K-12 Online Classrooms: Emergency Management Planning for All Settings

READINESS AND EMERGENCY MANAGEMENT FOR SCHOOLS TECHNICAL ASSISTANCE CENTER

When in-person learning in a physical classroom is impractical or unsafe, schools and school districts may pivot to providing teaching and learning in an online format, referred to as "remote" learning. Some schools and programs leverage online classrooms throughout the school year to provide teaching and learning services in an online-only format. For K-12 schools that normally offer in-person instruction, online classrooms can support the continued operation of schools during and after emergency incidents that disrupt in-person learning.

As online classrooms become more common, schools and school districts should consider how use of them might impact school safety, security, emergency management, and preparedness planning and how online classrooms may be affected by various hazards and threats. As outlined in the *Guide for Developing High-Quality School Emergency Operations Plans* (*School Guide*) and *The Role of Districts in Developing High-Quality School Emergency Operations Plans* (*District Guide*), multidisciplinary planning teams — composed of school personnel, school district personnel, and community partners — can develop a comprehensive school EOP that is customized for the school community and considers all settings and all

In late May 2020, almost 93 percent of surveyed households in the United States reported that their students had engaged in "distance learning" as a result of the coronavirus disease 2019 (COVID-19) pandemic, which included both online and paper resources.[4]

Remote learning "means programming where at least part of the learning occurs away from the physical building in a manner that addresses a learner's education needs. Remote learning may include online, hybrid/blended learning, or non-technology-based learning (e.g., lab kits, project supplies, paper packets)."[3]

times, including the online setting during and outside of school hours.

This fact sheet provides emergency management planning considerations for online classrooms from an all settings, all times perspective, which includes schools and programs that are fully online; it also highlights the importance of considering online classrooms in EOP annexes, such as the Continuity of Operations (COOP) Annex and the Cyber Annex.

Online Classrooms and All Settings, All Times

School EOPs should account for a variety of threats and hazards that may occur while the school community is operating in a remote setting; this is relevant to schools that normally operate in person and to schools that fully operate in an online environment. Developing a comprehensive EOP is supported by planning principles outlined in the *School Guide* and the *District Guide*, including planning for all settings and all times. Emergencies are unpredictable; they can

occur during or after school hours, and they can occur on or off campus. Many types of threats and hazards, including biological hazards (e.g., infectious disease outbreak), natural hazards (e.g., hurricane/typhoon, wildfire, winter precipitation), technological hazards (e.g., hazardous materials), and adversarial and human-caused threats (e.g., arson, criminal threats or actions), may cause schools and school districts to pivot to online classrooms.

When students participate in a remote environment, they will be learning in an off-campus and online setting; thus, planning for before, during, and after an emergency event may require different considerations than if an event were to occur on campus. Moreover, learning in a remote environment presents different challenges for the whole school community, such as malicious activity with ransomware attacks. For example, malicious cyber actors can interrupt synchronous online classroom settings by gaining access to online meeting spaces and harassing students. When students are learning remotely, it is important that schools and school districts can still prevent, protect against, mitigate the effects of, respond to, and recover from a variety of threats and hazards that may occur.

Considerations

The following considerations are intended to support core planning teams in the development of a comprehensive EOP that incorporates online classrooms with an all settings, all times approach:

- When developing or reviewing annexes, consider how remote learning might impact goals, objectives, and courses of action when students are not physically located on campus. For example, who will and how will they respond to a community-wide power outage that occurs while the whole school community is learning online?

- Regularly review, revise, and update your Communications and Warnings Annex to ensure that there are plans in place to communicate with the whole school community in an online environment, including hard-to-reach families and families with access and functional needs. Communicating and coordinating with the students, families, teachers, and staff can become more challenging when the school community is learning remotely, and some students and families may be harder to reach.

- Identify an information technology (IT) specialist who can serve as a member of the core planning team to support EOP development. School or district IT specialists are key school safety partners who can support safety planning teams in preparing for remote learning and in identifying and evaluating potential cyber threats that may pose an increased risk in an online environment.

Online Classrooms and Continuity of Operations Planning

Online classrooms allow schools and school districts to continue providing key services when an emergency event disrupts the school or the wider community. For this reason, online classrooms should be included in a COOP Annex, which provides goals, objectives, and courses of action for continuing the provision of essential services during and after an emergency. Depending on the type of threat or hazard, schools may experience short- or long-term student and staff absences, school dismissals, or school closures that require pivoting to remote learning options. For example, during periods of severe weather, schools may pivot to remote learning for a few hours or a few days; during a pandemic or following major structural damage to a school building after an earthquake or flood, remote learning can help schools continue serving the whole school community for weeks or months.

