



MenloEDU White Paper:

Challenges, Strategies and Resources for Conducting Educational Research in 2020-21

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Research Resources

We have put together a collection of some of the articles and databases that informed our thinking and that may be helpful to fellow researchers. Please browse our list of resources at <https://www.menloedu.org/remote-research-resources>

Introduction / Overview

Since early 2020, researchers' ability to conduct classroom-based educational research has been drastically reduced (and sometimes completely halted) due to the COVID-19 pandemic. The pandemic has also impacted the ability of researchers to collaborate with practitioners, teachers, and parents. In traditional classroom research, researchers work alongside administrators, teachers, parents, and students to gather and interpret information, build knowledge, and advance educational policy and practice. However, with COVID-19, districts and schools have physically closed, resorting to online interactions and activities. This shift in the educational paradigm must also catalyze a shift in how researchers view, prioritize, and conduct research with our partners. Researchers must change how we recruit participants, with whom we collaborate most closely, how we collect and store data, and how research is prioritized in the eyes of parents, schools, and other stakeholders. This primer aims to provide high-level guidance on how to best adapt research designs, partner collaboration, participant recruitment, and data collection to allow researchers to continue conducting high-quality educational research, even in the current environment.

A companion piece (in preparation) will offer a discussion about the influence of our current circumstances on the substance of our work as education researchers. To what extent do our current circumstances necessitate rethinking about the very questions we ask and the information that we aim to gather? As education researchers, we often concern ourselves with broad constructs like learning, cognition, engagement, perseverance, identity, equity, and others. Does our current environment influence our understanding of any of these constructs? Does our current environment influence how we can or cannot measure and observe these constructs—or what constitutes valid and reliable evidence? The companion piece will dive more deeply into considerations about the content of our research, while this piece focuses primarily on research methods.

Changing climate

Classrooms in most states were closed starting in mid-March of 2020, and many districts are implementing remote learning plans some or all of the fall and winter. Following abrupt closures, teachers, parents, and students had to adjust quickly to online classrooms. Now, schools and districts are working out how to best implement high-quality curricula online, in hybrid models, and/or with the new social distancing constraints that will persist throughout the 2020-21 school year.

The current climate requires that researchers adapt their plans to new circumstances and remain flexible to accommodate ongoing changes. Even when classrooms reopen for in-person instruction, some schools may have policies that restrict outside visitors and administrators may be less likely to allow researchers access as before. The cancellation of state and district standardized tests in the spring of 2019-2020 disrupted how the education community traditionally tracks student outcomes, presenting both challenges and opportunities for measuring student achievement. Moreover, throughout the 2020-21 school year, schools and districts are facing intermittent closures. Many districts are transitioning between virtual and in-person learning according to the prevalence of the disease within the community. Research plans need to be similarly flexible and able to adapt to unexpected changes throughout the school year.

The recent school closures may also shift research priorities for some schools, districts, and organizations. Schools are likely prioritizing novel questions such as how to make up for the learning loss from last school year, how to effectively integrate more virtual learning resources into instruction, how to attend to students' SEL needs, and how to maintain high academic standards and personal interactions while managing social distancing measures. Many schools and districts are also focused on ensuring that kids and families have access to the myriad other services that they rely on from schools, most especially regular, healthy meals.

With many schools operating remotely or with hybrid models, and some parents selecting alternatives to traditional schools, equity is also becoming a growing concern for educators and families. While some districts committed to providing computers and internet access to their students following the school closures in spring 2019, the digital divide is only one challenge that many families face. For those who depend on schools for childcare, remote instruction places a financial and logistical burden on parents and caregivers who are unable to work while children are home. Some families are addressing this challenge by hiring private tutors or connecting with other families in small learning pods or pandemic pods, but this expensive option is not available to all families. Furthermore, if families unenroll their students from public districts, schools could lose funding based on enrollment. As state and district plans for the fall shift rapidly, the short- and long-term impacts on equity in education should be a priority for education leaders and researchers.

Rethinking our research methods

Researchers will need to consider all facets of these new circumstances and make adaptations to our research designs and data collection plans accordingly, without sacrificing the reliability or validity of the

evidence we collect. Some traditional metrics may no longer be available (e.g., standardized test scores); and some data collection approaches may no longer be feasible (e.g., in-person observations). Because of compounding new priorities, teachers and schools may not have the capacity to work alongside researchers as much as they did in the past. Researchers will need to forge new collaborations and make their work even more invisible and less burdensome than before. At the same time, educational research is as crucial as ever for ensuring that each and every student continues to receive a high-quality education and the supports they need to reach their full potential. Gratefully, the research will not stop, but the methods and avenues we use must adapt to meet the challenges of the times.

Recruiting research participants

As learning activities move online or into hybrid models, our recruitment strategies also need to evolve. Some traditional recruitment methods—calling schools and districts, sending letters and emails—may still be appropriate. However, since students may be configured differently, and since in-person recruitment activity has been curtailed, we will need new strategies as well. This section describes some ideas for recruiting participants in novel ways that align with COVID practices and protocols. When recruiting or engaging with research participants online, through social media or a recruitment site, researchers must attend to IRB requirements and best practices provided by their institutions.

