Hello Minnesota educators,
Here at CAREI we release our Research Watch e-newsletter with summaries of relevant research and resources to assist member districts in their educational practices. We are sending this edition out beyond our District Assembly membership to districts across the state in the hopes that the resources here may benefit your current transition.

At this point, it has been well-established that we have quite suddenly found ourselves in an unprecedented reality. We want to take this moment to express how much we appreciate the tremendous work that you all do to benefit students across the state. The calling of educators has always been an especially trying and noble pursuit; never has that been more on display than this moment.

This month, we have made immediate adjustments to Research Watch to support your transition to distance learning. There are certainly many resources at our disposal to take on distance learning, and yet there are also many questions out there regarding how we will use this medium to ensure that we are reaching all of our students. With that in mind, we are summarizing research and literature with the intention of addressing these needs.

Click here to access an audio/podcast version of this edition of Research Watch.

CAREI Member Portal Resource

Minnesota Student Survey Data Dashboard - 2019 Update
We have recently updated our Minnesota Student Survey Data Dashboard to include results from the 2019 administration of this assessment. Administered every three years to students across the state, the Minnesota Study Survey has been the most consistent source of data
about the health and well-being of Minnesota's students for the past 30 years. This dashboard is based on the work of Dr. Michael Rodriguez and the students within his Minnesota Youth Development Research Group as well as the Search Institute with contributions from Dr. Dale Blythe.

CAREI’s interactive data dashboard presents student survey results within three developmental skills based upon the Developmental Assets Framework of the Search Institute. Those categories are: developmental assets, developmental supports, and developmental challenges. Each developmental skill consists of a number of supportive skills. Through the use of the Minnesota Student Survey Data Dashboard, you can be proactive and equitable in effectively targeting the developmental needs of your students.

For additional information on how to access and navigate the MSS Data Dashboard, check out this brief video.

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**Educational Policy & Leadership**

**Preparing for a Pandemic Illness: Guidelines for School Administrators and Crisis Teams**

As local areas prepare for COVID-19 and the potential for a community-wide infectious disease outbreak, schools can work collaboratively with local and state health departments to limit the spread of disease and provide a safe learning environment. The National Association of School Psychologists (NASP) recently provided guidance on preparing for and responding to a pandemic based upon recommendations from the US Department of Education and NASP’s PREPaRE School Crisis Prevention and Intervention Training Curriculum.

It is recommended that schools have an emergency operation plan, or a crisis plan, to help them respond to emergencies that arise throughout the school year, such as the spread of infectious disease. This would include a communication plan that details how information will be disseminated. It is important to provide timely and accurate updates about the pandemic and ensure that staff, families, and students have information on how to remain healthy.

While we understand that schools are currently closed, this resource provides recommendations on how to operate in a preventative manner with the intention of limiting the spread of the illness and fostering healthy behaviors in adults and students once school buildings are open. This includes:

- Helping staff and students understand standard protective habits that can help reduce the potential of traumatic impact on people
- Encouraging students to practice everyday hygiene
- Wash hands multiple times a day for 20 seconds
- Cover mouth with tissue when they sneeze or cough
- Do not share food or drinks
- Practice giving elbow bumps instead of handshakes
- Providing information that will reduce student and parent anxiety
- Encouraging staff and students to eat a balanced diet, get adequate sleep, and exercise regularly, to help develop strong immune systems to help fight off illness
- Controlling access to school buildings
- Developing a plan for reasonably accumulating and distributing infection-control supplies
- Informing employees and visitors to avoid coming to school buildings if they have flu-like symptoms
- Assessing the adequacy of infection-control supplies and reviewing distribution plans
- Cleaning and changing air conditioning/heating filters

During uncertain times, it is also important for schools to protect students’ mental health. Let students know that adults are working to ensure their safety. Ensure that the information that is distributed is accurate and readily available. Communicate with parents about children who are demonstrating anxiety or stress in school with respect to fear of the illness. Remember that for younger students, their understanding of the danger is determined by the behavior of caregiving adults. With this in mind, NASP recommends that educators:
- Remain calm and reassuring
- Make yourself available
- Avoid excessive blaming
- Be honest and accurate.