Although online classrooms can support planning for the continuity of teaching and learning, schools and school districts should also consider how an online setting might pose new challenges for the continuing provision of other essential services that typically take place in the school building, including business services, mental/behavioral health services, and feeding and food distribution.

It is also critical to determine whether the whole school community can access online resources and remote learning services, including individuals with access and functional needs who may need additional support to continue engaging in teaching and learning activities in an online classroom. For example, remote learning may pose additional challenges for English language learners and students with disabilities, such as language barriers and complications to the delivery of special education services.[1] Closing the digital divide and ensuring equity of access to technology is a focus for the U.S. Department of Education, Office of Educational Technology (OET). OET has also developed a *School Leader Digital Learning Guide, Teacher Digital Learning Guide,* and *Parent and Family Digital Learning Guide* to support community members with transitioning to remote learning.

Considerations

The following considerations are intended to support core planning teams in the development of a COOP Annex that incorporates online classrooms:

- Determine whether all students, faculty, and staff have access to the necessary technology and infrastructure, including wireless networks, needed to shift to a remote environment to continue

receiving and providing essential services. This brief offers strategies for and examples of districts deploying off-campus wireless networks to help connect all students.

- Support the well-being of all students in an online environment. Following an emergency, some students and families may experience hardship or displacement; other members of the school community may experience increased levels of burnout and stress. This TA Snapshot provides quick links to learning opportunities and resources on resilience and well-being during remote learning.

- Plan for potential disruptions to remote learning, such as a cyber attack, a cyberbullying incident, or a power outage, that may occur while the whole school community is learning online. COOP planning should also address potential disruptions to teaching and learning in online classrooms.

- Consider how the school or school district will continue feeding and food distribution services when students are learning online, as some members of the school community may rely on schools as a safe place and as a provider of hot meals.

- Offer teachers professional development to help them transition to and from an online classroom and the platforms that they may need to use. Strategies for continuing to provide a high-quality education in an online setting may include leveraging innovative technologies, adopting open educational resources, and piloting new emerging practices for remote environments, such as flipped instruction or using game elements as an intervention technique.

<table>
<tr><td>Navigating Cybersecurity and Cyber Safety in an Online Setting</td></tr>
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Cyber safety and cybersecurity are especially and equally important to schools operating in remote environments throughout and for portions of the school year. All members of the whole school community should be aware of online threats that can impact humans, networks, and systems in a school or district. Cybersecurity threats include data breaches, denial of service, spoofing/phishing, malware/scareware, spear phishing, ransomware, etc. Between 2016 and

2020, 99 reported data breaches impacted thousands of students in K-12 schools; many of these breaches involved student academic records and personally identifiable information.[2] Cyber safety threats include cyberbullying, inappropriate content, sexting, sextortion, online predation, oversharing, etc. In a remote environment, students, teachers, and staff will spend more time online, making it critical that the whole school community knows how to prevent these types of threats and to respond effectively if they should occur.

Students, parents, teachers, and staff share responsibility for cybersecurity and cyber safety, especially when students are engaging in remote learning. Building the capacity of students and staff on the topics of cybersecurity and cyber safety helps keep the whole school community safe in an online environment. Schools and school districts are encouraged to teach students what it means to be a responsive digital citizen as part of a broader strategy of promoting a positive school climate. School personnel can access data security best practices from the Privacy Technical Assistance Center. A comprehensive school EOP includes a Cyber Annex that includes goals, objectives, and courses of action for before, during, and after a cyber threat. Schools and school districts may also want to develop, review, or revise their Cyber Annex in coordination with community partners, including IT specialists, law enforcement, and emergency management professionals.

Considerations

The following considerations are intended to support core planning teams in the development of a Cyber Annex that incorporates online classrooms:

- Ensure that an IT specialist from your school and/or school district is a member of the core planning team. This specialist can contribute to the development or revision of the Cyber Annex and provide expertise on IT systems and networks.
- Encourage teachers and staff to follow cyber best practices. Training community members and building their capacity can help prevent cybersecurity threats. A Cyber Annex can include in-school training opportunities for the whole school community, including parents and school personnel, on cyber best practices.

