, one-on-one) for instruction.
    - Only 18% of these classrooms plan to continue full-class video post-pandemic; 55% plan to continue with some variety of video formats.
- Teachers expect to continue using a number of digital tools in post-pandemic instruction, including online polling and quizzes, on-demand instructional videos, and tools to ensure academic integrity.
- Survey respondents felt positively about Professional Development offerings that were provided, including the new focus on health and safety, as well as support for teaching with technology and remote instruction.
- While OER and licensing awareness levels remained similar year over year, teachers with prior experience teaching online had a greater awareness of these topics than those without.

OVERVIEW

This survey examines the curricula use and choices of K-12 schools and districts during the COVID-19 pandemic. This year's survey asked teachers and administrators about their current teaching situation (in-person and/or remote), whether they made any adaptations to the current pandemic curricula, and whether they integrated any digital materials into their curricula.

Perhaps more importantly, this year's survey also looks to the future, investigating the "post-pandemic" classroom. The sudden, involuntary push to online and remote teaching introduced a massive new audience to digital tool options. This increase in exposure is poised to change the classroom forever, as these new tools are expected to be adopted into future curricula.

The study includes a detailed examination of OER awareness and OER adoption rates as part of the broader questions surrounding digital curricula decisions. Additionally, previous surveys indicated that the availability and quality of professional development materials had a measurable impact on teacher adoption and sentiment for curricula. As a result, the survey asks about the perceived effectiveness of professional development on the curricula, pedagogical practices, and health and safety issues during the pandemic.

Information for this report comes from a national survey of K-12 administrators and teaching faculty, conducted in March 2021, and covering the 2020-21 school year. There were 2,168 teacher and administrator responses, representing a wide variety of school districts, grade levels, and subject matters.

BACKGROUND

This study is one in a series on K-12 curricula discovery, selection, and adoption processes in the U.S. The COVID-19 pandemic sparked significant changes in how classes were taught and curriculum materials were sourced, and this survey's focus shifted to studying that impact.

The pandemic-induced move to remote instruction was only possible because school districts had already embraced online-supported activities. Our survey covering the 2018-19 school year showed that virtually all school districts provided students with internet access across their entire campus, and a majority had a one-to-one laptop or tablet arrangement for their students. Without this existing experience and infrastructure, the resulting changes would not have been possible.

To understand the changes in teaching and curriculum, we also need to understand which processes districts put aside to deal with their immediate challenges. Key among these was the structured review process for new curriculum adoption.

Surveys covering the 2016-17 and 2018-19 school years noted the time-intensive structured approach used to find, evaluate, and adopt a new curriculum. This process was a group activity, with teachers, district-level administrators, and principals all having decision-making power. A single factor did not drive the decision; most districts cited 5 or more elements as "very important" or "critical." Districts typically considered 3 to 5 alternatives initially, narrowing that number to 2 or 3 for a final choice, with most decisions taking the better part of a year to complete. Virtually all districts suspended these activities during the pandemic.

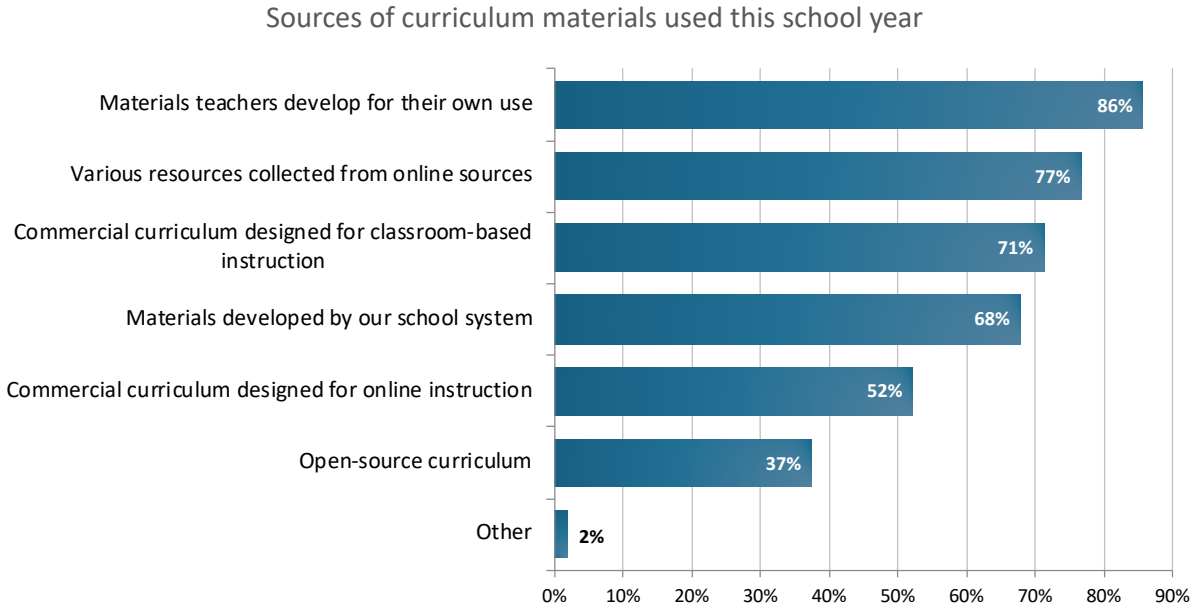
It is also important to understand that districts were making pandemic-based adjustments starting from a very diverse array of curricula. While material from the largest commercial publishers, such as Pearson, McGraw-Hill, and Houghton Mifflin/ were most common, these made up less than half of all curricula. The number of districts constructing their curriculum from multiple sources was almost as large as the portion selecting from one of the top three publishers. Curriculum based on open educational resources (OER) — free materials for educators and students to use, customize, and share — represented a small portion of K-12 recent adoptions, at slightly over 5%.

District-level Results

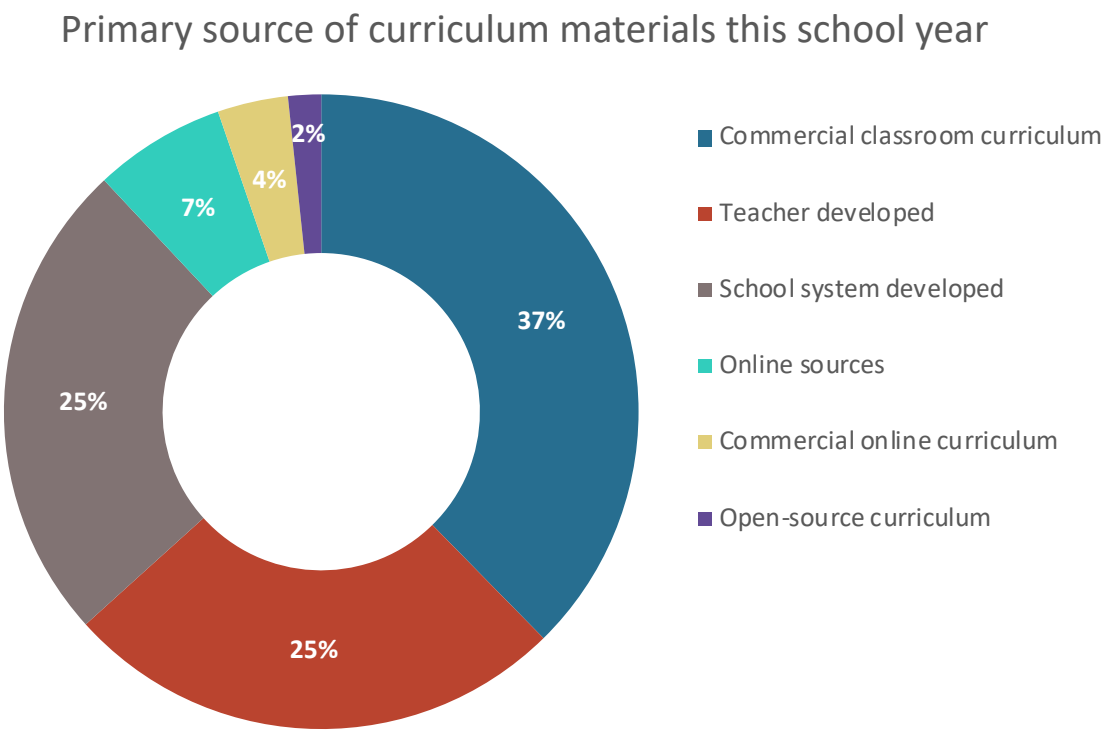
Curricula Adoption and Use

The COVID-19 pandemic drove a shift in the way teachers adopted and used curricula materials. During the pandemic, most districts reported using a mix and match strategy, with curricula materials collected from a variety of sources. This differs from 2018-19, where all but 5% of respondents reported that their curriculum was primarily sourced from a commercial or non-commercial publisher.

Unlike previous years, where the use of a pre-packaged curriculum was common, K-12 districts overwhelmingly relied on teachers to build the best curriculum for their pandemic-teaching requirements. This included having them select materials from multiple sources, such as both commercial and non-commercial resources they found online, and having them create portions of the curriculum themselves.



The primary materials being used in classes are materials from commercial curricula providers intended for in-classroom instruction, or those developed by teachers. One-quarter of districts used material that they had developed as their primary source, while a few relied on material found online. Commercial curricula designed for online delivery is not being used as a primary source to any large extent. While open-source materials were being used by slightly less than half of the districts as components of their mix and match strategy, they were rarely the primary source.



Teacher Perspectives

Hybrid teaching is ineffective and no matter how great the curriculum this is a barrier that is very hard to overcome.