*Click here to access a Distance Learning Communication Plan template

**Leadership Traits Among Effective Virtual School Leaders**

As schools prepare for increased virtual learning opportunities, there is a need for school administrators to effectively navigate the unique demands of this alternative method of
providing instruction. Fortunately, virtual learning is not a new phenomenon. In 2017, 34 states offered virtual education to nearly 1 million students, and that number has since increased. Leaders of virtual schools must inspire innovation, engagement, motivation, and initiative among their teachers. It is critical for them to build trust among teachers and to give them confidence in trying novel approaches.

The authors evaluated the judgments and opinions of teachers on what makes their virtual school leader effective. Results indicated that there were similarities of admired traits between both teacher and administrator groups, with both identifying effective leaders as being (a) broad-minded, (b) competent, (c) forward-looking, and (d) honest. In addition to these traits, the teacher group identified dependable and cooperative as essential, while the administrator group identified ambition and inspiring as priorities.

Given these results, the authors provided several recommendations:

1. Virtual school leaders should be active, engaged participants and modelers, who recognize that digital collaboration is possible.
2. Virtual school leaders should recognize that as technology continues to advance, it is possible for teachers to work together, no matter the space, time, or location.
3. It is critical for virtual school leaders to adjust to change and understand that adaptability is critical in leading education and training students for a new digital age.
4. Virtual school leaders should act as change agents, have a mission and purpose, use effective communication, build relationships and be technology proficient.

Available at: https://articlegateway.com/index.php/JLAE/article/view/2366

A Proposed Template for an Emergency Online School Professional Training Curriculum

Emergency online schools have been one reaction to the need for stability and support that children need when their typical schooling is compromised due to natural disasters or other emergency situations. This growing need is reflected by expansion in online learning and mental health support, which have grown in their breadth for K-12 schools, higher education, and the greater public.

The authors recommend a template for developing and sustaining these educational responses. They argue that the pursuit of emergency online schools “requires obtaining the knowledge necessary to understand the foundation on which emergency online schools stand and the resources required for emergency online school construction and
implementation.” Their critique focuses on a lack of training and considerations for developing this type of educational experience prior to an emergency occurring. The recommended steps to developing an effective emergency online school include:

1. Rationale and need for school services after disasters
2. Crisis preparation and response models
3. Online learning platforms and standards of practice
4. Online mental health platforms and standards of practice for children and adults
5. Use of mobile apps and social media during disasters
6. Emergency power sources and low-cost electronic devices
7. Supporting organizations

Each of these steps is accompanied by suggestions on time spent and additional resources for making decisions and plans.

The authors note that these steps may pose challenges such as faculty expertise, existing curriculum, availability of technology and other resources, and monetary resources needed to pursue such emergency responses. They highlight that these types of responses have been implemented and work in many industrialized nations like the United States, Canada, and Hong Kong, but that communities with few financial resources and access to technology may not be able to effectively implement these steps as proposed. Despite these challenges, the authors conclude that, although there are and will continue to be challenges to emergency online schools, that, “facilitating the emergence of emergency online schools… holds promise for not only expediently facilitating its growth, but also for evolving the paradigms of the approach through ongoing teaching, research, and service,” highlighting the importance both for the immediate resolution of educational access as well as the larger implications this type of training and planning can have on education on a larger scale.


**Virtual Leadership: Required Competencies for Effective Leaders**

Published in 2010, this article details specific competencies for being an effective leader within a virtual setting. The author asserts that the role of virtual leader differs from leadership in traditional settings due to some unique variables that can sometimes offer complications. Such differences are primarily centered around the lack of face-to-face interaction and the resulting effects on trust, predictability and reliability, and social relationships and experiences. In establishing teams within a virtual environment, it is
important for leadership to facilitate a process that results in the team’s ability to manage itself. This requires an initial focus on motivational factors like establishing common goals, attending to emotional experiences, and informing perceptions.

Given these variables, the author offers the following competencies in effective virtual leadership:

- **Communication**
  - Cultivating relationships is a crucial priority in leadership. This requires that leadership attend to the frequency and responsiveness of their communication; the provision of clear direction, goals, and objectives; an ability to listen and demonstrate an understanding of the input and perspective of others; modeling of social awareness; and competence in using technology as well as in instructing others on the use of such technology.

