

Coping with COVID-19 in Kentucky: Youth Examine Their Learning Lives

Daniela K. DiGiacomo
Ellen L. Usher
University of Kentucky

Sanaa M. Kahloon
Kentucky Student Voice Team

Caiti Griffiths
University of Kentucky

Connor Flick
Kentucky Student Voice Team

Beth Goldstein
University of Kentucky

Sadie Bograd
Spandana Pavuluri
Sofie Farmer
Emmanuelle Sippy
Kentucky Student Voice Team

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Abstract

This article presents a youth-driven study to understand Kentucky students' learning-from-home experiences in the wake of COVID-19 statewide school closures. Grounded in a sociocultural perspective on human development and guided by a youth participatory action research approach to inquiry, this study employed a sequential mixed-methods design to examine how the pandemic shaped students' learning lives. Data sources include a statewide student survey (N = 9,475) and peer-to-peer interviews (N = 32) administered in 2020. Descriptive and inductive analysis of results demonstrate the importance of socio-economic status as a mediator of educational experience, and social relations for learning.

Keywords: learning from home, student voice, youth experience, educational inequity, youth participatory action research

The year 2020 was characterized by crises on multiple fronts: the onset of the COVID-19 pandemic, persistent state-sanctioned police violence toward people of color, and a hyper-polarized political climate that culminated in a tumultuous presidential election. Amidst these crises, students across the nation had to rapidly shift their school-based learning to at-home environments to mitigate the spread of the virus. The “Coping with COVID-19 Student-to-Student Study” is a youth-driven study launched by the Kentucky Student Voice Team (KVST) after statewide school closures to understand Kentucky students’ learning-from-home experiences, with particular attention to issues of equity and justice.¹ As a statewide youth organization, KVST was well-positioned to document student experiences of the pandemic, including how issues of power, privilege, and difference mediated learning-from-home experiences. In line with other KVST initiatives, this action-oriented research, supported by a team of experienced adult researchers, intends to amplify student voice and ensure that educational policy is shaped by students themselves.

A Learning Lives Approach to the Study of Students’ Educational Experiences

This study is grounded in a sociocultural perspective on human development, in which social relations and context are considered central to how learning occurs. Learning is itself a cultural, social, and relational phenomenon—one that is facilitated by and through iterative, fluid interactions with a range of mediational means, including more experienced others, content/materials, and discourse/language (see Vygotsky, 1934/1978; Wertch, 1991; 1998). A *learning lives* approach (Erstad & Sefton-Green, 2013) in particular, takes seriously the ways in which learning is a situated, cross-setting, and over-time phenomenon that is constituted by and transformed through the social relations and material worlds in which students live and learn.

Such an approach to inquiry requires the examination of multiple dimensions of students’ lives, and perhaps most importantly, it requires the solicitation of first-person perspectives. To do this in our study, we drew on diverse data sources to capture students’ first-person perspectives about their attitudes toward learning, their teaching and learning relationships, their senses of self, and their hopes for the future.

How the Pandemic Impacted Students’ Learning Lives in the United States

Anecdotal and increasing scientific evidence has begun to document how the COVID-19 pandemic impacted students’ educational experiences, mental wellness, and home lives. Stressors such as lack of social support and new demands on learning were related to heightened anxiety, depression, and suicidality in adolescents (Jones et al., 2021; Yard et al., 2021). Distanced or decreased social interaction with peers, in large part due to school closures, lessened opportunities for co-regulation of stress (Fegert et al., 2020). Students’ learning experiences also differed along socioeconomic lines: the time spent learning and availability of

¹ The use of the present tense to refer to the study is purposeful, as the longitudinal aspect of the study is ongoing.

supportive learning resources decreased for poorer families (Andrew et al., 2020). Further, studies have projected more severe learning loss for Black and Latinx students compared to White students (Dorn et al., 2020).

Other forms of literature, including public media, news, and institutional reports, have documented the myriad effects of the pandemic on students' lives. Some students became caretakers for sick family members; others felt an overwhelming sense of social loss and loneliness. Students coped with COVID-19 in diverse ways. A March 2021 *Education Week* special report on students' well-being featured student essays with illustrative titles including, "Hours staring at tiny boxes on the screen," "My only parent essentially on her deathbed," and "One day, every day won't be as terrible." National policy reports such as those of the Economic Policy Institute (EPI) urged educational leaders to consider how even well-intentioned education responses to COVID-19 might be exacerbating inequities through existing conditions of unequal access. According to EPI, online learning and teaching were effective only if "students had consistent access to the internet and computers and if teachers had received targeted training and support for online instruction" (Garcia & Weiss, 2020). The report further noted that home schooling works well for students for whom intentional, personalized, and sufficient resources are available.

Both the grey and scholarly literatures point to a pronounced effect of the pandemic on the educational lives of students, albeit in distinct ways for different populations. Little research to date has focused on the experiences of students in the state of Kentucky, which is the focus of this study. Nor to our knowledge have researchers and policymakers turned to students to guide inquiry about their own experience. As creators and owners of their own experiences and perspectives, students themselves are best able to tell the story of the ways in which they experience learning, including how that learning shifts or transforms over time. They are also well suited to design research to solicit those stories from their peers.

Guided by these assumptions of the power and potential of community-based, participatory design research (Bang & Vossoughi, 2016), this study's theoretical grounding in a sociocultural perspective on learning was realized through a youth participatory action research (YPAR) design, as explained below (Cammarota & Fine, 2008; Kirshner, 2010; 2015). The purpose of the study was to examine the texture and nuance of students' learning lives during the early months of the COVID-19 pandemic and to describe patterns across student subgroups. We were guided by two primary research questions:

1. How did the COVID-19 pandemic shape Kentucky students' learning lives?
2. What educational inequities were revealed through students' experience of the pandemic?

Study Context and Methods

As is the case across the broader public-school landscape in the United States, persistent opportunity gaps appear across Kentucky (see Carter & Welner, 2013). As a predominantly rural state, geography and socioeconomic status are large mediators of educational opportunity for students across the state. Although the

Kentucky Educational Reform Act of 1990 initiated progress toward increasing educational equity in the state, the experience of education for K-12 students remains unequal (Clements, 1999; Coe & Kannapel, 1991; Sexton, 2004).