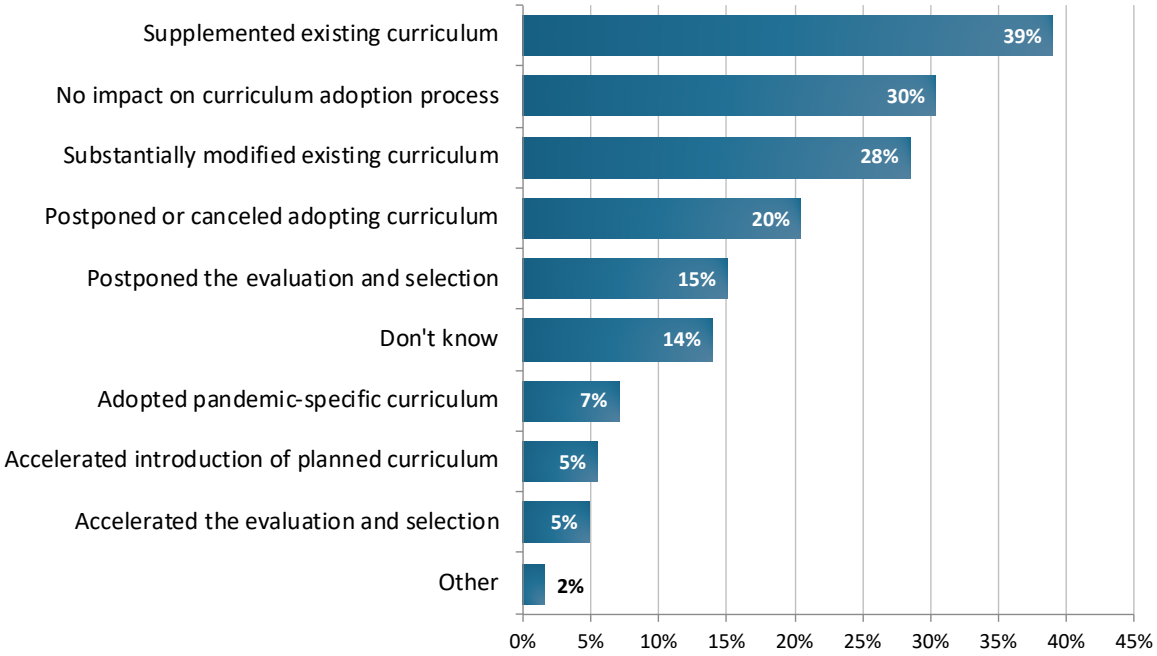
I developed all of my own resources, including notes, worksheets, quizzes, and instructional videos. I believe that these resources provide my students with almost everything they need to be successful. However, I have learned over the course of this year that it does not matter how effective your resources are if students do not have access to a teacher to help them (both answering questions as well as keeping them on task). Students struggle to learn without adult human interaction.

My biggest dilemma has been accurately gauging student engagement synchronously and asynchronously and measuring academic integrity for assessments so I do not know what my kids actually know this year. Otherwise, I have been able to provide all curriculum content and utilized a flipped classroom model to connect with students both synchronously and asynchronously. The students that have chosen to honestly engage in the content and act with integrity during assessments would have no learning gaps. And those that haven't will have gaps and there is no way to know until the kids move on and either struggle or succeed.

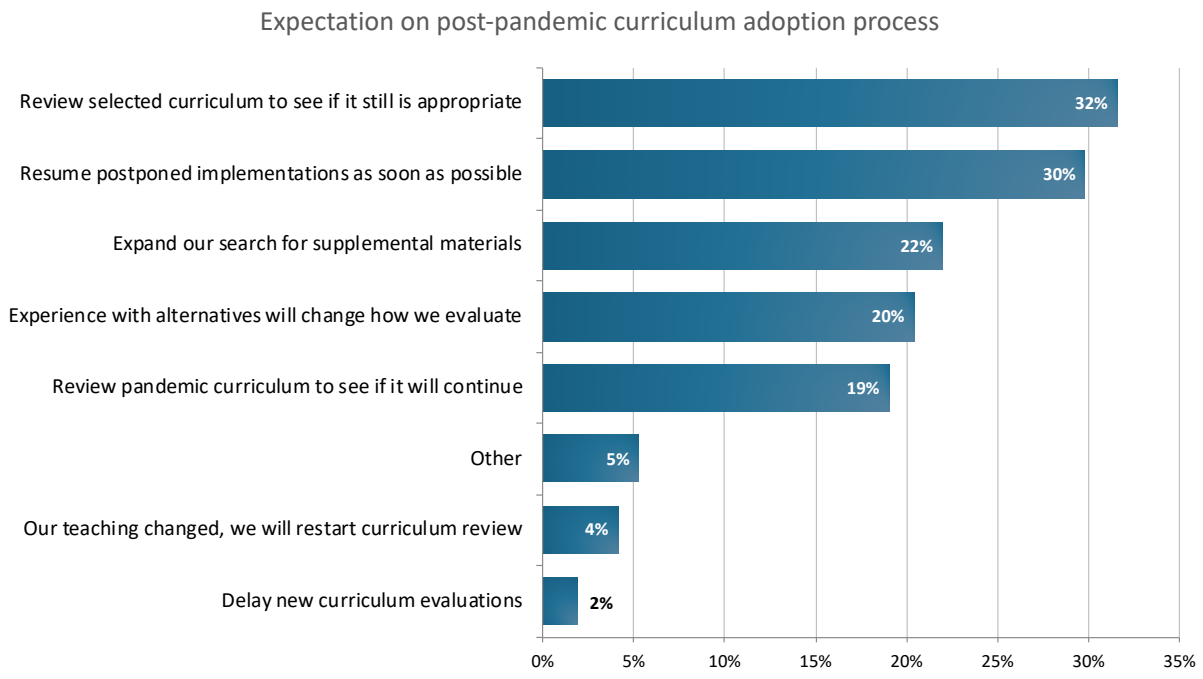
Curriculum Adoption Process

Only 30% of districts reported that the pandemic did not impact their current curriculum development process. A large majority of districts reported multiple changes to their approach due to the pandemic. A small number (7%) have adopted a pandemic-specific curriculum, and even smaller numbers accelerated their curricula evaluation (5%) or adoption (5%) processes — postponing or delaying adoption decisions were far more common than accelerating. The most common adaptations were to supplement an existing curriculum to serve during the pandemic, or to alter the evaluation and review process, rather than adopting an entirely new curriculum.

Impact of the pandemic on the curriculum adoption process



Most districts expected that their curricula evaluation and adoption process would change because of the COVID-19 pandemic; only 30% expected to continue where they left off before the pandemic. Most other districts expected that they would need to review prior selections given their experience teaching during the pandemic, and take a more focused look at using supplemental materials.



Teacher Perspectives

None of our resources to teach our curriculum were plug and play ready for remote learning. All resources were in-person ready. The resource we use threw together an online notebook/journal, but it was definitely not the best in the interest of the students and their learning.

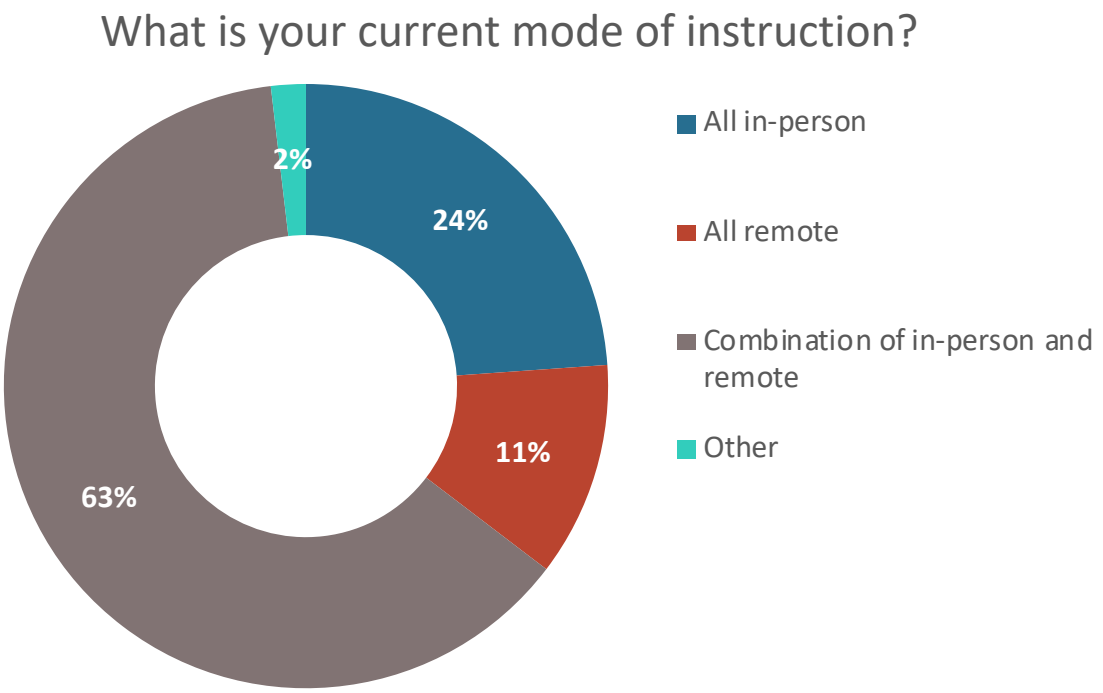
I do not use the curriculum at all - rather I write all my own stuff. It is not easily adaptable (in my opinion), and the online resources are not user friendly.

Everyone talks about curriculum, but there aren't really any effective district-wide systems for coordinating, adopting or adapting it. It's kind of every teacher for themselves and the few colleagues they collaborate with.

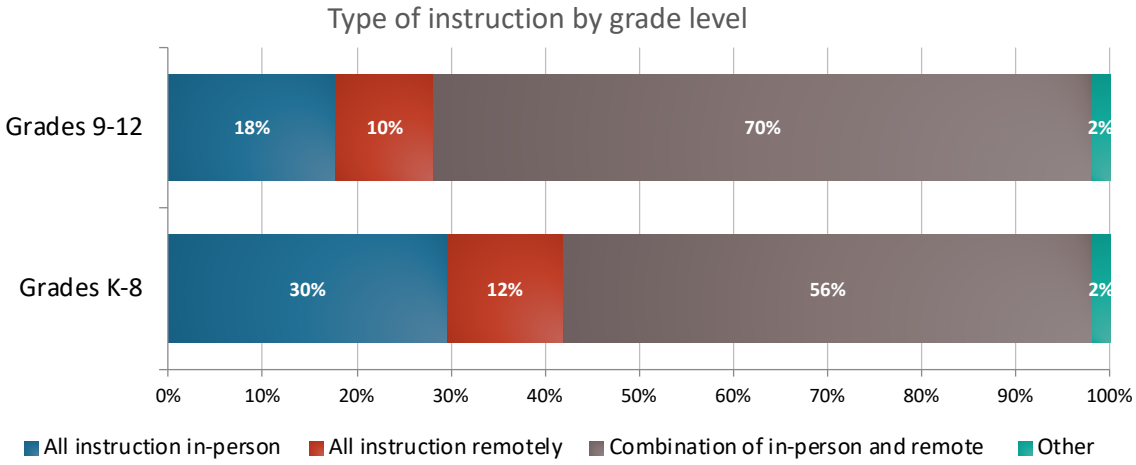
Teacher Results

Teaching Mode

During the pandemic, the largest trend was a shift to full- or part-time online instruction. Almost three quarters of teachers provided some form of remote instruction, with 11% reporting that they were "all remote." The most common form of remote instruction reported was a mix of students in the classroom and via online methods (75%), followed by alternating days of in-person and remote instruction (24%).