- **Personal attributes and trust building**
  - Key personal attributes include open-mindedness, flexibility, interest in and sensitivity toward other cultures, ability to deal with complexity, resilience, optimism, energy, and honesty. Demonstrating these attributes is crucial to establishing and maintaining trust among staff.

The author concludes that deliberate attention to these competencies is required for effective leadership. How these competencies practically apply to a virtual setting often differs from traditional settings. The ability to demonstrate such skills in the traditional settings does not automatically imply that they will translate to a virtual environment. Understanding this dynamic is ultimately essential for effective leadership.


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**Assessment**

**Assessment in a Blended Environment**

In this chapter from the 2016 book Blended learning in action: A practical guide toward sustainable change, the authors recommend a move beyond a dichotomy of assessment (i.e. summative and formative) to a more holistic idea of what assessment means in a blended learning environment. They define this idea as one that is frequent, personalized, and forming daily instructional adjustments on a student-by-student basis. With this foundation in mind, educators in the blended schooling environment should consider the following questions:
What drives student learning and engagement?
How can we personalize learning by aligning learning outcomes, instruction, and digital tools that will allow students to move at their own pace?
How can we use more frequent formative assessments to give us more precise illustrations of student progress?
How can we approach challenges of synthesizing multiple data sources, tracking assignments, and sharing with parents?

In particular, their focus on reading and responding to the “data narrative” focuses on how to best implement what educators can learn from data. Their suggestions are to: 1) maximize the Learning Management System (LMS; detailed below), 2) look beyond grades and data, and 3) make it personal.

The LMS refers to the technology platform used to deliver instruction such as Schoology and Google Classroom. These platforms can be used to provide a variety of data on student learning including polls, discussions, rubrics, assignments, comments, gradebooks, badges, and tests/quizzes. Educators can utilize the many functions available on these platforms to help provide data points that can support instructional choices in a blended learning environment. Relatedly, they can use project-based learning and discovery learning to provide flexibility, opportunities for collaboration, and compliments to assessment and data-driven activities. Blended learning also benefits when educators make learning personal. The authors recommend making space for choice to optimize each student’s learning experience and allow them to explore their passions. Ideally, this should be done through a variety of platforms and sources to better allow students to expand and apply their learning.

In pursuing blended learning, the authors recommend that we question how, when, and why teachers use data and to find ways to maximize the technology platforms, look beyond the limitations of existing data, and make learning personal.


**Promoting Formative Assessment in Online Teaching & Learning**

Ongoing, formative assessments are necessary to identify students’ needs and inform instruction. However, schools have often found it challenging to conduct such assessments and properly differentiate instruction within a distance learning format. This article from 2013 offers descriptions of formative assessment techniques as well as suggestions for developing assessments that can be used to improve online learning.
One of the formative assessment techniques that the authors discuss is through the use of online journaling. This strategy can be done with students individually or, if the online platform allows, within small groups. The effectiveness of this form of assessment is primarily determined by the structure of the prompt questions which should facilitate focus on the intended learning outcomes. The article offers several examples of online journaling which include:

- **Reflection paper**: This strategy provides students with an opportunity to reflect on discussion content and allows students to internalize the material. Teachers can use the students' responses to determine how the students are processing the material and make adjustments to instruction accordingly.

- **Minute paper**: The minute paper is a strategy that is designed to inform teachers and assist students in processing information through brief, frequent reflection. Previous researchers suggest two primary questions when using this strategy:
  - What is the most important thing you learned today?
  - What question(s) do you still have in mind?

- **Role play**: This strategy involves assigning students specific roles (e.g. facilitator, summarizer) that they will perform when engaging in discussion. Each role is accompanied by a set of guiding questions that assist students’ metacognitive processes while engaging with the content.

- **Hook questions**: Students are directed to develop questions that they can use to guide conversation around academic content. Students’ questions can be analyzed by the teacher to determine how they are processing the material and reveal potential misconceptions that can be addressed through differentiated instruction.

- **Questions wall**: This strategy requires providing students with a forum where they can post questions that arise during instruction. The forum is then used to inform the teacher of students’ questions and understanding and also promotes engagement within an online learning format.