Study Design

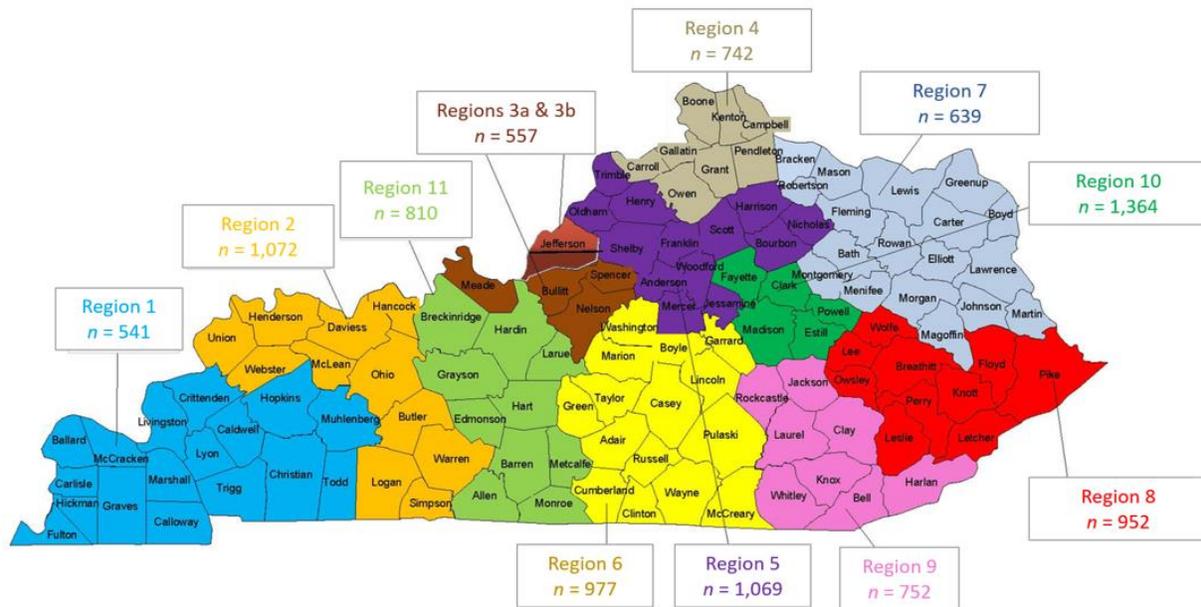
YPAR is a form of community-based, participatory research that is guided by the assumption that young people are both well positioned and adequately equipped to shape research that is directed at, toward, or about them. In YPAR, youth train and act as researchers who study and act on issues that matter to them (Cammarota & Fine, 2008; Kirshner, 2010; 2015; Mirra et al., 2015). According to Ozer et al. (2020), YPAR is best conceptualized as “an orientation, rather than a method, that challenges dominant assumptions about who holds and creates knowledge” (p. 3). Employing a YPAR approach, the “Coping With COVID-19” study was spearheaded, from ideation to inception to implementation, by the youth members of KSVT. The team recruited adult allies (professors from the local university) to serve as more experienced research guides, but the young people themselves led the work. KVST and its adult allies (referred to often hereafter as “we”) used a sequential mixed-methods design in which survey data collected in Phase 1 were used to select participants for semi-structured interviews in Phase 2 (Creswell & Plano-Clark, 2018).

Phase 1

Sampling and Participants

In May of 2020, the “Coping With COVID-19” survey was widely disseminated to Kentucky youth in grades 6-12 via a combination of peer-to-peer communication, administrative school-wide dissemination, and partnerships with youth and community organizations. The research team initially collected 9,796 survey responses. Data cleaning identified 321 participants who were ineligible to take part. The resulting sample comprised 9,475 students attending 573 schools across all but one of Kentucky’s 120 counties. Given the convenience sampling method, participation rates were not in proportion to the number of age-eligible students in each county; however, Figure 1 shows broad participation across the 11 Kentucky regions identified by the Division of Family Resource and Youth Services Centers. Table 1 shows the full demographic breakdown of survey participants.

Figure 1. Study participation by Kentucky family resource and youth services centers region



Survey Measures and Analysis

The online survey instrument addressed four main areas related to how Kentucky students were affected by COVID-19: educational experiences during non-traditional instruction, physical and mental wellness, changes in students' home lives, and plans for the future. An iterative process of ideation, thematic categorizing, cutting, and refining led to a final 25-item survey with multiple choice, Likert-type, and open-ended response options. Items used in this study are provided in Appendix A.

Table 1. Demographic information for phase 1 participants (N = 9,475)

Student Characteristics	<i>n</i>	Percentage
Grade Level		
6-8	1,761	18.6
9	1,840	19.4
10	1,935	20.4
11	2,127	22.4
12	1,807	19.1
Gender		
Female	5,389	66.8
Male	2,546	31.5
Gender non-binary/Gender non-conforming/Transgender	138	1.7
Race/Ethnicity		
White	6,799	84.0
Black/African American	334	4.1
Hispanic/Latinx	276	3.4
Asian/Asian American/Pacific Islander/Middle Eastern	295	3.6
Native American	31	0.4
Multiracial	355	4.4
Socioeconomic Status (Self-Reported)		
Poor/Working poor	277	3.4
Working class	1,259	15.5
Middle class	3,554	43.8
Upper middle class	2,158	26.6
Upper class	220	2.7
Prefer not to say	650	8.0
Gifted & Talented/AP /IB		
Is Gifted & Talented/Takes AP or IB courses	4,632	57.1
Is not Gifted & Talented/Does not take AP or IB courses	3,486	42.9
Rurality/Urbanicity of School District		
Non-Rural: County of 20,000 or more residents	5,570	58.8
Rural: County of fewer than 20,000 residents	3,905	41.2
Parental Education		
Some high school (didn't finish)	324	4.0
High school or equivalent	1,270	15.6
Some college or 2-year degree	1,996	24.6
College degree	2,354	29.0
Graduate degree	2,174	26.8
English Language Learner		
Is an English Language Learner	240	3.0
Is not an English Language Learner	7,859	97.0

We examined survey response trends related to the major survey themes. Frequencies for each response category were calculated for the full sample. Cross-tabulations were examined for students in key demographic categories:

race/ethnicity, rurality, parents' college completion status, social class, and students' advanced academic status. Chi square tests of independence were used to examine group differences in response patterns.

Responses to the survey's three open-ended questions were analyzed using a multi-step analytic approach that began with iterative, descriptive coding of 100 segments of data by rater pairs. Pairs met in larger teams of 7 to 10 students to examine and revise emergent descriptive codes until a high level of interrater agreement (> 85%) was reached. Consensus for a final coding scheme was then reached in consultation with the larger intergenerational research team (Miles et al., 2018). This final coding scheme (see Appendix B) was then applied to all 20,389 open-ended question responses, which ranged in length from 1 to 266 words.

Phase 2

Sampling and Participants

The second phase of the study provided a deeper qualitative exploration of high school students' educational experiences and perspectives a few months into the pandemic (i.e., summer 2020). We used purposeful sampling to select a subset of Phase 1 participants who indicated willingness to be interviewed (14.4%; $n = 1,361$). From these eligible students, we selected a subgroup of 300 students to whom we sent recruitment emails. We purposefully sought to overrepresent in our interview sample students who had been underrepresented in our survey sample (i.e., students of color; gender non-binary/non-conforming and transgender students; students from rural areas; students in low-income families; and students not in gifted or advanced education programs). Forty-nine students initially elected to take part in interviews; however, due to scheduling or personal constraints, 32 completed interviews (see Table 2 for demographic information). Students who were under the age of 18 required parent or guardian consent.

Interview Protocol and Analysis

Each "peer-to-peer" interview (i.e., conducted by and with high school students or recent high school graduates) lasted approximately 30 minutes via Zoom. The semi-structured interview protocol included 12 questions inviting students to describe how their educational lives had changed as a function of the pandemic (see Appendix C). An online service was used to transcribe the audio recordings. Each transcript was then authenticated by the interviewer.

To analyze the interview data, we used an inductive analytic approach facilitated by the Dedoose software program. This approach involved reading and re-reading a subset of interviews in pairs; assigning low-inferential, descriptive codes to chunks of text that reflected the phenomenon being expressed; generating a draft codebook; and collaboratively testing, refining, and applying the final list of parent and child codes (see Appendix D; Miles et al., 2019).

