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FAST RESPONSE

Best Practices on Distance and Blended Learning for Grades K-12 During COVID-19

Date: July 8, 2020   Request: 202005

Background

Considering how COVID-19 may impact the upcoming school year, the Region 7 Comprehensive Center (R7CC) Advisory Board has requested information about best practices on distance and blended learning. To help slow the spread of the disease, social distancing strategies may include limited to zero access to school buildings, allowing for safety and health of the school community. The CDC's guidance for schools provides many recommendations that may be difficult for districts to implement. As such, educators will require effective technology innovations to provide continued learning for K-12 students during the pandemic. In response to this inquiry, R7CC developed two Fast Response reports that address these issues.

This Fast Response report provides a brief summary of effective instructional practices related to distance and blended learning described in the literature as well as special implementation considerations for reflection. The second report in this series summarizes what other states are doing to address distance learning.

This Fast Response is organized into the following sections:

- Procedure
- General Limitations
- Section 1: What the Research Tells Us
- Section 2: Practical Considerations Related to Equity
- Conclusion
- References

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Procedure

To locate resources for this report, the R7CC Fast Response team conducted online searches across three primary databases (ERIC, IES, and Google Scholar). For inclusion in this report, the team selected and reported on two journal articles and nine online reading and math programs that meet the What Works Clearinghouse standards. We used these criteria for inclusion: (a) publication date within the past 10 years, unless they were perceived as seminal works by the research team; (b) initiatives, programs, and studies that produced statistically significant, positive effects; and/or (c) content relevant to the client's topics of interest. Detailed information on the selected resources is provided in Section 1 of this report. Section 2 provides consideration questions and four relevant online resources.

General Limitations

As with many topics in education, there is a limited research base of information on K–12 distance and blended learning. More research is conducted at the post-secondary level in terms of effective practices for distance learning, given K–12 schools are typically provided in the brick and mortar setting. As noted, however, several online programs cited in this report have met the What Works Clearinghouse Standards Without Reservations.

Section 1 What the Research Tells Us

Publications

In his book chapter *Practical guidelines for creating online courses in K–12 education*, Journell (2015) offers practical guidelines in online instruction for high school teachers and district administrators. *One key principle is to avoid the common mistake of transferring face-to-face instruction to an online setting instead of capitalizing on the digital experience.* There are five steps described in the chapter to support educators with implementing online instruction.

1. Deciding to use a synchronous or asynchronous approach.

2. Choosing a learning management system (e.g., open source or commercial).

3. Developing a solid and accessible course with users in mind by

   - creating an easy filing system,

   - using compatible files such as PDFs,

   - using Universal Design for Learning for accessibility (e.g., students with disabilities and English learners), and

   - maintaining a consistent instructional design (e.g., teacher expectations and established routines).