Conducting formative assessment in distance learning requires special consideration for the design of the class overall. The authors suggest that teachers consider the frequency and duration of such assessments as well as how they will potentially be used within the grading policy for the class. Other suggestions include the use of scoring rubrics in analyzing students’ responses, the use of self- and peer-assessment to enhance engagement, and avoiding redundancy in the methods that are being used.

Teaching & Learning

Enhancing Online Distance Education in Small Rural US Schools: A Hybrid Learner-Centered Model

Online distance education (ODE) is commonly used to deliver remedial courses and advanced courses in rural areas where there is limited access to varied course options. Reviews of research on ODE indicate that there are typically no significant differences in learning outcomes, when comparing ODE to traditional face-to-face classes. However, online students frequently report feelings of isolation. Additionally, the attrition rates for ODE are notably higher than in traditional classrooms. It is also noted that advances in technology typically move faster than the ability of researchers to provide empirical and theory-based support for the efficacy of technology in learning.

Given these concerns, de la Varre et al. (2010) implemented a two-year randomized control trial of an online distance learning program delivered in US rural high schools. Their study implemented a learner-centered model that included frequent communication with online instructors as well as school staff and parents. When necessary, students were engaged to interact with their online peers and to create a positive virtual classroom environment. They also assisted students in developing time management and self-regulation skills, which are important for independent work within a home environment.

Results of the study indicated that many students reported being frustrated and overwhelmed with the ODE format, particularly at the beginning of the course. It was noted that this study did include on-site facilitators, who were able to provide a greater variety of instructional strategies to support during times that were frustrating for students. Online instructors felt that instruction was most effective when they had a good working relationship with the on-site facilitator. This is an important, practical finding for schools who are attempting to deliver virtual instruction, as students who may already be struggling with the content will likely find virtual instruction to be frustrating given the absence of on-site support.


Defining Differentiation in Cyber Schools

In this TechTrends article published in 2017, the authors discuss the results of study involving a survey administered to two cyber schools. Researchers found that online-only teachers defined differentiation differently than teachers serving in traditional face-to-face
classrooms. In traditional classroom models, differentiation is guided by four key practices including: a) gathering information on student interest and learning profile, b) fostering classroom community, c) flexible grouping, and d) utilizing formative assessment. However, results of the aforementioned survey indicated that online-teachers used learning style as their main piece of information to inform differentiation.

The researchers also found that online teachers defined differentiation from two distinct perspectives: a) why a student needs differentiation, and b) what a student needs differentiated. According to survey responses, cyber school teachers viewed three key needs of differentiation. These were primarily based upon student learning styles and abilities, though some respondents stated that interest and choice were also reasons to differentiate. In terms of what students need differentiated, cyber school teachers’ responses revealed a focus on process, product, and content. However, it was unclear what this focus specifically implied as no descriptive classroom examples were provided. As a result, researchers note three key findings that describe both the similarities as well as the differences among face-to-face teachers and cyber school teachers including:

1. Online teachers fall for the myth of learning styles as a key to differentiation.
2. Online teachers report that they need to differentiate content, product, and process.
3. There was little mention of using assessment to inform differentiation.

The authors suggest professional development on strategies for differentiation within their online classrooms. Practical implications include support for teachers in their use of assessment to identify student needs and differentiate accordingly. For additional information on the use of formative assessment in distance learning, see the summary entitled Promoting Formative Assessment in Online Teaching & Learning within the Assessment section above.


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**Instructional Technology**

**Adapting to the New Classroom**

In an article published in Tech & Learning in 2018, author Sascha Zuger provides examples of what some American school districts are doing to create an effective blended learning environment to meet the needs of all students. Each example offers an exploration of an adaptive learning technology that is successfully “adapting to this changing educational landscape.” The following examples demonstrate the potential for success and problem-solving at the district level for public schools across the country.
1. Green County School District in Tennessee uses a variety of tools including iReady, a diagnostic tool that assists teachers in developing enrichment and intervention groups. This resource also allows the district to implement common assessments across its 12 elementary and middle schools. The author notes that, in addition to iReady, this district uses a variety of technological tools for learning including IXL math, Brainpop, Google Classroom, and makerspaces.