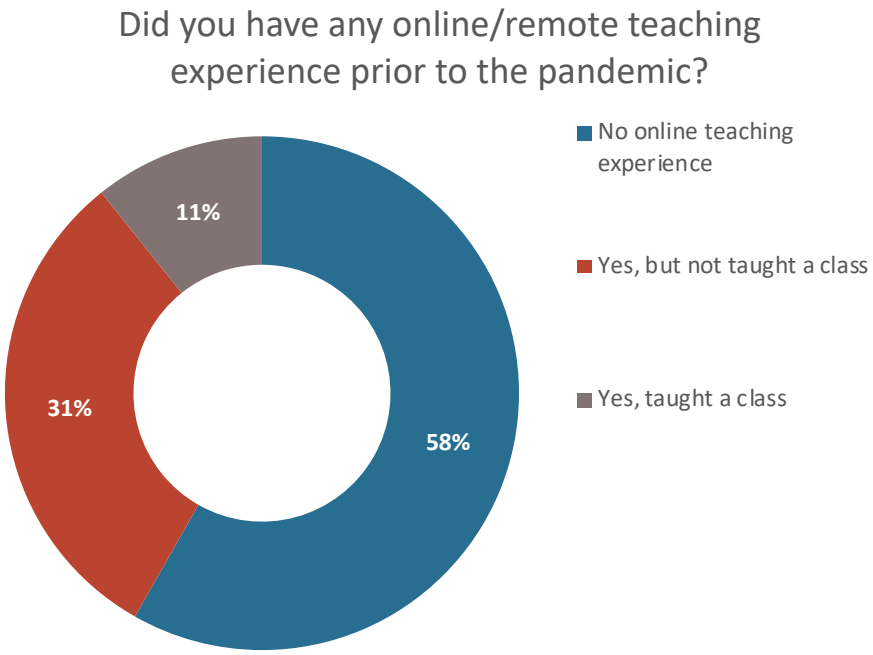
There was a difference on mode of instruction between grade levels. For high school (grades 9-12), 80% of teachers reported that they were all remote or some combination of remote and in-person. Teachers for lower grades (K-8) were more likely to be in-person, with 68% reporting some remote instruction, and 30% remaining all in-person.



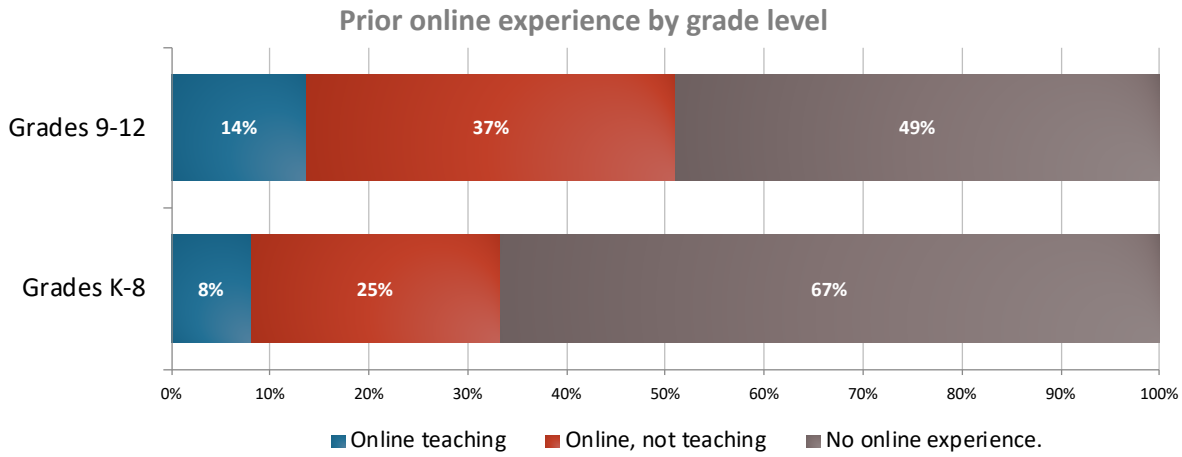
New to Online

The majority of teachers had no prior online or remote teaching experience of any kind prior to the pandemic. Only 11% of the teachers had some online teaching experience, whether teaching a class entirely online, or a combination of online and in-person. The most common experience with remote instruction was the inclusion of online exercises or activities in a class that was designed to be taught in-person.

For teachers with prior online experience, there were vast differences in what a prior online experience was, and how applicable it might be for the teachers' current situations. For example, some teachers may have taught a few students in a class receiving remote instruction, or taught a fully online classroom for a few days, due to circumstances like snow days. Others may have taught online in other contexts, such as professional development, college courses, or prior careers.



These experience levels were similar across subject areas, but varied by grade level. High school teachers were more likely to have had any online teaching instruction than those teaching lower grades, with higher rates of teaching online classes and other non-teaching online experience.



Teacher Perspectives

There is no substitute for the types of learning opportunities that can be offered in the classroom: discussion, simulations, and interactive activities. Through feedback and trial/error, diversity in instructional approach is vital in the class and online. But, attempting to reach all areas of intelligence under the Multiple Intelligence Theory is extremely difficult to do remotely and with accountability dependent on so many factors (connection to online, distractions at home, etc.).

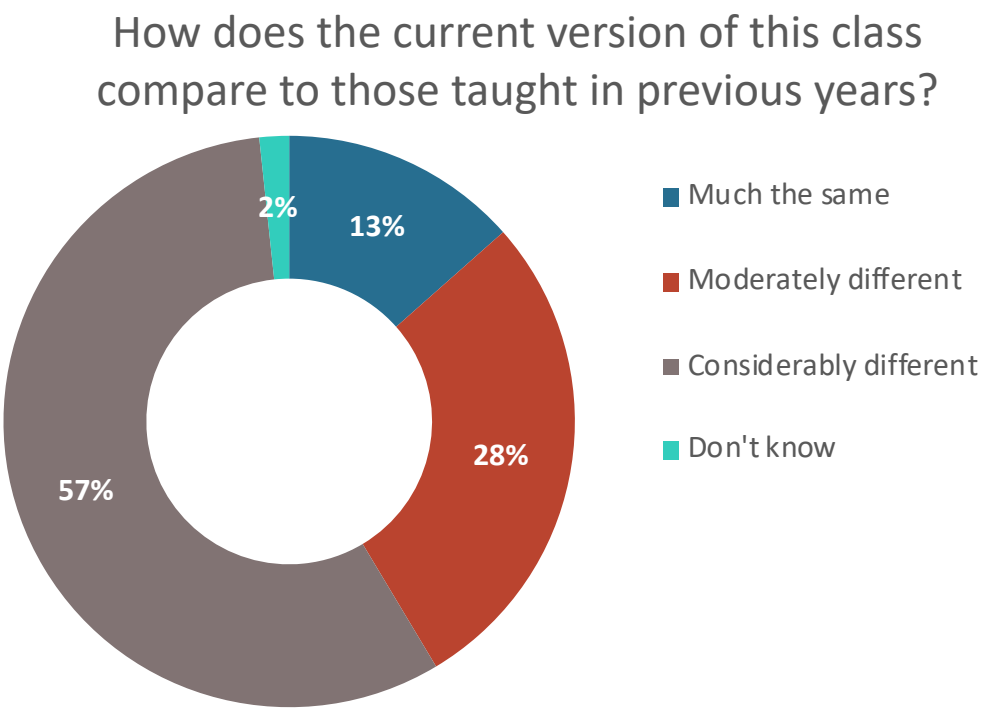
This has been the most difficult year of my 26 years teaching. The lack of connection with the students is troubling. I see many students struggling with depression because of the lack of "connectedness."

This pandemic was not expected and we had a steep learning curve, mostly provided by people who are only just now figuring out what could have been done. It is my hope that we never have a situation like this again, but that if we do, we'll be better prepared and have more instructional resources.

This year has me wondering if I want to continue teaching. I have felt unvalued and dehumanized, expected to work in dangerous situations in-person nearly the whole year, and chastised for voicing concerns. I have been spread so thin and felt less effective than in my first years of teaching. We have attempted to do all the same things in the same amount of time, but do so via multiple mediums (in-person, hybrid, virtual) that each require individual planning time – instead of doing one thing as best as we can. Meanwhile, I worry that this year's standardized test results will be used as evidence of learning loss to further attack teachers and public education in the years to come.

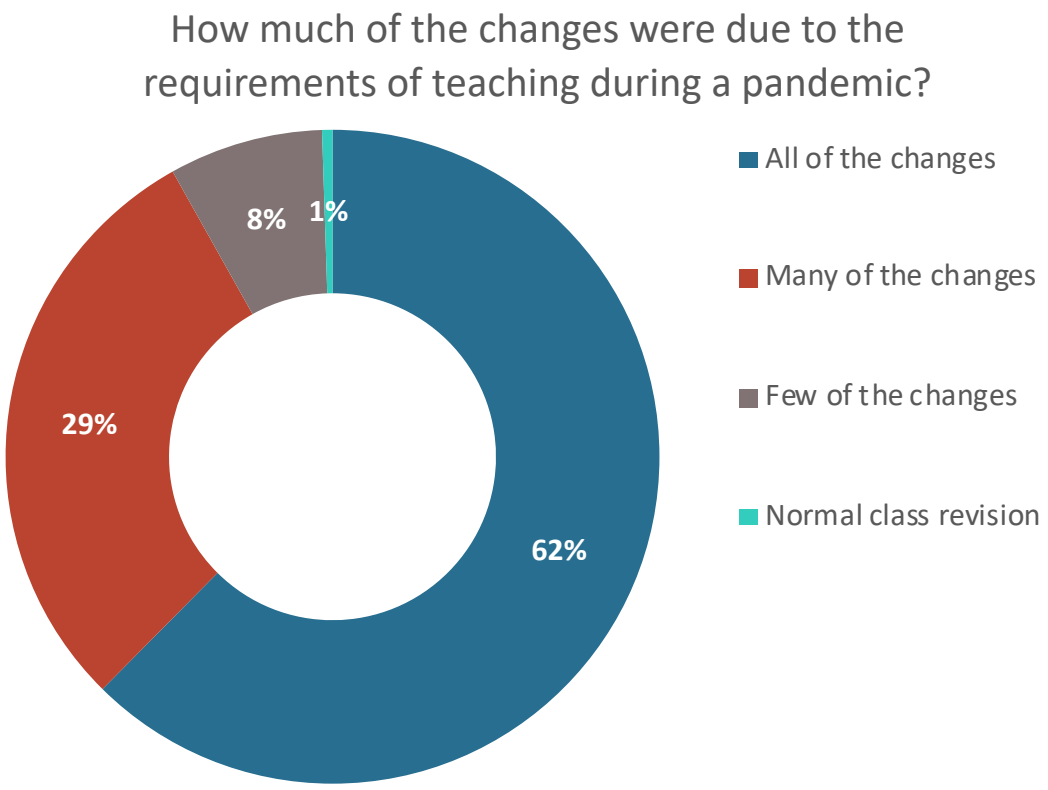
Impact of the Pandemic on Teaching

Teachers reported that the vast majority of their courses were different compared to those taught in previous years. Over half of the courses are reported as "considerably different." This pattern is consistent across grade levels and subject matter.