Table 2. Demographic information for phase 2 participants (N = 32)

Student Characteristics	<i>n</i>	Percentage
Grade Level		
9	6	18.8
10	6	18.8
11	11	34.4
12	9	28.1
Gender		
Female	15	46.9
Male	16	50.0
Gender non-binary/ Gender non-conforming/ Transgender	1	3.1
Race/ Ethnicity		
White	22	68.8
Black/African American	3	9.4
Hispanic/ Latinx	1	3.1
Multiracial	6	18.8
Socioeconomic Status		
Poor/ Working poor	4	12.5
Working class	12	37.5
Middle class	11	34.4
Upper middle class	5	15.6
Advanced Status		
Is Gifted & Talented/ Takes AP or IB courses	17	53.1
Is not Gifted & Talented/ Does not take AP or IB courses	15	46.9
Rurality/Urbanicity of School District		
Non-Rural: County of 20,000 or more residents	23	71.9
Rural: County of fewer than 20,000 residents	9	28.1
Parental Education		
Some high school (didn't finish)	1	3.1
High school or equivalent	6	18.8
Some college or 2-year degree	5	15.6
College degree	11	34.4
Graduate Degree	9	28.1

Results

We organize our findings on how the pandemic shaped the learning lives of Kentucky students in four major areas of change that emerged: shifting classroom and home environments, attitudes toward learning, educational relationships, and plans for the future. We present triangulated findings from both phases of data collection and highlight group-based inequities.

When School Shifts Home: Changes in Students' Classroom Environments

One of the primary ways in which the pandemic impacted students' learning lives was in the marked, material changes in students' classroom environments due to a required shift in locus from school to home. That shift did not impact all students equally, in part due to differences in the many material and psychological resources required to do school from home: (a) digital access, (b) classroom access, and (c) overall wellness.

Access

Nearly 90% of the students surveyed reported having reliable access to the internet most or all of the time. Students who had limited or no access, however, were disproportionately rural, poor and working class, and/or had parents who were not college educated. Although nearly 85% of the full sample had reliable cell phone data service, nearly a quarter (23%) of students living in rural areas said they "never" or only "sometimes" had reliable cell phone data service, compared to only 10% of non-rural students.

Not having consistent Wi-Fi access via a home connection or a smartphone device was an ongoing barrier for students to access their virtual classrooms, interact with their teachers and peers, and complete their homework. Some school districts imposed additional access restrictions. Consider the complexity of Kenji's access challenges shared in her interview:

It's a lot harder to just do anything if you have a device that's out of the school's network of devices—so like all the Chromebooks, and their laptops. If you're trying to use one of these for a Google Meet, you can get in just fine. But if you're using something like your cell phone, you can't get in because the teachers won't let you.... So, if I ever need to talk in a Google Meet, I'll have to [use] my phone, which they won't allow... so you can't do anything. You're sitting, you have to type it all out in chat. And if it's a math problem or a really long-winded response, you can't do that.

Kenji (a pseudonym, as are all student names presented in this analysis) enumerates many dimensions and multiple layers of access that are necessary to enable full participation in virtual classroom environments and highlights the clear possibility of being left behind for those who lack even one piece of the digital puzzle.

Nearly 80% of students who responded to the survey reported having access to hardware (desktop, laptop, tablet, notebook) necessary for remote learning. However, 2 out of 10 poor and working-class students reported "never" or only "sometimes" having such access—more than twice the rate of middle- and upper-class students. This is significant to consider when imagining how challenging it would be to "type up a paper on my little smart phone," as one student reported. Moreover, poor and working-class students were nearly twice as likely to have to share their device with a family member than were their middle- or upper-class counterparts. This trend was mirrored in students' access to textbooks and school supplies: 31% of poor and working-class students said they "never" or "sometimes"

had access compared to 18% of middle and 12% of upper-class students, respectively. Students in rural areas also reported significantly less access to technology and school materials than did non-rural students during the pandemic. It bears noting that students who participated in this study were those who managed to complete an *online* survey. The access gaps identified here are therefore likely even larger among Kentucky's learners, particularly those living in economically distressed and rural areas.

Learning Environment

Our Phase 1 survey assessed the degree to which students were engaged in formal education activities. When asked how many times per week their classes met "in real time" with their teachers (e.g., on a video call), students' reports varied widely. Nearly 28% reported that they had no class meetings, whereas nearly the same percentage reported two or more meetings per week. Students living in rural areas (40%) were twice as likely to never meet with their classes during the initial months of the pandemic. Poor and working-class students were also less likely to have real-time class meetings than were their middle- or upper-class peers.

Interviews and open-ended responses demonstrated the importance of students' learning environments during COVID-19. The code "Classroom Environment" emerged 266 times across the 32 interviews and appeared more frequently than any other code. Likewise, over 1,000 students wrote about the need for better communication and interaction when asked what their teachers could be doing to better support their learning during the pandemic. As one young man explained, "I wish we could have more class video calls whenever we have to learn from home. I love the conversations that I have with my favorite teachers and classmates."

In interviews, students most often referred to the virtual spaces their teachers had created in lieu of face-to-face class meetings. The form of and requirements in these spaces varied across schools and districts (e.g., some had seven daily synchronous "class" hours required, while others were asked to participate and learn in mostly asynchronous ways). For instance, even teachers' decisions around the time of day to release information impacted students' learning routines, as the following illustrative open-ended response suggests:

Some of my teachers have been posting at 4pm in the afternoon or having live sessions at 5pm and that has not worked. I'd prefer it if they posted regularly in the morning and had their live sessions in normal school hours.

Across interview and open-ended response data, students frequently noted how important the organization of their classroom environment was to the quality of their educational experience and their learning. They noted, too, how pandemic-induced increases in responsibilities shaped their overall learning lives' experiences, as the following sections will address.

Physical and Emotional Well-Being

Survey and interview evidence showed that some students experienced changes to their physical and emotional wellness during the pandemic. Forty percent of

students surveyed reported feeling more stressed than before the pandemic. About 16% of students surveyed reported feeling more worried about their family having enough money to live on and about 6% were more worried about having enough food to eat. Poor and working-class students (30%) were more than twice as likely to report increased financial worries than were middle- (15%) and upper- (10%) class students. Food insecurity and overall stress were similarly disproportionate by social class.

Students were asked to rate their need for and access to mental health support services before and during the pandemic. Nearly 10% of students reported having wanted, but lacked, access to mental health services before the pandemic, and 14.9% said this described their feeling during the pandemic. Among those who were receiving mental health services before the pandemic, fewer continued to receive services, reflecting an overall loss of access. When asked to write about their current primary challenge, 13% of poor and working-class students reported a mental health problem, compared to 9% of middle-class students. This finding was echoed throughout the open-ended responses, in which students expressed a desire “for more emotional support” when asked what their teachers could be doing to better support their learning.