2. Coxsackie-Athens Central School District in rural New York has made major shifts in their approach to learning. In response to increasing rates in drop-outs and failed classes, this district chose to make a 1:1 technology plan that would more effectively identify and address students’ needs. Using Apex Learning, the district was able to develop a recovery plan for credits that allowed students to work toward graduation requirements in an alternative manner. This program has also allowed students to earn credit early on which, in turn, gives them more opportunities to enroll in electives and other courses of interest, thereby improving engagement and motivation.

3. Palo Alto Unified School District in California used its close proximity to Silicon Valley to its advantage by utilizing Schoology. Their approach requires that every student have access to assistive technology, which is a resource that has historically been associated with the provision of special education services. As a result, the district reports an increase in teacher-student communication as well as the availability of lessons to students who are absent.

4. Holy Family Academy in Pittsburgh, Pennsylvania is utilizing a breadth of technology to support their struggling students. Their use of Google Apps, PowerSchool SIS, Canvas, and Imagine Learning are all learning management systems used to support student learning and individualization. Other programs used include LiFT, CAD design software, and Kahoot to engage and support student learning.

These mini-case studies demonstrate the powerful impact that technology can have on learning for students in all grades, in all locations, and from all backgrounds. The local educational agencies discussed have identified positive growth for their students when shifting their approach to blended and technology-based learning to better meet the needs of all students, further supporting the suggestion that such a transition offers potential opportunities to educators.


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Social-Emotional Learning
Building Developmental Relationships During the COVID-19 CRISIS

The Search Institute is an organization that partners with other organizations and agencies to conduct and apply research that promotes positive youth development and advances equity. Through their research, they have determined that young people demonstrate numerous developmental benefits when they experience positive developmental relationships with adults.

In response to the COVID-19 crisis, they have created a checklist that offers strategies for adults to express care, challenge growth, provide support, share power, and expand possibilities with students. Each category is accompanied by a checklist of numerous practical applications that are specific to the current situation. The institute has published this checklist for free. It can found at the following link:
Click here to access the Building Developmental Relationships During the COVID-19 CRISIS checklist

Virtual Counseling for Students Enrolled in Online Educational Programs

The transition to distance learning presents several ethical and logistical challenges to consider in addressing the provision of counseling services. In addition to current guidance from the American School Counselor Association, lessons from counseling in virtual schools can be applied to the present pandemic:

- Counselors need training in how to communicate through technology without the aid of non-verbal or visual cues. Encourage staff to verbally describe reactions and communicate affect and empathy through capitalization, punctuation, emojis, etc.
- Student assent and parental consent to receive services may need to be renegotiated as expectations around responsiveness, frequency of meeting, confidentiality, and privacy change.
- Two-way, synchronous video conferencing most closely approximates the traditional counselor-client experience, but other technical solutions that may be of use include asynchronous email counseling, one-on-one or group chat, and referrals to online mental health resources.
  - HHS Resources to Support Adolescent Mental Health
  - NIMH Child and Adolescent Mental Health
  - List of Hotlines and web resources for teens experiencing a mental health crisis

The author also warns that counselors have likely received little to no training in the provision of remote services. Therefore, in addition to extensive technical training and
support, counselors will need clear guidance around how to continue personal, social, career, and academic counseling virtually as well as an ongoing opportunity to consider the ethical and legal ramifications of modified services.

Available at: https://newprairiepress.org/cgi/viewcontent.cgi?article=1153&context=edconsiderations

At-Risk Populations

Communication Intervention for Young Children with Severe Neurodevelopmental Disabilities Via Telehealth

Published in 2017 in the Journal of Autism & Developmental Disorders, this article details a study that was conducted by researchers from the Department of Educational Psychology at the University of Minnesota. The authors specifically examined the effects of parent-implemented communication assessment and intervention that was accompanied by remote coaching via telehealth on the acquisition of early communication skills of three children between the ages of three and five with a severe neurodevelopmental disability (e.g. autism spectrum disorder and Rett syndrome). They specifically examined the children’s development of augmentative and alternative communication (AAC) responses which are intended to address the needs of students with severe impairments in speech/language production and comprehension by using a variety of techniques (e.g. gestures and communication boards) to help them express needs, desires, feelings, and ideas. Interventionists coached parents on the use of Functional Communication Training (FCT) which is an intervention that is designed to replace challenging behaviors with appropriate communicative responses. Parents were also coached on assessment procedures.