The COVID-19 pandemic was responsible for almost all of the reported course changes for the 2020-21 academic year, as course materials were adapted to different school schedules and remote instruction techniques were adopted. In general, a portion of all courses underwent review and revisions each year. However, during 2020-21, very few course changes — just 1% — were due to normal revisions.

For the 2021-2022 school year, assuming a return to mostly in-person instruction, it is likely that the future curricula will be very different than that taught in the middle of the pandemic, leading to a second year in a row of curricula changes.

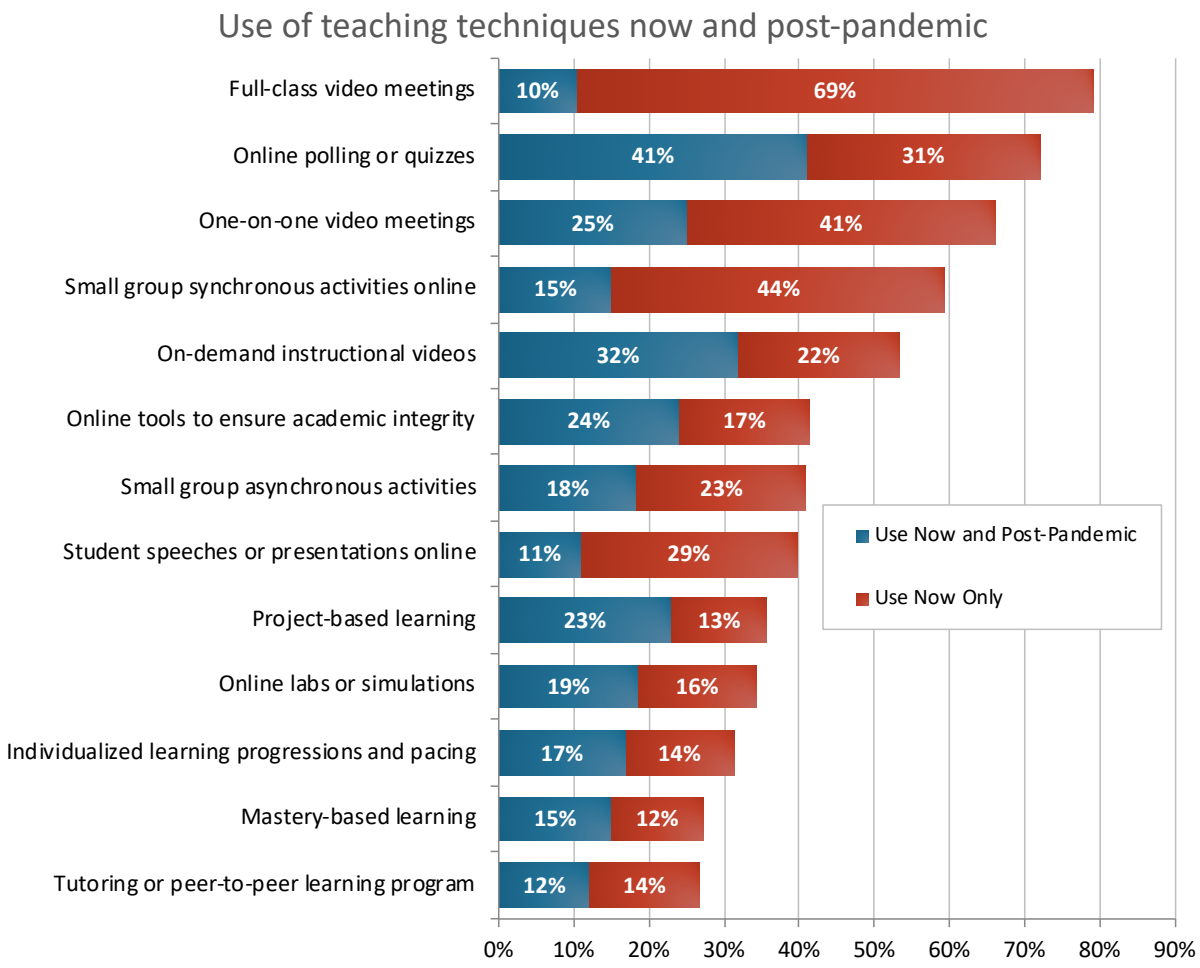


Digital Teaching and Post-Pandemic

The implementation of full-class video instruction was a major component of remote instruction during the COVID-19 pandemic. This method was utilized by 4 out of every 5 classrooms that went partially or fully remote during the pandemic. For classrooms that went partially or fully remote, 93% used one or more forms of video (full-class instruction, small group synchronous activities, or one-on-one instruction).

Across any form of video, 55% of fully or partially remote teachers expect to use newly adopted techniques post-pandemic. However, full-class video is one of the least "sticky" techniques, as only 1 out of 10 classrooms indicated they may continue to use it post-pandemic. Similarly, small group synchronous online activities, (e.g., Zoom breakout rooms or one-on-one videos) were used by a majority of teachers, and only a quarter of teachers expect to continue their use post-pandemic.

Survey respondents reported experimenting with a variety of tools to complement the move to online. These ranged from online polling or quizzes to the use of on-demand videos or student-led presentations and interactions. Though some were more appropriate for specific subjects, these tools were implemented across grade levels and subject matters. For example, online labs or simulations were more likely to be used by Natural Sciences teachers, while Math and Natural Science teachers were less likely to use student presentations and asynchronous activities. These differences likely reflect the existing differences between the subjects, as well as the materials available for adoption for a given course.



Seven of the tools highlighted in the survey were especially favored, with over 50% of respondents who used them stating that they plan to continue using them in their post-pandemic teaching. These include:

- Project-based learning (64%)
- On-demand instructional videos (60%)
- Online tools to ensure academic integrity (58%)
- Online polling or quizzes (57%)
- Mastery-based learning (55%)
- Online labs or simulations (54%)
- Individualized learning progressions and pacing (54%)

Among these, online polling and quizzes had some of the highest integration into classrooms (72%), and over half plan to incorporate these into their future lessons plans.

Teacher Perspectives

Kids can't collaborate in the same way while online. They can't have the same rich discussions that lead to discovery.

I am able to use most of my typical curriculum from normal years; however, with students more adapted to online instruction I am able to incorporate online assignments to aid in completion rates and convenience.

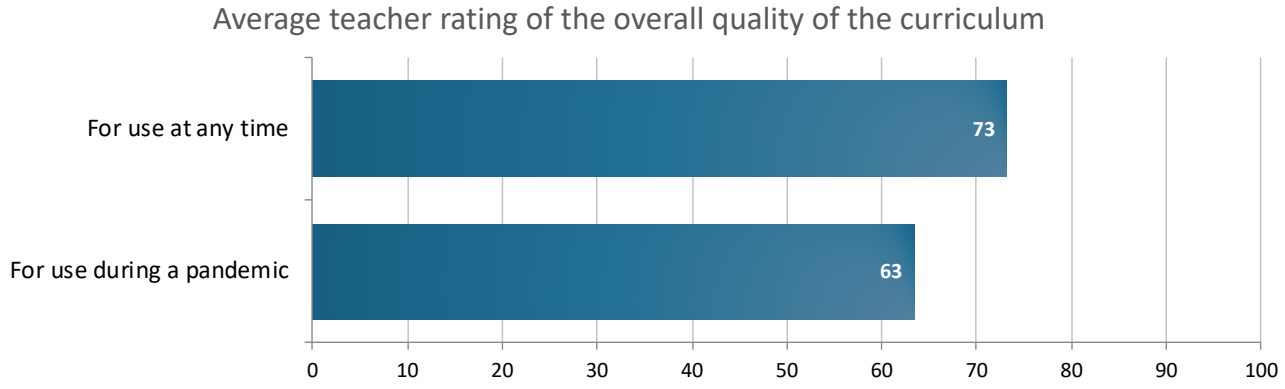
It wasn't developed to be used like this. We had to completely modify our pacing this year and slow things down since we only had 20% as much time with them. It just wasn't developed for this format. Also, many of the online tools that come with the publisher materials are clunky and are difficult to track student progress.

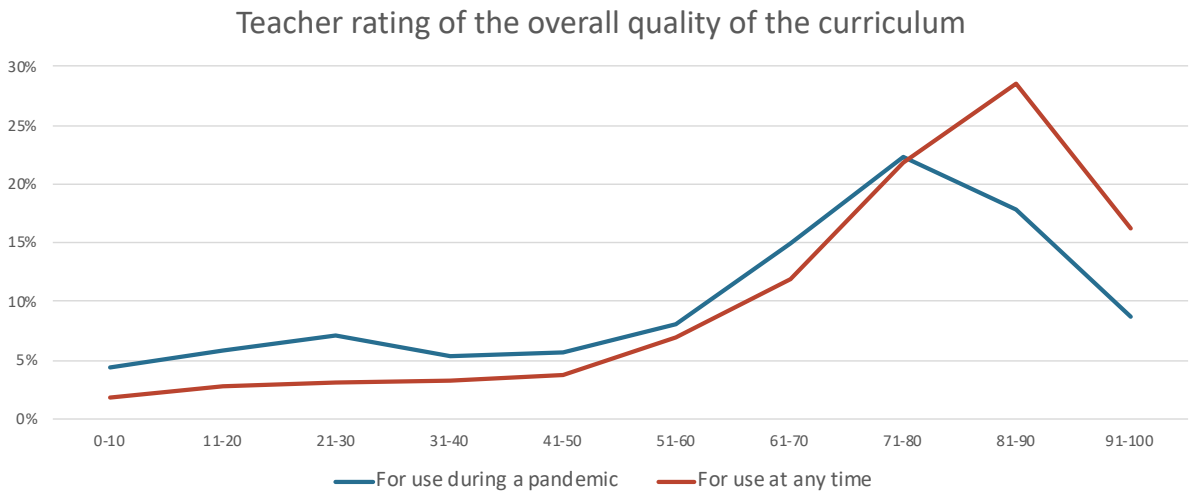
I think it is high time we embraced the digital reality of our students' lives. I am an old school kind of gal, but I have been learning so much and growing in my practice because I was forced out of my comfort zone. If we could really help teachers to gain confidence and proficiency in developing their practice to increase the implementation of technology that would be great. The big problem is we end up having to use new technologies without ample time for practice and this causes some interesting moments for us!