Significantly more poor and working-class students (21%) than upper-class students (13%) reported feeling less “emotionally safe” in their living conditions. Poor and working-class students also reported having additional responsibilities at home. As Michael explained, “I work 7 hours a day and come home to a handicapped father and take care of him. I never get my [school] work done.” Students like Michael made visible how challenging it could be to complete schoolwork given increased responsibilities at home and at work. For other students, more time at home led to more worry. As another high school student wrote, “I am feeling very unmotivated sometimes, and I'm stressed constantly. My home environment isn't really ideal, lots of arguing and tense moments.”

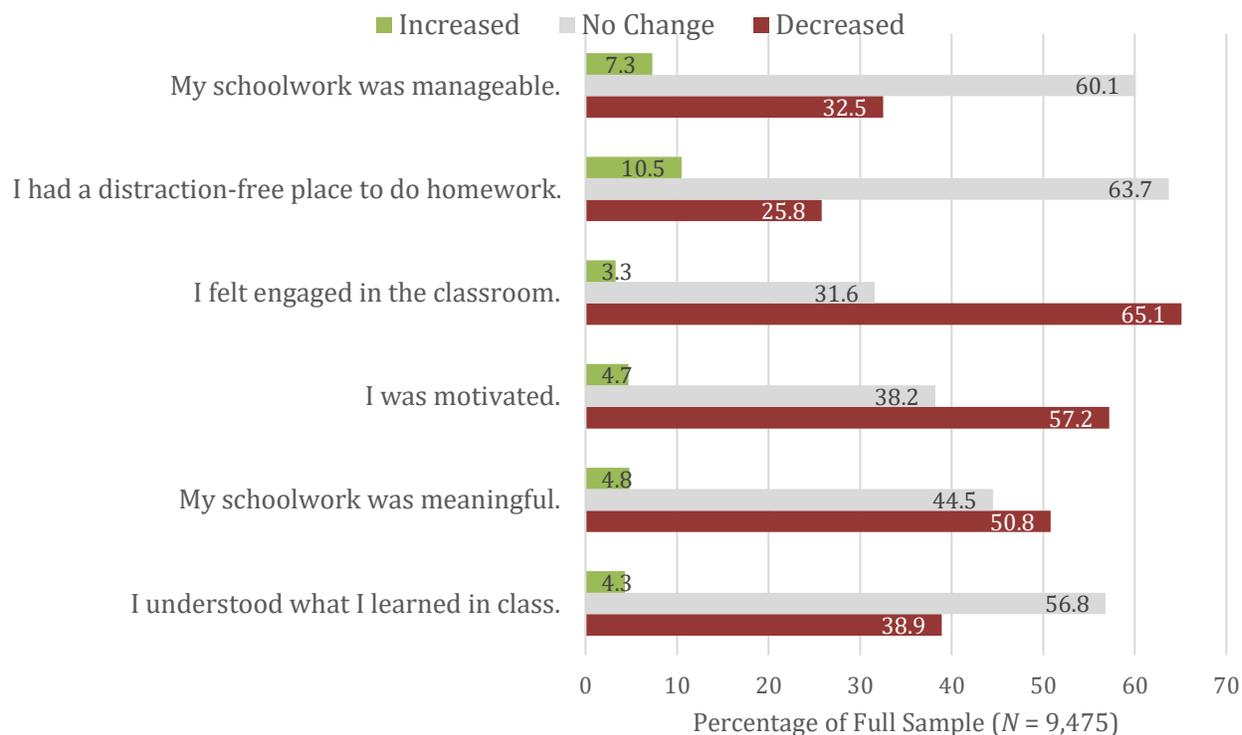
Students' Attitudes Toward Schooling

Pandemic-related stressors also affected students' school-related attitudes and perceptions. Two key themes emerged. First, students reported declines in the areas of self-regulation and motivation for school. Second, they reported more difficulty comprehending what they were learning both in terms of content and purpose.

Self-Regulation and Motivation

We compared students' reports of their educational attitudes before and during the pandemic. As Figure 2 illustrates, nearly one-third of all students surveyed reported that their schoolwork was less manageable during COVID-19 than before. This decrease was more pronounced for poor and working-class students, 42% of whom said their schoolwork had become less manageable. Among this group, 35% reported more difficulty finding a distraction-free place to do homework.

Figure 2. Kentucky students' educational attitudes after shift to non-traditional instruction



More than half of those surveyed (51%) reported that their schoolwork had become less meaningful during the pandemic. An even higher proportion (57%) reported a decrease in motivation, and 65% reported a decrease in their academic engagement. In fact, of over 6,000 students who provided a description of the “primary challenge you are facing right now,” one in five wrote about difficulties with self-regulation or motivation. Typical responses included, “I can’t motivate myself to do my schoolwork,” “I can’t focus at all,” challenges with “Keeping track of all my assignments,” and “I constantly procrastinate.” Students in advanced classes were more likely to report decreased motivation and engagement than were their non-advanced counterparts. For many students, stress and anxiety accompanied a loss of motivation and led to difficulty regulating daily activities. The following interview excerpt illustrates this theme succinctly:

I literally have no motivation to do anything. I understand that my grades are important, but I have generally given up trying. It's pathetic because this only makes me more depressed.

Although a substantial number of students expressed that they were intrinsically motivated to learn and cared about the content, their increased overall responsibilities did not align with this desire, as the following student response makes clear:

Since I'm a front-line worker I was constantly working and stressed, and I felt like the [school] work I had to do was meaningless and just busy work. I would've liked less assignments but more engaging assignments.

In this response, there is an expressed desire for more meaningful schoolwork because their life, overall, had become more stressful. From this response in context, it was evidence that the front-line work was not new for this student—but having to continue to do it in the face of the pandemic amplified the stress of working, school, and life overall. The qualitative data also revealed nuanced shifts in students' wellbeing and self-perceptions. For example, pandemic-related shifts led some students to examine their own intrinsic and extrinsic motivation—and the purpose of education—more critically. As Kelli explained, “I am more unmotivated to do the pointless, ‘busy work’ that I am assigned; however, I am more motivated to actually learn and grow—which should be the priority of school.”

Comprehension and the Purpose of Learning

Kelli's observation, like others, highlights the connection between shifts in students' motivation to learn, their actual learning, and their ruminations regarding the purpose of learning. Survey responses revealed 39% of students with a reported decrease in being able to understand what they were learning in their classes. This perceived learning loss was greater for poor and working-class students (46%). Analysis of open-ended responses, too, illustrated that students of color reported their greatest pandemic challenge was “education” at a significantly higher rate than their white peers (22% vs. 14%). When asked what their teachers could be doing to better support their learning, a substantive number of students across sub-groups named “more meaningful schoolwork” as their primary desire—though this was disproportionately higher for students in advanced classes, as compared to their peers in non-advanced classes.

Interview data echoed this sentiment in ways that highlight the complex and intersecting issues of access, motivation, engagement, workload, relevance, socioemotional support, and structure—all in relation to students' learning. The following interview excerpt from Ta-kenda reflects the broader set of responses:

I just really want to stress how counselors and teachers need to reach out to their students. Because I had my first encounter with depression during this whole thing. And without people reaching out, it's really easy to just sink down into your own head, and just feel like everything's pointless for a long time. I cried last week, because I was like, 'What's the point of me doing all this?' And if I'm never just going to be able to either go back to school or go to college, it just all seems pointless. I was like, 'Well, I don't know what I'm doing here then.'