- Plan for cyber threats that may be unique to online classrooms; for example, plan what to do if an inappropriate or traumatic event is shown on camera during an online class. As it can be difficult to prevent incidents, it is important to consider how the school will respond to and recover from them.
- Regularly update software, change passwords, and leverage approaches like multi-factor authentication. These simple strategies can help a school or school district prevent and mitigate a cyber threat.
- Engage students early in conversations about safe online activity inside and outside the classroom, including via digital citizenship programs. Creating an environment where students feel comfortable reporting a cyber threat to a school adult can help prevent, mitigate the effects of, and protect against cyber threats.

Resources

Further Reading – REMS TA Center

- Cyber Safety Considerations for K-12 Schools and School Districts, Fact Sheet
- Cybersecurity Considerations for K-12 Schools and School Districts, Fact Sheet
- Cyber Safety Quick Links for Protecting Youth: Empowering Students to Become Responsible Digital Citizens and Engage Online Safely, Publication
- Continuity of Operations (COOP) Planning for Education Agencies: Ensuring Continuity of Teaching and Learning During Prolonged Absences, Dismissals, and Closures, Publication

Training Opportunities – REMS TA Center

- Cybersecurity Considerations for K-12 Schools and School Districts, Online Course
- Understanding the Role of Information Technology Specialists in Supporting School Safety Before, During, and After an Emergency, Webinar
- School EOPs In-Depth: Developing a COOP Annex, Online Course
- Continuity of Operations Planning Module, Specialized Training Package

Further Reading – Online Teaching and Learning

- [Digital Equity Education Roundtables Initiative](#), Web page (U.S. Department of Education [ED], Office of Educational Technology [OET])
- [Home Access Playbook: Strategies for State Leaders Working to Bridge the Digital Divide for Students](#), Publication (ED, OET)
- [Keeping Students Connected and Learning: Strategies for Deploying School District Wireless Networks as a Sustainable Solution to Connect Students at Home](#), Publication (ED, OET)
- [National Education Technology Plan](#), Publication (ED, OET)
- [Building Technology Infrastructure for Learning](#), Publication (ED, OET)
- [School Leader Digital Learning Guide](#), Publication (ED, OET)
- [Teacher Digital Learning Guide](#), Publication (ED, OET)
- [Parent and Family Digital Learning Guide](#), Publication (ED, OET)

Further Reading – Cyber Threats

- [Data Breach Response Checklist](#), Publication (Privacy Technical Assistance Center [PTAC])
- [Data Security: K-12 and Higher Education](#), Web page (PTAC)
- [Stop Ransomware: K-12 Resources](#), Web page (U.S. Department of Homeland Security [DHS], Cybersecurity and Infrastructure Security Agency [CISA])
- [Cyber Threats to K-12 Remote Learning Education](#), Fact Sheet (DHS, CISA)
- [Secure Videoconferencing for Schools](#), Publications (DHS, CISA)
- [Data Breach Response Training Kit](#), Downloadable Materials (PTAC)

Further Reading – Cyber Safety and Digital Citizenship

- [NetSmartz](#), Website (National Center for Missing and Exploited Children)
- [Everything You Need to Teach Digital Citizenship](#), Web page (Common Sense Education)
- [Digital Promise](#), Website (Digital Promise)
- [K12 Security Information Exchange](#), Website (K12 Security Information Exchange)
- [Technology Safety: Online Privacy & Safety Tips](#), Web page (National Network to End Domestic Violence)

Endnotes

1 Administrative Priority and Definitions for Discretionary Grant Programs, 85 Fed. Reg. 86,545 (December 30, 2020). Retrieved August 29, 2022 from https://www.federalregister.gov/documents/2020/12/30/2020-28820/administrative-priority-and-definitions-for-discretionary-grant-programs.

2 McElrath, K. (2020, August 26). *Nearly 93% of Households With School-Age Children Report Some Form of Distance Learning During COVID-19.* U.S. Census Bureau. Retrieved August 29, 2022, from https://www.census.gov/library/stories/2020/08/schooling-during-the-covid-19-pandemic.html.

3 U.S. Government Accountability Office. (2020). *Distance Learning: Challenges Providing Services to K-12 English Learners and Students With Disabilities During COVID-19.* Retrieved August 29, 2022, from https://www.gao.gov/assets/gao-21-43.pdf.

4 U.S. Government Accountability Office. (2020). *Data Security: Recent K-12 Data Breaches Show That Students Are Vulnerable to Harm.* Retrieved August 29, 2022, from https://www.gao.gov/assets/gao-20-644.pdf.

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REMS
TECHNICAL ASSISTANCE CENTER

(855) 781-REMS (7367)

info@remstacenter.org

@remstacenter

https://rems.ed.gov