Curriculum Ratings

The unique aspects of teaching during a pandemic were evident in the teacher rating of the curriculum that they were using. While they largely reported that they were able to construct an effective curriculum for teaching during the pandemic, it still did not measure up to how effective it would be for teach at other times.

For the 2020-21 school year, teachers were asked to evaluate the curricula they used during the COVID-19 pandemic on a 0 to 100 point scale, rating the curricula's suitability for use during the pandemic, and giving their overall impressions of the material. Over 60% of respondents gave their curricula choices a similar rating for overall impressions and suitability for use during the pandemic. However, of the remaining 40%, three quarters (30% of total) gave the curricula's overall rating a slightly worse score than the curricula's suitability during the pandemic. Given this gap in ratings for many teachers, it is likely that some will opt to use other options if they return to remote teaching and are allotted enough time to prepare in the future.



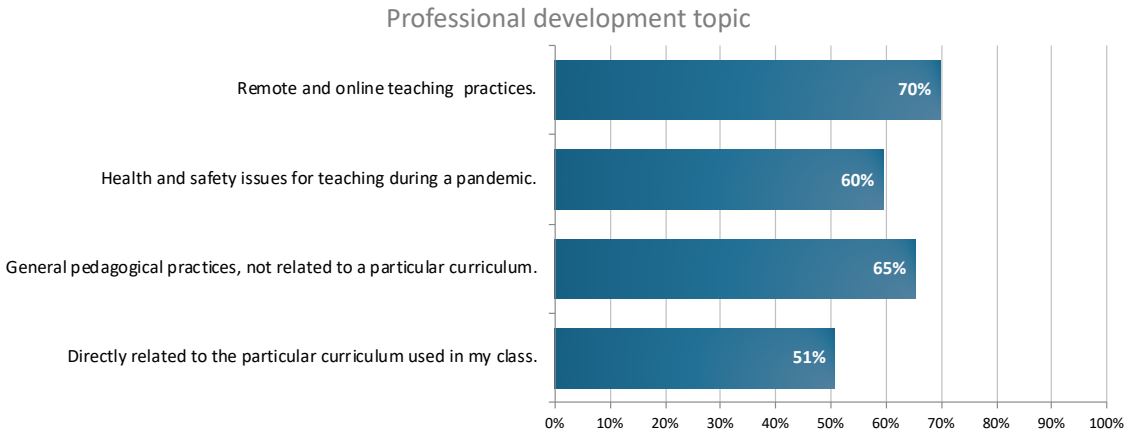


A small portion of teachers (approximately 3%) rated their curricula much worse during the pandemic, citing the lack of collaboration, lack of ability to perform hands-on tasks, and/or no access to online versions of materials. Another subset of teachers (approximately 7%) rated their curricula as better during the pandemic. These teachers highlighted the online access of materials and the independent nature of assignments, though many noted that the materials in question were the best option for interactions specifically for pandemic teaching.

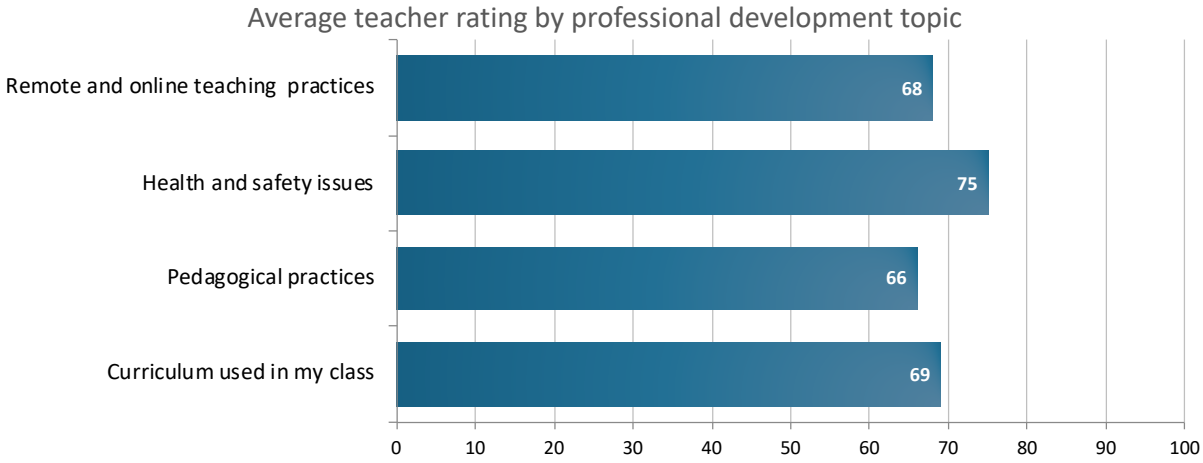
Professional Development Ratings

Respondents reported that the overall focus of Professional Development (PD) during the year shifted to pandemic-related topics, including health and safety or online teaching. At the start of the pandemic, many schools and districts scrambled to put together PD that covered the new issues of health and technology, as well as covering new remote formats. Teachers and administrators reported that, after some time, many schools and districts were successfully able to provide PD opportunities for their teachers. An overwhelming majority (95%) of teachers reported that they received at least one form of PD from their school or district. Additionally, many teachers sought out their own support, through external sources like Facebook groups and YouTube videos.

The most common subject for PD was online and remote teaching practices, with 70% of teachers reporting taking such a course during the year. The least common, but still a majority, was curriculum-specific training, which probably reflects the mix and match approach that most school were employing during the pandemic.



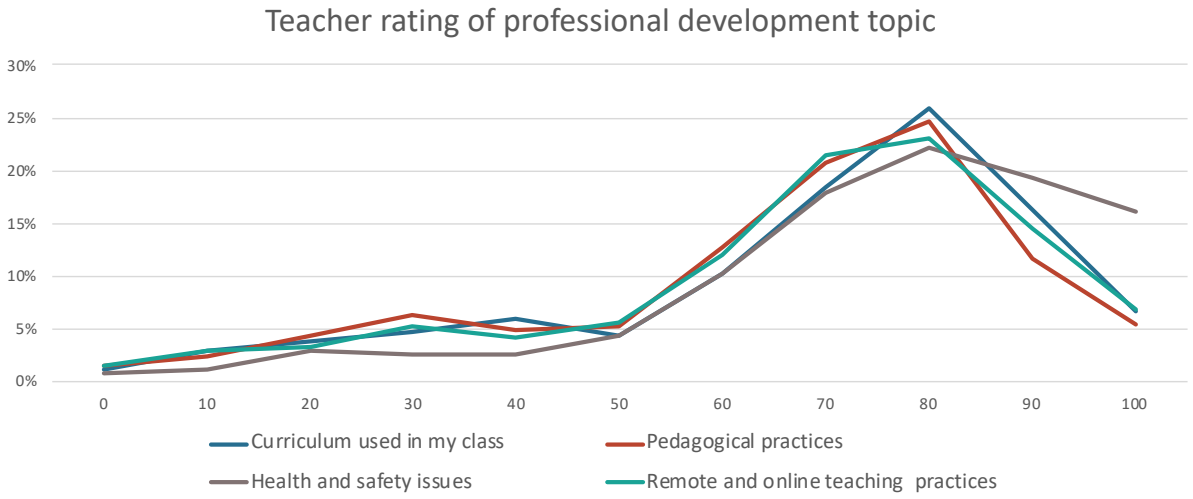
There were slight differences in the respondent ratings for PD topics. Health and safety received the highest average rating, at 75 out of 100, and most respondent comments are very positive about this topic. However, the lack of specific information and suggestions on COVID-19 procedures was frustrating for some (e.g., what and how to clean), though most were grateful to have some guidance.



The pandemic-specific PD on remote and online teaching practices, including technical details, received mostly positive reviews and an overall 68 of out 100 score. The primary complaints were on the use of specific tools and their limitations (e.g., Zoom).

Professional development materials covering specific curricula and those concerning pedagogical practices were similarly rated at 66 out of 100 and 69 out of 100, respectively. The most common complaints in the comments were about a lack of applicability to a teacher's specific courses. Many teachers also found training to be geared towards early career teachers, though some reported still being able to benefit from aspects of the training.

The pattern of teacher ratings on the effectiveness of the professional development that they received was very consistent across topics. The only difference was a larger number of teachers given the training on health and safety issues a perfect mark.



Across all PD, there were some common features mentioned in the comments that were associated with those that received highest ratings. Among these was a preference for the PD to be offered in multiple scheduling formats, like full-day sessions or multiple shorter meetings throughout the year. Furthermore, teachers stated they benefitted from PD that offered follow-up, as they were able to implement any new techniques and then have new questions answered or discuss more advanced topics.

Teacher Perspectives

We've received lots of PD opportunities for our specific curriculum (very good), and our school district has provided PD on health and safety (boring but helpful and accurate). Pedagogically, I don't think we've received any direction on what are "best practices" for virtual teaching and learning. That might be because the information isn't really out there (especially for younger kids and middle age). I've yet to see research on virtual teaching and learning for younger age groups.

I have received excellent training in FOSS curriculum — prior to and during the pandemic — and the pedagogical practices associated with Next Generation Science Standards through my school district, FOSS, and local science centers. I also took a wonderful paid professional development workshop through the National Science Teachers Association during Summer 2020 to learn specifically how to teach phenomenon-based science online.

Some of the remote/online teaching offerings were fairly hastily put together and tended to be tied to a specific piece of technology/application. More foundational information about how kids learn remotely would have been more helpful.