Ta-kenda's questioning of the purpose of school/education/learning reverberated throughout the data sets, a theme that emerged alongside the reported decrease in overall learning and motivation, and the expressed need for more mental health support.

Educational Relationships

One of the strongest sentiments expressed within and across interview and survey data was students' sense of how important their relationships with their teachers and peers were for their learning lives. The data revealed that the rapid move to non-traditional instruction shifted student-teacher relations in ways that most students experienced as detrimental to their learning because of the social nature of learning, and decreased opportunity for connection through consistent communication.

The Social Nature of Learning

Within and across the data, there emerged a strong awareness by students of the embodied nature of learning, which includes more than simply verbal dialogue and discussion. Analysis of open-ended responses revealed students' desires for more purposefully dialogic and synchronous *teaching for understanding*. Students of color articulated this desire at a significantly greater proportion than their white peers (18% v. 15%), when asked about what their teachers could be doing to better support their learning. Of note, across all sub-groups, the three most frequent responses to this question was more, better, and more consistent dialogic, student-centered pedagogy. (See Table B1 in Appendix B).

A majority of students articulated that the pandemic made learning harder for them because their new "classroom" environments lacked the *physical presence* of teachers and peers. The social context of the physical classroom provided ongoing and consistent feedback, expert models, structure, and in-the-moment support for their comprehension, queries, and ideas. The following excerpts reveal the importance for learning of relational feedback and opportunities for shared expertise (social and relational feedback dimensions in **bold**):

*Because I have a hard time focusing and **if I see other people around me doing the same work, I can just ask them for help with that specific problem right then right there. And they can explain it to me in a different way. And I feel more... I don't know how to explain it. I'm less alone.***

*I'd say it's the loss of human interaction in support [for learning]. **In a classroom you're used to your teachers giving verbal cues, gestures of support. Whereas now, it's all through just the speaker.***

*I learned so much more in person. I don't know what it is about in-person, but **it almost forces you to be there in the moment**, it's harder to get distracted in person.*

In each of these illustrative interview excerpts, students articulate a sense of how their growth and development is enhanced by a developmental context that is deeply social and relational in nature.

In the interviews in particular, students very frequently mentioned "relationships," even when the interview questions were not focused on them. Student relationships

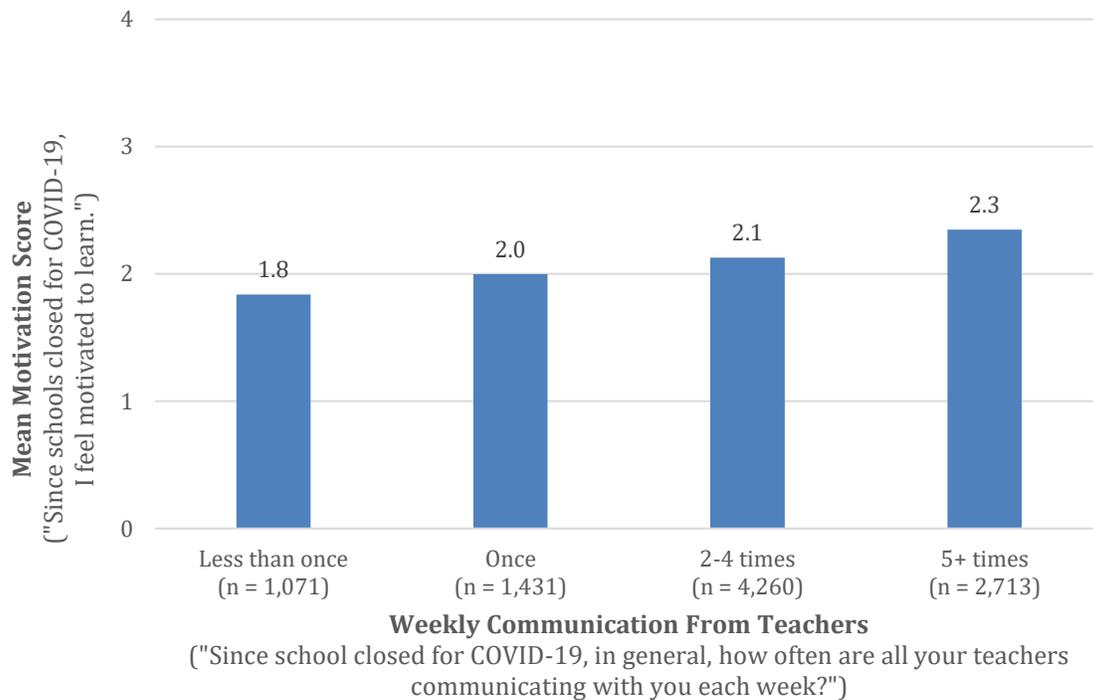
with their teachers were most named (177), followed by peers (125), and family members (90). They often spoke about the levels of trust, liking, appreciation, and/or empathy that existed between them and their teachers. And, they discussed how important their relationships with their teachers were for shaping their learning environment. In addition, deeper inductive analysis showed how the social relationships that students have with their peers were also linked to their overall sense of wellness and perceived ability to learn.

It is important to note, however, that for many students, pre-pandemic schooling itself had not always been ideal in terms of fostering the meaningful relationships that support learning. This sentiment emerged across several interviews, though for purposes of this publication it is excluded from the present analysis.

Decreased Opportunity for Connection Through Communication

A second theme of educational relationships involved the nature of communication and its connection to students' attitudes toward learning. Survey responses revealed that most students (74%) said teachers communicated with them two or more times per week during the initial months of the pandemic. However, 16% of those living in rural areas (compared with 8% in non-rural areas) reported teacher communications occurred less than once a week, if at all. Of interest, those who received more frequent communication from their teachers reported, on average, greater motivation to learn (Figure 3).

Figure 3. Mean student motivation by frequency of communication from teachers



Note. Analysis of variance and post hoc tests showed that all means were statistically different, $F(3, 9,471) = 96.11, p < .001$.

Open-ended and interview responses indicated that students wanted more frequent, meaningful teacher communications that involved both teaching of academic material and time for interpersonal connection. Illustrative responses to the question of what teachers could be doing to better support their learning included “active communication to help with motivation” and “they could be reaching out to the students more and helping to come up with plans to help their students do well and stay motivated.” In other words, students expressed a felt and strong connection between communication and motivation. From brief hallway interactions with teachers to in-class peer-driven discussions, social connection and social relations emerged as central to students’ learning lives. As one student put it, quite simply, “More Zoom calls not just for learning but social connection.”

Analysis of mixed-method data overwhelmingly revealed that most students felt an extreme sense of social loss during the pandemic, too. Indeed, “social loss” was the second most frequent code assigned to students’ open-ended responses to their “primary challenge” in May of 2020, and “social wellness” was the third most frequent code that emerged from the inductive analysis of interviews. Not being able to see friends and family created serious challenges to students’ well-being. From feelings of extreme boredom to loneliness, isolation, and anxiety, students’ experience of social loss varied. Most related these feelings to changes in their motivation, mental health, ability to self-regulate, self-worth, and overall level of engagement with learning. As one student wrote, “Loss of contact with my friends is hard, and it's hard to stay motivated in school, so both communicating with friends and school is hard right now.”