Crowdsourcing participants

One avenue for obtaining participants in educational studies is through crowdsourcing and social media. This approach allows researchers to recruit from a large population without having to work through schools and administrators. Crowdsourcing will work well for studies that need to recruit a particular population (e.g., teachers, students, parents, etc.). Through crowdsourcing, researchers can even specify that they are looking for teachers of particular grade-levels or subjects, or students from a particular region of the country, etc. In contrast, research that focuses on programs or policies within a particular district or school may not be conducive to crowdsourcing because obtaining enough participants from a particular study site may be difficult. Similarly, crowdsourcing may not be the best way to recruit participants for randomized control trials and other research designs that require assigning participants to different groups, because the researcher will have very little control over what those participants do throughout the duration of the study. As always, researchers will have to think through incentives, targeted media versus word of mouth, and ways to check the quality of what they collect when recruiting through crowdsourcing. However, for those who can tap into this resource, it could prove fruitful for certain large scale data collection endeavors.

In addition to social media sites, a number of online recruitment services exist to help researchers connect with participants. Children Helping Science is one example of a website that enables researchers to share online research opportunities specifically with school-age children and their parents. For studies that do not require a school-specific environment, researchers might consider submitting their studies to Children Helping Science as one recruitment method. The site lists detailed requirements for submissions, including an ethics approval (e.g., IRB number) and groups studies by target age group of participants.

Leveraging community-based organizations

Researchers can also reach out to community-based organizations or non-profits to form new partnerships as a means to recruit students when school-based recruitment is not an option. Organizations such as the YMCA, Boys and Girls clubs of America, and others could provide avenues to stay connected with students and youth without burdening teachers and while being able to reach a cohort (and not individual students). These partnerships may require incentives for both the organization and the participants, and of course, researchers and their partners will need to consider IRB requirements as well.

Direct outreach to potential participants

As many schools and districts delay in-person learning, researchers may also consider reaching out to families and students who seek and set up alternative learning environments, like learning pods. Social media groups focusing on learning pods and sites helping to match tutors with families could be helpful resources for research recruitment.

Collecting educational data

Perhaps the most concrete change to educational research will be the strategies and methods that we use to gather data. With many schools operating remotely or with hybrid models, many standard data collection procedures are no longer feasible. This section describes ideas, strategies, and considerations for gathering educational data in the current circumstances.

Conducting virtual observations

Whether educational activities (school, professional development, etc.) are happening remotely or in-person, researchers may need to conduct their observations virtually. These virtual observations present some logistical challenges, but they also present opportunities and perhaps even some benefits for research. When researchers are present in the classroom, as for traditional in-person observations, they inevitably disrupt and influence the activity to some degree. Certainly, researchers should never conduct an observation without ensuring that the participants are aware that the observation is taking place.

Nonetheless, virtual observations allow the researcher to become invisible much more easily. This invisibility can help the researcher to minimize disruptions and decrease the likelihood that they may be influencing the observed activities.

Virtual observations of in-person learning

Some schools have students attending in-person, but they may not allow additional visitors, such as researchers, to enter the building. In these cases, researchers need to find ways to remotely observe in-person activities. Schools themselves may be using similar approaches to conduct their own observations for teacher training and evaluation purposes. Researchers could potentially leverage these same videos for their research, in lieu of conducting in-person observations. Researchers could view these videos either synchronously or asynchronously (or both) to capture and record the data they need.

A few different options exist for how to capture these videos of in-person teaching. Companies like Swivl and Edthena offer products and services that enable schools to record classroom videos to support coaching and professional development. The Swivl units include both a movable camera stand and also several microphones that can be placed around the classroom in order to capture student discourse in addition to teacher talk. Most teachers will have a laptop that they could use for recording their lessons. Indeed, if they are set-up for remote teaching, they can most likely record in-person lessons using that same technology. Most teachers also have a phone that could record their lessons—although some teachers may not want to record their lessons on a personal device; and video quality may also be an issue. Depending on the availability of recording technology, researchers will need to consider what data can feasibly be captured and how to support teachers in setting up the recordings.

Virtual observations of online sessions

Many districts and schools are holding online classes and professional development workshops, presenting additional opportunities for virtual observations. Here, too, researchers could view these sessions synchronously or asynchronously. To join synchronously, researchers should become familiar with the platform used by the school (such as Zoom, Microsoft Teams, or Google Classroom) so that they can observe and/or participate without disrupting the session. To view the sessions asynchronously, researchers should work with the session leaders to determine how best to obtain the video recordings. Many virtual sessions are already being recorded for participants to view after the fact, if they could not attend at the scheduled time or if they need to review certain content. Researchers could view these recordings for data collection purposes, without requiring too much additional effort on the part of the session leaders. If sessions are not already being recorded for other purposes, researchers would need to

work with session leaders and any other appropriate personnel to establish the necessary approvals for recording video of the session.