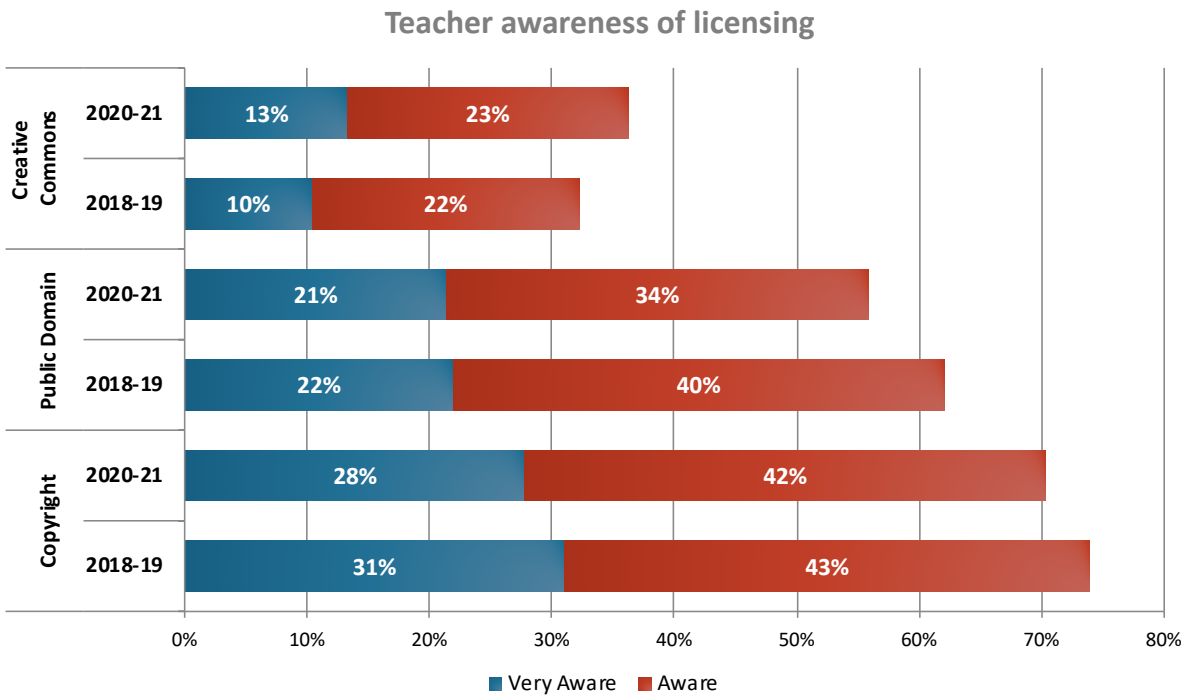
You get out of any professional development what you are willing to put into what you learned. I always am able to take something away from anything I attend. Some are more practical than others, but you have to be able to go in with an open mind to learning something new.

OER and Licensing Awareness

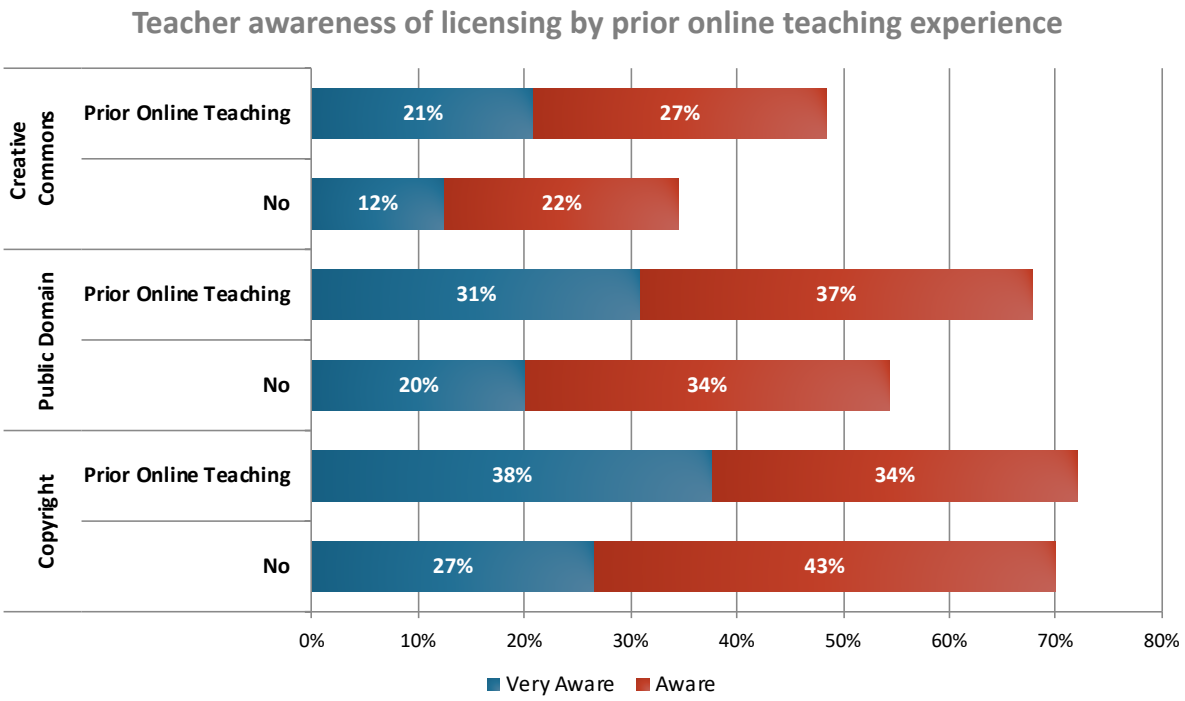
Faculty awareness of Open Educational Resources (OER) was of particular interest in light of the COVID-19 pandemic, as online curricula options are free and openly-licensed, and thus ideal for "mixing," which was noted as very common. However, the true awareness of teachers is complicated, as many do not have a full understanding of the details. Some may confuse "open" with "free," and assume all free resources are OER.

Overall, awareness of specific licensing is not universal among teachers. Copyright has the highest awareness levels, followed by Public Domain, with 70% and 55%, respectively. Creative Commons has the lowest awareness level, at around only one-third of respondents.

Compared to the 2018-19 survey, there have been small changes in the number of respondents stating they are "aware" or "very aware" of specific licensing types. The number aware of Creative Commons grew by 4% this year. In contrast, the numbers aware of Public Domain and Copyright licensing decreased by 7% and 4%, respectively.

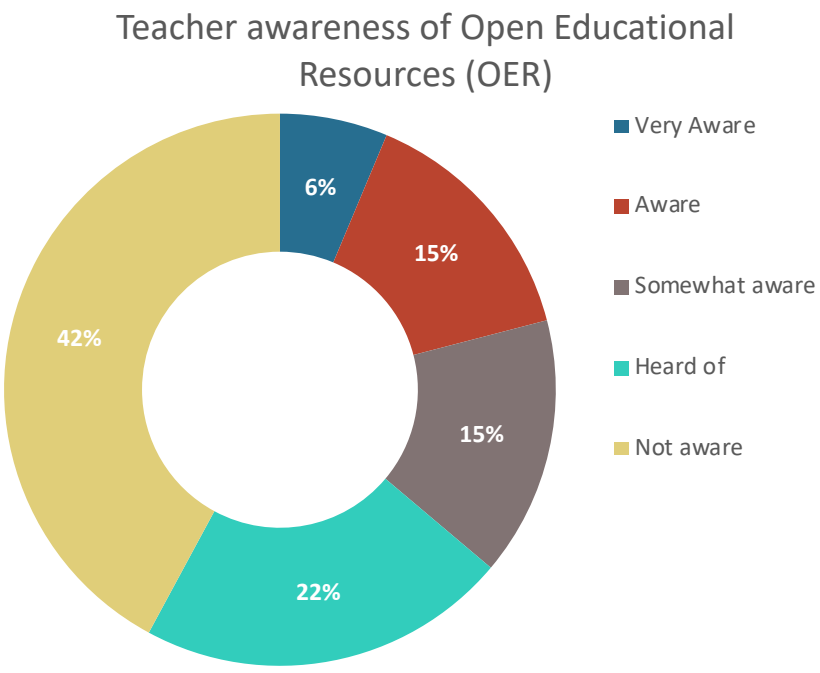


Prior online experience teaching a fully or partly online course is associated with greater awareness of licensing. The awareness of Creative Commons was 14% higher, to almost half of respondents for teachers with prior online courses. Similarly, the awareness of Public Domain licensing grew 14%, to almost same level as overall Copyright licensing.

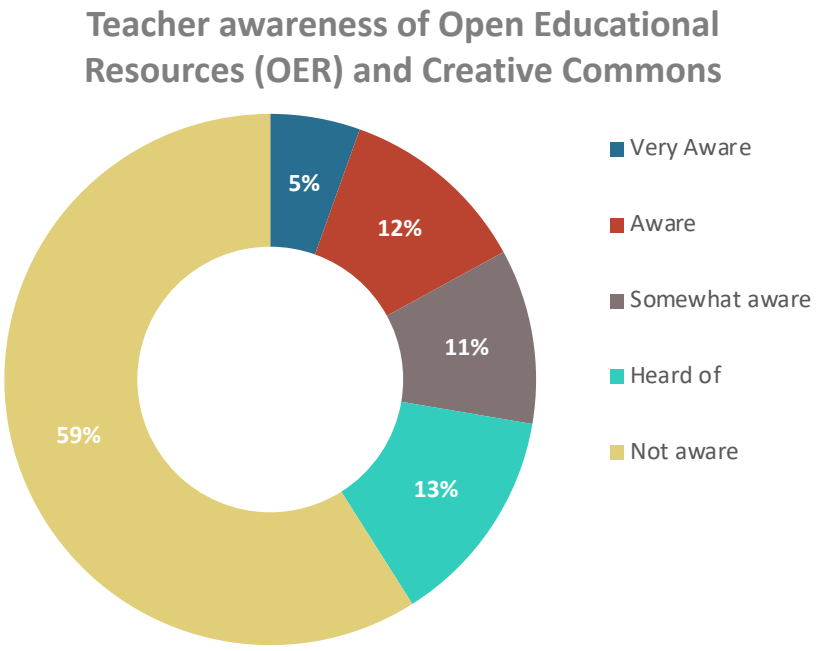


Awareness of OER is measured using a question validated in previous reports, as it was shown to have the best balance in differentiating among the varying levels of awareness without leading respondents with no previous knowledge of the concept. This specific wording has remained consistent, to support year-to-year comparisons to the earlier surveys.