Students’ Future Plans: Increased Uncertainty and Decreased Confidence

The fourth theme that emerged from data analysis was how the pandemic impacted students’ ideas, dreams, and plans about what was possible for their futures. In the survey, we asked students about their level of confidence toward future plans. For this question, we restricted analysis to students in 11th and 12th grade, given the emphasis in those grades on future planning. Twenty-five percent of juniors and seniors reported a decrease in confidence, 71% reported no change, and 4% reported an increase in confidence about their future plans. Poor and working-class students (34%) were significantly more likely to report a decrease in confidence about their future plans during the pandemic than were their middle- (22%) and upper-class (20%) peers. Consider Ryan’s description of the pandemic’s impact on his ideas about the future: “I’m going to become a mailman, I’ve given up on my [other] dreams.” Ryan’s interview response was not atypical; many students’ experiences during the pandemic dampened their ideas about possible futures.

Over one-third of the more than 7,000 students (9-12th grade) who responded to the open-response question regarding changes in their future plans mentioned postsecondary education. These students frequently noted their decision to stay in state for college or attend community colleges to be closer to family or for financial reasons. Many students pointed to the cancellation of sports seasons and standardized testing as jeopardizing their chances for athletic and merit-based scholarships. Others reported that the cancellation of “resume-building” events such as extracurriculars would hurt their college application and attendance

prospects. Many said that they expected to perform worse academically during non-traditional instruction, which would compromise their college admissions. Students also pointed to a lack of access to trusted adults in schools to receive college and career advice. Abby's admission during her interview shows the ways in which the pandemic dashed some students' hopes:

My grades are going to hit the floor and I am scared I won't get into the college I want. I live in poverty and always viewed college as a must to get out of this lifestyle, but now I'm not so sure about anything.

In a similar yet distinct way, Amiyah reflected on how life in the pandemic has shifted her understanding of her positionality in her cultural context.

I didn't mention earlier, but my blackness has been one of my drivers because I want to become an opera singer. And I go to a predominantly white school and so I'm always like, "Well, I'm a Black kid. I need to work my hardest because I don't want to be seen as less than, I need to prove that I belong here." And now I don't care what anybody thinks, I don't need to push myself to the point of my mental health not being good because before the pandemic I was the "yes" person. A lot of it was because I don't want to be seen as the angry Black woman. I don't want to be seen as uncooperative. And now I feel comfortable. If I don't know the answer, I'm not going to raise my hand, I'm not going to act like I know everything. I'm not going to act like I'm strong all the time. And it's made me be able to learn more and be able to learn at the pace that I want to learn. And I'm not constantly trying to live up to this unattainable standard.

Many students also expressed worry in their interviews with us about the financial feasibility of their career aspirations after seeing so many others lose their jobs during COVID-19. Several students noted looking into an "essential" career. Stability was a driving issue for many respondents who described a change in their future career plans. As Paul remarked, "I have started to second guess if my future job is even obtainable in today's economy." On the other hand, numerous students expressed newfound interest in the medical field, explaining that the pandemic had given them real life examples of job security, or that the field seemed a more viable option after seeing the impact that doctors, nurses, and others had on their communities.

Limitations

There are several important limitations in our study. First, the survey sample overrepresents Kentucky students who are White, middle class, and academically advanced. We expect this was a function of the survey's dissemination, as peer-to-peer sampling resulted in a reflection of the KSVT demographics, which also skew in this direction. In addition, the largest and most racially diverse school district in Kentucky restricted data collection from its students during COVID-19, which imposed further sampling constraints. We therefore engaged in purposeful sampling of interview participants to ensure greater racial and socioeconomic diversity, although this sample still skews slightly White and middle-class. Participants in the

study were limited to Kentucky learners who were able to take an online survey. Our report therefore underrepresents the experiences of learners without internet access who are more likely to live in economically disadvantaged or rurally situated areas. The equity gaps identified in this paper are therefore likely much larger across the state.

Along with the benefits of having a broad, intergenerational research team came the challenge of varying levels of formal research training among the many coders who helped with data analysis. All coding protocols were designed by a youth research team and reviewed by experienced adult research allies, extending ownership of data analysis to the youth team. We are proud to be a YPAR project and accept the potential limitations that stem from purposefully including youth with limited formal research experience to inform those who, despite their training, have a less acute understanding of the life of a student.

Concluding Discussion

Our analysis reveals that persistent inequities in students' educational experiences are shaped by socioeconomic differences. The most consistent, significant difference creator was socioeconomic status, which marked stark disparity in categories ranging from confidence in future plans to access to technology to manageability of schoolwork. This finding is consonant with previous studies that have found access as a function of fiscal resources to strongly impacts students' educational experiences—in pandemic times and not (e.g., Andrew et al., 2020 and Kincheloe & Steinberg, 2007, respectively). Of note, socioeconomic status often served as a proxy for other demographic trends, such as level of parental education, access to advanced classes, rurality, and race.

Next, our analysis reveals the primacy of social relationships in students' educational experiences. From caring teacher-student relationships to peer-to-peer relations, students reported a variety of ways in which their relationships were negatively impacted by the pandemic, and how these shifts mediated their educational perspectives and learning experiences. Analysis within and across interview data showed the centrality of the social situation for development for student learning. Such an understanding of the importance of the necessary social conditions for learning and relational feedback for learning is also well documented (e.g., DiGiacomo & Gutiérrez, 2015; 2017); Nasir, 2012; Resnick & Rosenbaum, 2013; Vygotsky, 1934/1978).

When considering the findings from our data, however, one should not romanticize in-person schooling. As many students told us, their schools, pre-pandemic, were far from perfect. Students' struggles with engagement, motivation, and relationships are all pre-existing conditions that were exacerbated and illuminated by unprecedented shifts in our broader society. These struggles will not go away without an equally dramatic shift in the socioeconomic structures that continue to impact educational access and outcomes. And lastly, our data made evident, yet again, that what is going on in life outside of school significantly impacts the way students think about learning, school, and education more broadly.

Attempts to address the inequities in the Kentucky K-12 educational experience are ongoing, but the pandemic showed the fragility of even well-intentioned policy attempts to address inequity, especially in times of crises. Our study confirms the difference socioeconomic status makes on consistent access to high-quality learning experiences. Accordingly, we suggest that improving schools should not be siloed from the other needed work to address economic inequality. Relatedly, how students conceptualize what is possible and desirable for them, now and in the future, was greatly impacted by the pandemic. In turn, we suggest thinking carefully and collectively about the role schools can play in enlivening students' imaginations about what counts as learning and what is possible for them in their future lives. At the very least, this study demonstrates the power of student voice and youth participatory action research to make visible the range and nuance of student experience. Of note, the findings from this study have and continue to be made visible and accessible to a range of public and policy-making audiences, including the Kentucky Board of Education.² We hope readers of this article will consider the ways in which they, too, can support attempts to amplify student voice and center student experience in their own contexts. From our vantage point, it is through the continual and further democratization of education efforts such as these that a better and more just society is possible.

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The authors would like to acknowledge the work of the entire Kentucky Student Voice Team (<https://www.kystudentvoiceteam.org/>) in its efforts to solicit the voices of all Kentucky students to advance education justice. Their work drove this study, from inception through analysis, and as their work continues, new and salient information about learning in the time of COVID-19 continues to be discovered and disseminated.