Protecting participants during virtual observations

Regardless of whether the session itself occurs in-person or online, researchers collecting data through video recordings will need to obtain proper IRB approvals and take all of the necessary steps to protect participants. Ultimately, researchers will need to defer to the privacy policies within the school or district where they are working. However, researchers should make sure to consider certain key factors, no matter what the district or school may require. In particular, participants should always be notified both when sessions are being recorded and also when those video recordings are being used for research purposes. These two goals—recording video for participants to (re)view later and recording video for data collection activities—are not the same and should not be treated as equivalent. Teachers' comfort with having their lessons recorded will vary based on their school culture and their familiarity with the process. For their part, parents may or may not be comfortable having their children recorded during class. While schools and districts may be able to mandate that classes are recorded for educational purposes, parents have a say in whether or not their children are involved in any research.

Pulling student work from learning management systems

As schools and districts adapt their practices to accommodate changing circumstances, they may also increase their use of learning management systems. Some student assignments and formative assessments formerly submitted on paper may now be submitted through an LMS. Researchers could make use of these artifacts for research. For example, some researchers may be interested in examining the tasks that teachers are asking students to do, with the goal of understanding aspects of teaching. Researchers may also be interested in analyzing the student work products, to understand what activities students did and the kinds of learning demonstrated in that work. Certainly, researchers may also be interested in understanding both formative and summative information about student learning. All of these goals could be addressed through an examination of teacher assignments, student work products, and/or student assessments. Traditionally, gathering this kind of information has been enormously laborious, both for researchers managing the activity and for the teachers who must select, curate, and submit examples of student work. To the extent that these artifacts are now available online as part of the instructional routine itself, researchers should be able to make use of these data sources with much less burden to educators.

Conducting virtual interviews and focus groups

As schools conduct more and more activities online, researchers may be able to conduct virtual interviews and focus groups. Student interviews that would otherwise happen in person could potentially occur

virtually and as part of the online class time. This approach would require researchers and teachers to coordinate (similar to in-person coordination) and would require researchers to set up distinct video “rooms” for these interviews / focus groups. One consideration is that while a 1:1 interview with students or even a small group discussion may be viable in this new medium, a large group or focus group may not prove to be quite as welcoming for virtual rooms. However, many virtual rooms have tools and features that allow students to indicate they want to add to the discussion (e.g., hand raised). When setting up virtual meetings with students, researchers should first confirm that their choice of platform is approved by the school.

Administering surveys

Educational researchers have been using online survey tools to conduct survey research for many years now, especially for teacher, leader and administrator surveys, but also for student surveys. Now more than ever it may be convenient, or even necessary, to conduct all surveys online. For online the surveys, researchers, school administrators, or teachers can be the ones to administer and manage the survey data collection. As always, incentives, reminders, and follow-up emails can support stronger response-rates. Many survey software programs offer free or limited featured versions of their products. Researchers can use those or see what their institution already supplies.

Asynchronous remote research opportunities

If opportunities for school-specific research are limited, then researchers could also adopt strategies used with Asynchronous Remote Communities to connect with K-12 stakeholders (parents, teachers, students, etc.) virtually through social media or other online platforms. Recruitment in these mediums may allow for a more diverse sample population and provide a rolling sampling. That is, researchers may have more freedom on when and how they collect information through these mediums compared to a traditional classroom.

Engaging participants as partners in research

Participatory action research (PAR) and youth participatory action research (YPAR) are research methods that build on a collaboration between researchers and participants, whether practitioners or youth. Ideally, the participant-researchers are active in all parts of the research, from identifying pressing questions to designing the study and the data collection protocols to analyzing evidence and interpreting findings. PAR has many benefits for research, largely derived from the fact that the participant-researchers tend to have deep connections to and in-depth knowledge of their own communities. These connections help to ensure that the research is addressing genuine questions of concern to the community; they support

greater authenticity of the data that are gathered; and lend important context for understanding and interpreting results. Beyond these traditional benefits of PAR, in today’s world, a participatory approach could lend the added benefit of providing a mechanism for in-person data collection, even when outside researchers are not permitted to be present. With remote conferencing technology, researchers and participants have the opportunity to collaborate throughout the research process, and together could make sure that the participant-researchers have the knowledge and tools they need to gather valid and reliable data from the community. For example, high-school students could potentially interview their peers to collect information for a targeted questionnaire, or even organize small focus groups with other students. These kinds of partnerships between researchers and participants have the potential to overcome some of the hurdles introduced by our current circumstances.

Conclusions

This paper aims to support the continuation of high-quality educational research throughout the COVID-19 pandemic and beyond. The pandemic has had an enormous impact on all aspects of our society, not least education. As researchers in this field, we understand the grave importance of continuing to investigate crucial questions about how best to support learning and educational opportunity for all students. To support this work, we have offered some key considerations for conducting research within our current circumstances and suggestions for how best to recruit participants, collaborate with partners, and gather educational data. Some of these strategies provide alternatives for methods that are no longer feasible; others present opportunities to advance methods that may be uniquely suited to our current environment. We hope this paper provides both concrete solutions and the start of an ongoing discussion about innovative and productive educational research methods. We know that we cannot simply place these educational inquiries on hold until “normal” life resumes—education, and the research behind it, are too crucial to let that happen.

Research Resources

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