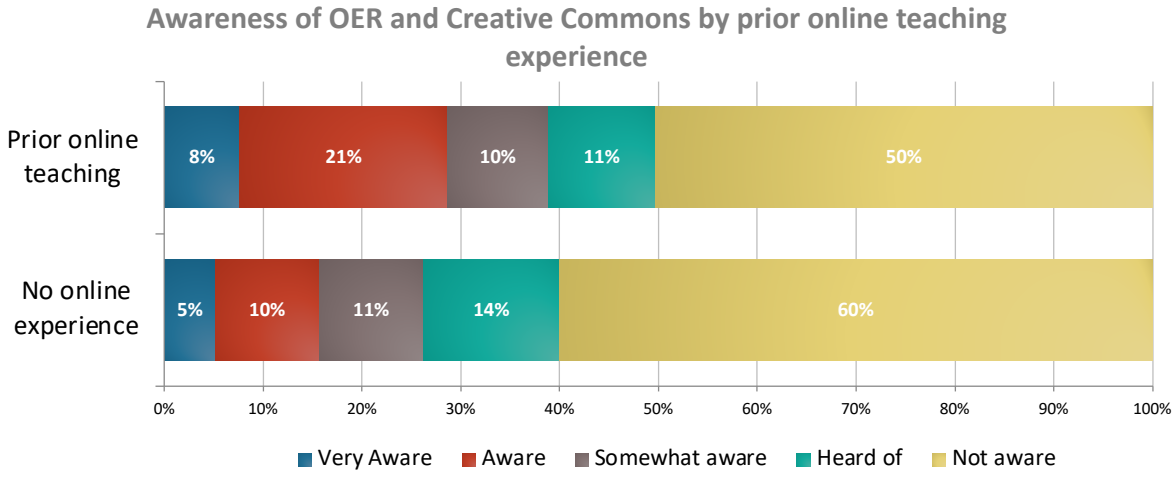
For OER, slightly more than one-third of teachers state that they are "somewhat aware," "aware," or "very aware." A quarter of respondents indicate that they have "heard of" OER. This group of teachers may have received exposure to OER through many channels — other teachers, mentions in PD, online searching for materials, etc. If this population continues to hear about OER, they could move into greater awareness categories in future years.



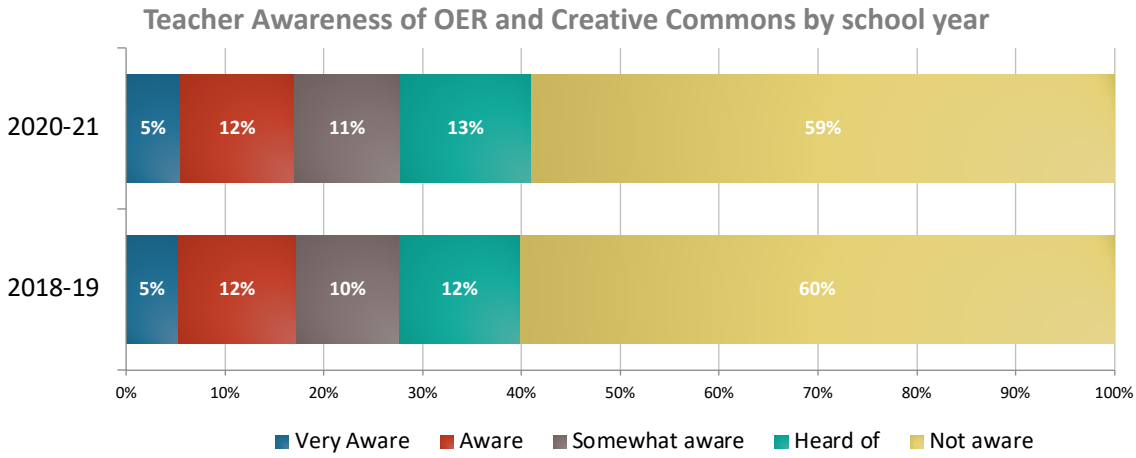
Because many respondents have a less than precise understanding of OER and can confuse OER with "free" or "open source," this series of reports has used a second indicator of awareness, one that combines awareness of the term OER and of licensing. Respondents who report that they are unaware of Creative Commons licensing are removed from the "Aware" categories, creating a stricter index of OER awareness, that includes only those who are aware of both the term and the type of licensing that goes along with it. When controlled for awareness of Creative Commons, the OER awareness rates drop slightly from 6% to 5% for those reporting that they are "Very Aware," and from 15% to 12% for those saying that they are "Aware."



Prior online course experience is also associated with greater awareness of OER, especially in the “Aware” category. Those with previous online teaching experience are almost twice as likely to classify themselves as "Very aware" or "Aware."



Despite all the changes in teaching brought about by the pandemic, there was almost no change in the level of OER awareness among teachers. The proportion of teachers classifying themselves into the top two categories did not change at all, while the next two categories barely increased. The overall percentage who are "Not aware" dropped by only one percentage point.



Teacher Perspectives

I regularly and knowingly violate copyrighted materials all the time to get quality materials to my students since my school is unable to provide anything more than class copy of a textbook for my classroom. All of my lessons I made or were shared with me from another teacher. I wonder how much more I could do with my students if my school invested in online learning materials for students.

I'd like to see OER better advertised, expanded upon, and contributed to.

I'm very interested in OER initiatives, though, frankly, this is the first I've heard of the term, OER. Other initiatives I'm aware of are the UK's "Computing At School," an initiative at Chicago Public Schools, CSforAll, CSUnplugged, Khan Academy, and MIT's Scratch.

SUMMARY

The COVID-19 pandemic changed the K-12 education landscape in the US, from the way classes were taught to what curricula materials were used. Before the pandemic the curricula market was diverse, fragmented between commercial publishers and many other options, including self-crafted materials and OER. Almost all schools had already implemented some form of digital technology, like campus-wide internet or Chromebook/iPad programs. It was expected that technology would continue to enter the classroom over the next few years, though only a small group may have planned to support remote learning.

The shift to full or partial remote teaching across three-quarters of the nation's classrooms forced the unplanned adoption of curricula that could support digital interactions. The majority of curricula was revised, and most districts left it up to the teachers themselves to find the best mix of resources.

Despite the push to online teaching, the awareness levels of licensing types and OER did not increase year over year. This is surprising, though may speak to the frantic pace at which many curricula decisions were made, and the lack of time for a proper review of all available options or even getting acquainted with the specifics of chosen materials.

There is some expectation that licensing and OER awareness will increase. Teachers who have taught prior online courses reported being more aware of alternative licensing options, suggesting there is an initial exposure barrier to create the need to become aware of these topics. It is likely that teachers coming out of the pandemic, now with online experience and expectations to integrate digital tools, will come across OER while researching and developing their next curricula.

All told, the pandemic represents a break in trends for curricula adoption, technology integration, and OER awareness. Much of the future remains uncertain, but it is clear classrooms will not be returning to the pre-pandemic states. Teachers and administrators across the US have tried many novel teaching tools, and the majority plan to retain the best aspects they discovered for the future.

Next Steps

The near-term future will likely remain in disarray for curricula and technology adoption. How will the 2021-22 school year look, compared to an academic year engulfed in a pandemic? Given the summer to review their options, what types of curricula will be chosen? How will commercial and OER curricula providers adapt their offerings to support the larger potential audience for their digital materials? Many teachers expect to retain technology tools for their classrooms: which tools have the staying power to be around post-pandemic? These are some of the questions we are focused on as we look ahead to the next school year.

METHODOLOGY

The universe of interest for this study is composed of all public school districts in the United States that operate schools. Information on these districts comes from the Common Core of Data (CCD) from the U.S. Department of Education's National Center for Education Statistics (http://nces.ed.gov/ccd/ccddata.asp).

Participants were invited to the study using via email invitation, which was sent to randomly selected school districts using a commercial source for email addresses. A reminder email message was sent after the first message. Both the invitation and the reminder message contained a unique URL that, when clicked, would load the survey form in a web browser and pass the unique survey ID.

All potential respondents were informed of the funding source for the study (The William and Flora Hewlett Foundation), and who was conducting it ("researchers at Bay View Analytics"). They were also told: "All survey respondents are provided complete anonymity; the William and Flora Hewlett Foundation does not see individual-level results. No personally identifiable information is released."

Analysis for this report includes responses from 541 K-12 administrators, and 1,627 K-12 teachers. These responses come from all 50 states and the District of Columbia. The respondents represent 1,605 different school districts with a total enrollment of 15,467,057 students.

Questionnaire

The questionnaires used in this study builds on those used in previous Babson Survey Research Group studies on K-12 educators. New questions designed for use during the COVID-19 pandemic and changes to existing questions were pre-tested in multiple preliminary surveys to judge questionnaire length and clarity of all the questions. Based on the results of a first test, and feedback from teachers and school administrators, a revised questionnaire was tested in a second pre-test to confirm that all the issues were properly addressed.

OER awareness was measured using the same approach as previous reports in this series, with questions about awareness of licensing mechanisms along with a general question on OER awareness. OER curriculum adoption was tallied from the results of the respondent selection of the curriculum adopted, and then computing the proportion of these that are from known OER providers.

Definitions

In addition to examining the curriculum adoption process, this study also explores materials classified as open educational resources (OER). Creative Commons defines OER as:

Open Educational Resources (OER) are teaching, learning, and research materials that are either (a) in the public domain or (b) licensed in a manner that provides everyone with free and perpetual permission to engage in the 5R activities.

- *Retain – make, own, and control a copy of the resource*
- *Reuse – use your original, revised, or remixed copy of the resource publicly*
- *Revise – edit, adapt, and modify your copy of the resource*
- *Remix – combine your original or revised copy of the resource with other existing material to create something new*
- *Redistribute – share copies of your original, revised, or remixed copy of the resource with others*[1]

[1] https://creativecommons.org/about/program-areas/education-oer/

An important aspect of the examination of the use of educational resources is the licensing status of such materials: who owns the rights to use and distribute the material, and whether the faculty member have the right to modify, reuse, or redistribute said content. The legal mechanism that faculty are most familiar with is that of copyright. The U.S. Copyright office defines copyright as:

A form of protection provided by the laws of the United States for "original works of authorship", including literary, dramatic, musical, architectural, cartographic, choreographic, pantomimic, pictorial, graphic, sculptural, and audiovisual creations. "Copyright" literally means the right to copy but has come to mean that body of exclusive rights granted by law to copyright owners for protection of their work. … Copyright covers both published and unpublished works.[2]

Of particular interest for this study is the copyright status of the primarily textual material (including textbooks) that faculty select as required materials for their courses.