***Daniela K. DiGiacomo** is an Assistant Professor at the University of Kentucky. Her research interests include youth development and civic engagement, and her scholarly agenda centers on the design of informal learning environments for justice and equity.*

About the student authors: The Kentucky Student Voice Team supports students as research, advocacy, and policy partners to improve Kentucky schools. Our work centers the least heard students, as the student voice isn't meaningful when it's only an opportunity afforded to students who get certain grades and come from certain zip codes. We envision a Commonwealth where all school staff—be it cafeteria staff, counselors, or custodians—are equipped to support students. We envision a Commonwealth where legislators co-design policies with young people. We envision a Commonwealth where research is democratized, informing action for justice. We envision a more just and equitable world.

² See <https://www.kystudentvoiceteam.org/coping-with-covid> for more on information on study dissemination efforts.

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Appendix A

Phase 1 Survey Questions Used in the Study

Question	Response Options
1. Since school closed for COVID-19, in general, how often are all your teachers communicating with you?	<ul style="list-style-type: none"> • <i>Not at all</i> • <i>Less than 1 time a week</i> • <i>2 to 4 times a week</i> • <i>5 times a week</i> • <i>More than 5 times a week</i>
2. Since school closed for COVID-19, in general, how often are your classes meeting in real time with teachers (i.e. on a video call)?	<ul style="list-style-type: none"> • <i>Not at all</i> • <i>Less than 1 time a week</i> • <i>2 to 4 times a week</i> • <i>5 times a week</i> • <i>More than 5 times a week</i>
3. Before school closed for COVID-19, I felt: <ol style="list-style-type: none"> a. My schoolwork was meaningful b. Motivated to learn c. My schoolwork was manageable d. Engaged in the classroom e. I had a distraction-free place to do homework f. I understood what I learned in class g. Confident about my future (college, job, etc.) 	<ul style="list-style-type: none"> • <i>Never</i> • <i>Some of the time</i> • <i>Most of the time</i> • <i>All of the time</i>
4. Since school closed for COVID-19, I felt: <ol style="list-style-type: none"> a. My schoolwork was meaningful b. Motivated to learn c. My schoolwork was manageable d. Engaged in the classroom e. I had a distraction-free place to do homework f. I understood what I learned in class g. Confident about my future (college, job, etc.) 	<ul style="list-style-type: none"> • <i>Never</i> • <i>Some of the time</i> • <i>Most of the time</i> • <i>All of the time</i>
5. Since school closed for COVID-19, how much time are you spending on schoolwork during a typical weekday?	<ul style="list-style-type: none"> • <i>Less than 1 hour</i> • <i>1 to 3 hours</i> • <i>3 to 5 hours</i> • <i>5 to 7 hours</i> • <i>7 hours or more</i>
6. Please describe your home learning environment. I have access to: <ol style="list-style-type: none"> a. Reliable internet (WiFi) b. Reliable cell phone data service (4G/LTE) c. A desktop, laptop, tablet, or notebook computer d. A smartphone e. Textbooks & school supplies 	<ul style="list-style-type: none"> • <i>Never</i> • <i>Some of the Time</i> • <i>Most of the Time</i> • <i>All of the Time</i>
7. Do you have to share your desktop, laptop, tablet, or notebook computer with a sibling or other family member?	<ul style="list-style-type: none"> • <i>No</i> • <i>Yes</i> • <i>I do not have a device</i>

<p>8. Compared to the time before school closed for COVID-19, I am now:</p> <ol style="list-style-type: none"> Physically safe in my living conditions Emotionally safe in my living conditions Worried about having enough food to eat each day Worried about my family having enough money to live on 	<ul style="list-style-type: none"> • <i>Less than before</i> • <i>About the same</i> • <i>More than before</i>
<p>9. Compared to the time before school closed for COVID-19, I now feel:</p> <ol style="list-style-type: none"> Unmotivated Stressed Worthless Depressed Anxious Grateful 	<ul style="list-style-type: none"> • <i>Less than before</i> • <i>About the same</i> • <i>More than before</i>
<p>10. Before school closed for COVID-19, did you use any mental health services?</p> <p>11. Since school closed for COVID-19, did you use any mental health services?</p>	<ul style="list-style-type: none"> • <i>Yes, through my school.</i> • <i>Yes, but not through my school.</i> • <i>No, but I wished I could get some mental health support.</i> • <i>No, I did not want or need mental health support.</i> • <i>I prefer not to say.</i>
<p>12. What could your teachers be doing to better support your learning?</p>	<p><i>Open</i></p>
<p>13. In what ways has COVID-19 changed your plans after high school?</p>	<p><i>Open</i></p>
<p>14. What is the primary challenge you are facing right now?</p>	<p><i>Open</i></p>

Appendix B

Table B1. Phase 1 inductive coding scheme and response frequencies for open-ended question 1: "What could your teachers be doing right now to better support your learning?" (n = 7,063)

Codes	Definitions and Examples	Frequency
No change	Expresses no suggestion for improvement. (e.g., "I don't know," "Nothing")	1,689
Delivery of Lessons	Expresses a desire for synchronous & organized lessons (e.g., live video calls & lessons, lectures, class meetings)	1,273
Teaching	Focuses on teaching skill. Includes desire for better explanations or remarks about teaching competence, effort, feedback, help, varied instruction, one-on-one collaboration, etc.	1,120
Communication	Expresses a desire for improved student-teacher communication (e.g., timeliness, meaningful interaction with students, feedback)	1,032
Workload: Less Work	Expresses a desire for less work than what is being given.	682
Workload: More Meaningful	Expresses a desire for more meaningful work than what is being given (e.g., challenging assignments, no "busy work")	572
Care	Expresses a desire for more emotional support (e.g., empathy and understanding, personal touch, frequent check-ins)	440
Organization	Expresses a desire for teachers to assign work and structure classes in a more organized manner (e.g., using a singular learning platform, maintaining structure in curricula)	357
Flexibility	Expresses a desire for leniency and flexibility in course work and outside of school (e.g., turning in assignments past due date, balancing stressors outside of the classroom)	153
Digital Resources	Expresses a desire for additional online and digital resources (e.g., YouTube videos, online quizzes)	133
Other	Response does not fit other categories (e.g., "go slower," "extra credit")	128
Resources: General	Expresses a general desire for additional resources to help with learning (e.g., notes, examples). Does not specify modality.	122
Back to School	Expresses a desire to revert to in-person learning rather than see changes in their remote learning environment.	111
Engagement	Expresses a desire for more engaging/interactive learning (e.g., collaborative projects, built-in time for discussion)	102
Workload: Easier	Expresses a desire for easier work than what is being given.	89
Motivation	Mentions a need for motivational support (e.g., encouragement, flexibility, incentives to continue day-to-day assignments)	83
Personal	Describes personal struggle or situations with personal/home life that they wish teachers understood	61
Materials/Supplies	Expresses a desire for tangible material resources to improve understanding of content (e.g., textbooks, handouts, packets, hands-on materials, school supplies)	57
Coordination	Mentions wanting better coordination among school personnel to streamline delivery, communication, learning platforms to students.	32

Availability	Expresses a desire for out-of-school time for teachers to connect individually with students (e.g., office hours)	16
Nonsensical/ Inappropriate	Response does not make sense in context of the question.	38