Results revealed that all three participants acquired at least one appropriate communicative response, with two of the subjects acquiring multiple responses. Additionally, the intervention delivered in the aforementioned format resulted in decreases in challenging behaviors (referred to in the article as “idiosyncratic responses”). Researchers also noted a number of specific conditions that were identified as contributing to the efficacy of the intervention. First, it was noted that intermittent reinforcement schedules may allow the challenging behaviors to persist. Second, FCT was more successful when the effort required to demonstrate the AAC response (i.e. the appropriate communicative response) was less than the effort required for the idiosyncratic or challenging behavioral response.

Overall, parents were able to implement the intervention and administer assessment effectively via telehealth coaching. Furthermore, they rated the treatment as acceptable.
Results of this study further highlight the potential for alternative means of service delivery that may be relevant and applicable to a distance learning format. Pursuing this method of delivery requires specific consideration of linguistic factors, access to the internet, and a schedule for ongoing communication and feedback with coaches.


**Multiculturalism & Educational Equity**

**Enhancing Anti-Bias Education with Anti-Racist Education**

One of the many unfortunate consequences of the recent COVID-19 pandemic has been a rise in harassment, bullying, and other forms of discrimination being demonstrated toward students and families of perceived Asian descent. Combating this discrimination and further addressing other existing inequities is crucial in ensuring that distance learning is designed and administered in a way that provides educational access to all learners.

In this article published in the December 2018 edition of The Journal of Curriculum, Teaching, Learning, and Leadership in Education, the author, Dr. Escayg, identifies the shortfalls of anti-bias education and provides practical suggestions for aligning central premises of anti-racist education with early childhood education practices.

Dr. Escayg indicates that anti-bias curricula have largely been focused on the individual with content that centers around children’s perceptions of themselves and others. While this approach does possess some benefits (e.g. positioning students and educators as agents of social change, challenging prejudice and stereotypes), it does not deliberately identify and challenge institutional racism, which is a fundamental characteristic of anti-racist curricula. The author states that such an approach is necessary to observe and address the extent to which discrimination has been intimately embedded within societal norms.

Prior research has demonstrated that, due to complex issues related to privilege, individuals within the White, dominant culture often do not comprehend the true nature and impact of racism. Similarly, anti-bias curricula’s focus on embracing difference fails to confront many of the fundamental aspects of racism that allow for continued, systemic discrimination. By focusing solely on challenging bias and promoting inclusion, this approach allows for the persistence of silence which is a contributing variable to cycles of oppression. Thus, Dr. Escayg identifies that an active anti-racist curriculum is necessary to sincerely pursue equity and justice.
Guidance on Culturally Responsive-Sustaining Remote Education

The NYU Metro Center has just released a resource document entitled Guidance on Culturally Response-Sustaining Remote Education. This resource is intended to provide guidance and address questions and concerns related to high-leverage teaching and learning practices for equity-based remote education. The NYU Metro Center defines culturally responsive-sustaining remote education as an approach that, "grounds the use of education tools and arranges the educational experience in a cultural view of learning and human development in which multiple expressions of diversity (e.g., race, social class, gender, language, sexual orientation, nationality, religion, and ability) are recognized and regarded as assets for teaching and learning. Thus, it is education that is responsive to students’ individual and collective lived experiences, and in particular during this time, their experiences with the COVID-19 pandemic."

This guidance document address what we need to know, what we should be doing, what we should be thinking about to minimize the social-emotional toll, and how we can connect from the perspective of teachers, families, school leaders, and students.

For additional information, click here to review the Guidance on Culturally Responsive-Sustaining Remote Education document directly.

Kim Gibbons, Ph.D.
CAREI Director
kgibbons@umn.edu
c: 651-303-4141 | p: 612.625.9751 | f: 612.625.3086

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You are connected to CAREI and our services

Our mailing address is:
University of MN
1954 Buford Ave
Saint Paul, MN 55108-6103