Copyright owners have the right to control the reproduction of their work, including the right to receive payment for that reproduction. An author may grant or sell those rights to others, including publishers or recording companies.[3]

Not all material is copyrighted. Some content may be ineligible for copyright, copyrights may have expired, or authors may have dedicated their content to the public domain (e.g., using Creative Commons public domain dedication[4]).

Public domain is a designation for content that is not protected by any copyright law or other restriction and may be freely copied, shared, altered and republished by anyone. The designation means, essentially, that the content belongs to the community at large.[5]

[2] http://www.copyright.gov/help/faq/definitions.html
[3] http://legal-dictionary.thefreedictionary.com/copyright
[4] https://creativecommons.org/publicdomain/zero/1.0/
[5] http://whatis.techtarget.com/definition/public-domain

An intermediate stage between traditional copyright, with all rights reserved, and public domain, where no rights are reserved, is provided by Creative Commons licenses. A Creative Commons license is not an alternative to copyright, but rather a modification of the traditional copyright license that grants some rights to the public.

The Creative Commons (CC) open licenses give everyone from individual authors to governments and institutions a simple, standardized way to grant copyright permissions to their creative work. CC licenses allow creators to retain copyright while allowing others to copy, distribute, and make some uses of their work per the terms of the license. CC licenses ensure authors get credit (attribution) for their work, work globally, and last as long as applicable copyright lasts. CC licenses do not affect freedoms (e.g., fair use rights) that the law grants to users of creative works otherwise protected by copyright.[6]

The most common way to openly license copyrighted education materials — making them OER — is to add a Creative Commons license to the educational resource. CC licenses are standardized, free-to-use, open copyright licenses.[7]

[6] Personal communication from Cable Green, PhD, Director of Open Education, Creative Commons
[7] State of the Commons report: https://stateof.creativecommons.org

APPENDIX TABLES

DISTRICT-LEVEL RESULTS

Curricula Adoption and Use

SOURCES OF CURRICULUM MATERIALS USED THIS SCHOOL YEAR

Materials teachers develop for their own use	86%
Various resources collected from online sources	77%
Commercial curriculum designed for classroom-based instruction	71%
Materials developed by our school system	68%
Commercial curriculum designed for online instruction	52%
Open-source curriculum	37%
Other	2%

PRIMARY SOURCE OF CURRICULUM MATERIALS THIS SCHOOL YEAR

Commercial classroom curriculum	37%
Teacher developed	25%
School system developed	25%
Online sources	7%
Commercial online curriculum	4%
Open-source curriculum	2%

Curriculum Adoption Process

IMPACT OF THE PANDEMIC ON THE CURRICULUM ADOPTION PROCESS

Supplemented existing curriculum	39%
No impact on curriculum adoption process	30%
Substantially modified existing curriculum	28%
Postponed or canceled adopting curriculum	20%
Postponed the evaluation and selection	15%
Don't know	14%
Adopted pandemic-specific curriculum	7%
Accelerated introduction of planned curriculum	5%
Accelerated the evaluation and selection	5%
Other	2%

EXPECTATION ON POST-PANDEMIC CURRICULUM ADOPTION PROCESS

Review selected curriculum to see if it still is appropriate	32%
Resume postponed implementations as soon as possible	30%
Expand our search for supplemental materials	22%
Experience with alternatives will change how we evaluate	20%
Review pandemic curriculum to see if it will continue	19%
Other	5%
Our teaching changed, we will restart curriculum review	4%
Delay new curriculum evaluations	2%

Teacher Results

Teaching Mode

What is your current mode of instruction?

All in-person	24%
All remote	11%
Combination of in-person and remote	63%
Other	2%

Type of instruction by grade level

	Grades K-8	Grades 9-12
All instruction in-person	30%	18%
All instruction remotely	12%	10%
Combination of in-person and remote	56%	70%
Other	2%	2%

New to Online

Did you have online/remote teaching experience prior to the pandemic

No online teaching experience	58%
Yes, but not taught a class	31%
Yes, taught a class	11%

Prior online experience by grade level

	Grades K-8	Grades 9-12
Online teaching	8%	14%
Online, not teaching	25%	37%
No online experience.	67%	49%

Impact of the Pandemic on Teaching

HOW DOES THE CURRENT VERSION OF THIS CLASS COMPARE TO THOSE TAUGHT IN PREVIOUS YEARS?

Much the same	13%
Moderately different	28%
Considerably different	57%
Don't know	2%

HOW MUCH OF THE CHANGES TO THE CLASS WERE DUE TO THE REQUIREMENTS OF TEACHING DURING A PANDEMIC?

All of the changes	62%
Many of the changes	29%
Few of the changes	8%
Normal class revision	1%

Digital Teaching and Post-Pandemic

USE OF TEACHING TECHNIQUES NOW AND POST-PANDEMIC

	Use Now and Post-Pandemic	Use Now Only
Full-class video meetings	10%	69%
Online polling or quizzes	41%	31%
One-on-one video meetings	25%	41%
Small group synchronous activities online	15%	44%
On-demand instructional videos	32%	22%
Online tools to ensure academic integrity	24%	17%
Small group asynchronous activities	18%	23%
Student speeches or presentations online	11%	29%
Project-based learning	23%	13%
Online labs or simulations	19%	16%
Individualized learning progressions and pacing	17%	14%
Mastery-based learning	15%	12%
Tutoring or peer-to-peer learning program	12%	14%

Curriculum Ratings

AVERAGE TEACHER RATING OF THE OVERALL QUALITY OF THE CURRICULUM

For use during a pandemic	63
For use at any time	73

TEACHER RATING OF THE OVERALL QUALITY OF THE CURRICULUM

	For use during a pandemic	For use at any time
0-10	4%	2%
11-20	6%	3%
21-30	7%	3%
31-40	5%	3%
41-50	6%	4%
51-60	8%	7%
61-70	15%	12%
71-80	22%	22%
81-90	18%	29%
91-100	9%	16%

Professional Development Ratings

PROFESSIONAL DEVELOPMENT TOPIC	
Directly related to the particular curriculum used in my class.	51%
General pedagogical practices, not related to a particular curriculum.	65%
Health and safety issues for teaching during a pandemic.	60%
Remote and online teaching practices.	70%

AVERAGE TEACHER RATING BY PROFESSIONAL DEVELOPMENT TOPIC	
Curriculum used in my class	69
Pedagogical practices	66
Health and safety issues	75
Remote and online teaching practices	68

TEACHER RATING OF PROFESSIONAL DEVELOPMENT TOPIC

	Curriculum used in my class	Pedagogical practices	Health and safety issues	Remote and online teaching practices
0-10	1%	2%	1%	1%
11-20	3%	2%	1%	3%
21-30	4%	4%	3%	3%
31-40	5%	6%	3%	5%
41-50	6%	5%	3%	4%
51-60	4%	5%	4%	6%
61-70	10%	13%	10%	12%
71-80	18%	21%	18%	21%
81-90	26%	25%	22%	23%
91-99	16%	12%	19%	14%
100	7%	5%	16%	7%

OER and Licensing Awareness

Teacher awareness of licensing

	Copyright		Public Domain		Creative Commons	
	2018-19	2020-21	2018-19	2020-21	2018-19	2020-21
Very Aware	31%	28%	22%	21%	10%	13%
Aware	43%	42%	40%	34%	22%	23%
Somewhat Aware	18%	20%	24%	26%	22%	21%
Unaware	8%	10%	14%	18%	46%	43%

Teacher awareness of licensing by prior online experience

	Copyright		Public Domain		Creative Commons	
	No	Prior Online Course	No	Prior Online Course	No	Prior Online Course
Very Aware	27%	38%	20%	31%	12%	21%
Aware	43%	34%	34%	37%	22%	27%
Somewhat Aware	20%	21%	27%	22%	21%	20%
Unaware	10%	7%	19%	10%	44%	32%

Teacher awareness of Open Educational Resources (OER)

Very Aware	6%
Aware	15%
Somewhat aware	15%
Heard of	22%
Not aware	42%

Teacher awareness of Open Educational Resources (OER) and Creative Commons

Very Aware	5%
Aware	12%
Somewhat aware	11%
Heard of	13%
Not aware	59%

Awareness of OER and Creative Commons by prior online teaching experience

	No online experience	Online teaching
Very Aware	5%	8%
Aware	10%	21%
Somewhat aware	11%	10%
Heard of	14%	11%
Not aware	60%	50%

Teacher awareness of OER and Creative Commons by school year

	2018-19	2020-21
Very Aware	5%	5%
Aware	12%	12%
Somewhat aware	10%	11%
Heard of	12%	13%
Not aware	60%	59%

This year's survey continues to study K-12 curricula in U.S. schools through the lens of the COVID-19 pandemic. The survey was conducted in March of 2021, in the midst of the pandemic, as teaching styles shifted to accommodate federal, state, and local health and safety guidelines. A lack of national-level guidance and disparate rules across the country resulted in a wide variety of adaptations to instruction between districts, schools, and even classrooms, with distinctions in how and when classes were taught, and what was being taught.

The COVID-19 pandemic forced widespread changes across the educational landscape, though a shift to digital and online tools was already trending. It is too early to determine the full impact the pandemic had on the adoption of digital tools and exposure to OER across classrooms. Still, it has become clear that schools, teachers, and administrators may not decide to return to pre-pandemic habits.

Some key findings from the survey include:

- The COVID-19 pandemic spurred a major shift to remote instruction, causing major changes to classroom curricula.
- Most teachers had no prior experience teaching with remote instruction.
- When designing curricula during the pandemic, survey respondents took a "mix and match" approach, combining materials from multiple sources.
  - 45% of respondents incorporated open-source supplemental materials into their curricula.
- The majority (93%) of full or partially remote classrooms used some form of video (full-class, small group, one-on-one) for instruction.
  - Only 18% of these classrooms plan to continue full-class video post-pandemic; 55% plan to continue with some variety of video formats.
- Teachers expect to continue using a number of digital tools in post-pandemic instruction, including online polling and quizzes, on-demand instructional videos, and tools to ensure academic integrity.
- Survey respondents felt positively about Professional Development offerings that were provided, including the new focus on health and safety, as well as support for teaching with technology and remote instruction.
- While OER and licensing awareness levels remained similar year over year, teachers with prior experience teaching online had a greater awareness of these topics than those without.

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