Note. Word count ranged from 1 to 266 ($M = 12.6$; $SD = 14.9$)

Table B2. Phase 1 inductive coding scheme and response frequencies for open-ended question 2: "In what ways has COVID-19 changed your plans after high school?" (n = 7,067)

Codes	Definitions and Examples	Frequency
Postsecondary	Mentions plans relating to postsecondary education (e.g., location of potential institution, mode of education, ability to attain desired postsecondary education)	1,283
Employment	Mentions present or future employment, career paths, working environments, and education necessary to achieve desired future plans	517
Mindset	Refers to some shift in mindset relating to future plans, not necessarily concrete shifts in plans made; often included sentiments of "working harder" or "what's the point"	507
Education	Mentions K-12 education, especially how current education impacted other fields of life. Did not include mentions of postsecondary education.	412
Other	Response does not fit into other categories.	316
Online	Mentions online education in relation to current, future, or postsecondary education. Positive or negative evaluation of online education's current or potential usage.	290
Extracurricular	Mentions changes in extracurricular activities (e.g., sports, volunteering, summer programs) that were necessary to consider in future plans. Response might mention how inability to be involved in extracurriculars would impact ability to gain quality postsecondary education or post-graduation employment.	133
Finance	Notes change in financing or economic status due to COVID-19, especially in relation to what kind of future financial status is now desired or what current boundaries now exist/have been removed in achieving desired future plans	121
Cancellation	Mentions a cancellation in future plans or in some current plan that will impact their ability to achieve desired future plans; often used with Extracurricular code	106
Testing	Notes a change in taking tests (either in school or out) that are related to future plans; usually involves a predicted negative change in future performance on tests	91
Graduation	Mentions graduation. Often used in conjunction with Cancellation code.	67
Delay	Mentions some kind of delay in future plans or delay in current work necessary to achieving desired future plans	54
Nonsensical/ Inappropriate	Response is inappropriate or does not make sense in context of question	54

Note. Word count ranged from 1 to 139 ($M = 9.8$; $SD = 11.9$).

Table B3. Phase 1 inductive coding scheme and response frequencies for open-ended question 3: "What is the primary challenge that you are facing right now?" (n = 6,246)

Codes	Definitions and Examples	Frequency
Motivation & Self-Regulation	Uses terms related to motivation or self-regulation (e.g., lazy, laziness, drive, getting myself to do something, procrastination, focus, routine, time management)	1,220
Social Loss	Refers to social loss or isolation (e.g., loneliness, missing others)	994
Education	Refers to some aspect of education or schooling (e.g., testing, grades, teachers, workload, graduation requirements, understanding material, frustration with busy work)	934
Mental Health	Refers to negative emotions (e.g., anxiety, depression, stress, overwhelm, eating disorder)	810
No Challenge	Says that there is no challenge (e.g., they're fine, nothing is happening)	724
Boredom	Refers to boredom, not having anything to do, staying busy, difficulty finding things to do	387
Physical Health	Mentions a physical health challenge (e.g., not enough sleep, weight concerns, exercise, staying healthy, COVID)	302
Opportunity Loss	Relates to missing out on opportunities (e.g., missing out on graduation, sports season, prom)	300
Family	Refers to challenges relating to family members or family relationships. This code is <i>not</i> used for wanting to see/interact with people, missing others, etc.	245
Uncertainty	Relates to vague uncertainty, not knowing what's coming next, unsure about future (as a whole), etc.	220
Basic Resources and Access	Relates to financial difficulties (e.g., paying bills, saving for college, buying supplies, employment), food insecurity, access to technology and wifi, housing	193
Feeling Stuck or Confined	Relates to feeling confined at home, or in life; feeling of confinement not just related to one particular space or place; wanting to leave, etc.	193
Postsecondary	Relates to struggles with postsecondary education (e.g., deciding where to go, college applications)	174
Juggling Responsibilities	Notes multiple obligations (e.g., school workload & home/job), insufficient time	171
Other	Responses that do not fit into another category but reflect a valid and well-defined challenge	120
Change	Relates to change as a result of the pandemic (wearing masks, social distancing, staying at home)	101
Self-Perception	Expresses some type of self-evaluation (confidence, self-worth, self-identification, identity, meaning of one's life or work)	96
Relationships	Refers to challenges with relationships with non-family members. This code is <i>not</i> used for wanting to see/ interact with people, missing others, etc.	73
Home Environment	Relates to concerns of home environment (living conditions not ideal). Separate from Feeling Stuck or Confined.	35

"I Don't Know"	Responses are some variation of the phrase "I don't know"	90
Unspecified	Particular challenge is unclear (e.g., "Myself," "Sports," "Pandemic," "Prefer not to say," "None of your business")	68
Inappropriate/ Nonsensical	Responses that were inappropriate	28

Note. Word count ranged from 1 to 234 ($M = 10.2$; $SD = 13.6$).

Appendix C

Phase 2 Peer-to-Peer Interview Protocol

1. Before schools closed for COVID-19, what was going well for you? What wasn't?
2. After schools closed, how would you describe the life changes you experienced? What stayed the same?
3. When you think about these changes, which ones were the most difficult to face? Why?
4. What motivates you in relation to school? Has your motivation changed due to COVID-19?
5. Can you tell me more about what you think of as success in school? (Give an example of success in school.)
6. In what ways did you feel supported or unsupported to learn before the pandemic?
7. What makes you feel supported? What doesn't?
8. When the pandemic began, how did your support systems shift?
9. What, if anything, do you prefer about learning at school? (e.g., What are the advantages of learning from school?)
10. What if anything do you prefer about learning at home? If you had to choose one, which would you choose and why?
11. What parts of virtual learning would you like to see continue when school resumes in person?
12. In what ways does your situation at home influence how you answered these questions about learning at school vs learning at home?
13. How have your in-school relationships changed as a result of the transition to remote learning? (This could include with teachers, peers, coaches or other people you interacted with at school).
14. What do you wish your teachers and administrators knew about your experiences and responsibilities right now? These can be academic, social, personal, or both.
15. What changes do you believe need to be made to help you and your friends if schools continue online? What about if they continue in-person?
16. What are important aspects of your identity? How have these impacted your COVID-19 education experience? (Let the student lead on answering about identity but then maybe pursue some of: race, class, gender; place, role - athlete, performer, nerd..., intro/extrovert - emotional side of things; location in family)
17. In what ways has the COVID-19 pandemic influenced your future plans?
18. What support do you need for your future plans (postsecondary transitions, work...)?
19. Is there anything I didn't ask that you think I should know (related to learning during the pandemic)?

Appendix D

Phase 2 Inductive Coding Scheme and Response Frequencies

Parent Code Child Code	Frequency
Environment	
Classroom	260
Home	113
Extracurricular	55
Employment	21
Finances	
Career	19
Basic Needs	13
Future Plans	
Postsecondary	56
Uncertainty	25
Other	7
Attitudes	
Motivation/Self-Regulation/Effort	189
Manageability	166
Flexibility	142
Meaningfulness	113
Belonging/Identity	99
Toward Educational Policy	94
Empathy	83
Relationships & Communication	
Teacher	177
Peer	125
Family	90
Technology	60
Wellness	
Social	175
Mental/Emotional	97
Physical	24