4. Creating engaging assignments (e.g., using podcasts, video, group work, Webquests).

5. Assessing student participation and learning.

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Pulham and Graham (2018) summarize, compare, and contrast K–12 online learning and blended learning teaching competencies in this literature review. In online learning, students receive their instruction from a distance, while blended learning is the integration of in-person and online learning. *The authors argue that researchers and practitioners need to develop awareness of competencies teachers need for distance learning to be effective.* Below in Figure 1 is a summary of teacher competencies for blended learning.
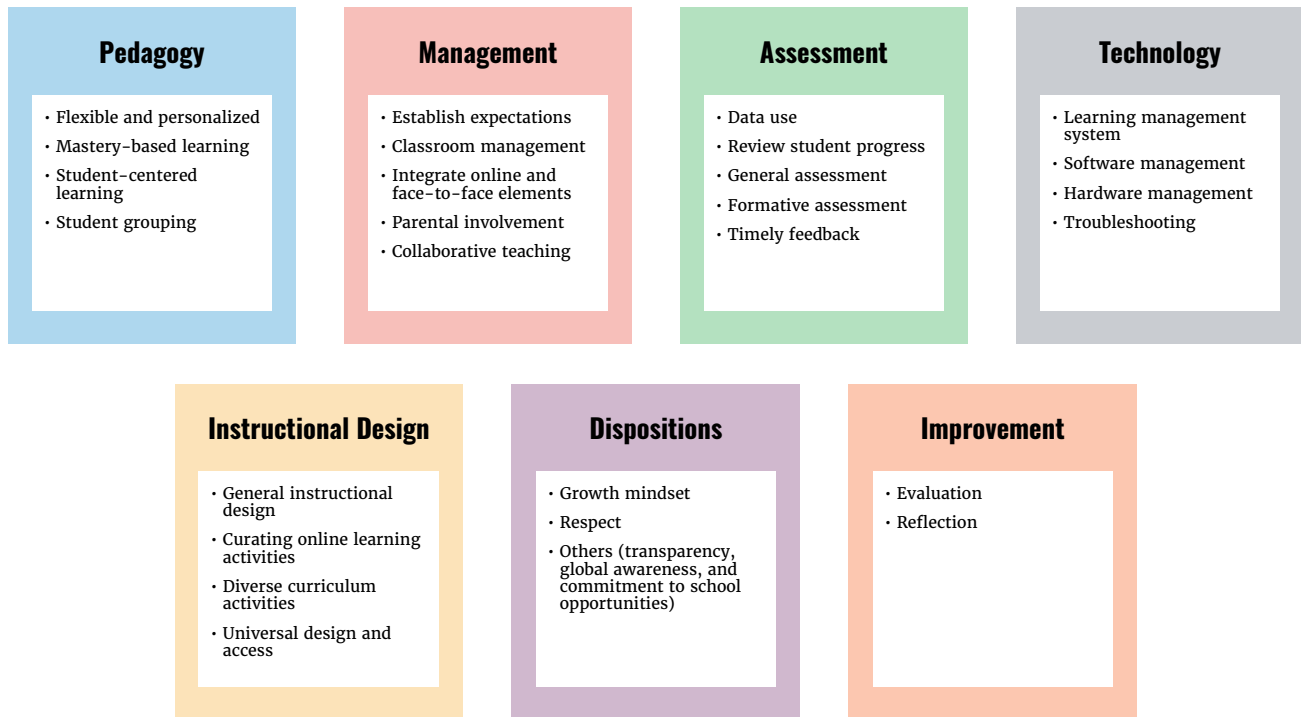
Pedagogy
- Flexible and personalized
- Mastery-based learning
- Student-centered learning
- Student grouping

Management
- Establish expectations
- Classroom management
- Integrate online and face-to-face elements
- Parental involvement
- Collaborative teaching

Assessment
- Data use
- Review student progress
- General assessment
- Formative assessment
- Timely feedback

Technology
- Learning management system
- Software management
- Hardware management
- Troubleshooting

Instructional Design
- General instructional design
- Curating online learning activities
- Diverse curriculum activities
- Universal design and access

Dispositions
- Growth mindset
- Respect
- Others (transparency, global awareness, and commitment to school opportunities)

Improvement
- Evaluation
- Reflection

Figure 1. Important competencies for blended learning (Pulham & Graham, 2018)

Effective programs meeting What Works Clearinghouse standards

Nine online programs demonstrated positive or potentially positive effects using the What Works Clearinghouse (WWC) standards. Table 1 presents all nine programs and includes appropriate grade level, number of studies meeting WWC standards without reservations, average effect size, and measure. The programs are organized in the table by decreasing effect size. In order to provide comparable effect sizes, the WWC uses percentiles. They can be interpreted that the program Access to Algebra I, for example, results in a 25 percentile increase for a student at the 50th percentile. For mathematics, there exists at least one program at every grade level to improve student achievement from Kindergarten to Grade 11. Likewise, for reading, at least one program exists at every grade level for students from Pre-Kindergarten through Grade 12.

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Table 1. Effectiveness of Reading and Math Programs

Subject Area	Program	Grades	Studies meeting WWC Standards[1]	Average Effect Size (Percentiles)	Measure
Math	Access to Algebra I	8	1	25	Advanced course taking, posttest
	Odyssey Math	K–8	2	16	Algebra skills
				12	TerraNova math achievement
	ASSISTments	7	1	7	General math achievement
	DreamBox Learning	K–5	1	4	General math achievement
	Texting Parents	6–11	1	1	General math achievement
Reading	Headsprout Early Reading	PreK	1	22	Oral reading fluency, print knowledge
	Online Tutor 2.0	6–8	1	17	California Achievement Test comprehensive reading and vocabulary
	Read180 Adolescent Literacy	4–12	3	6	Comprehension
				4	General literacy, Reading fluency
	Achieve 3000	2–8	0	6	Comprehension
				3	General literacy

[1] The number of studies that met WWC standards without reservations.

Section 2 Practical Considerations Related to Equity

The questions below summarize distance learning concerns trending across practitioner and equity advocate discussions. They can help to frame strategic planning for distance learning as a central tenet of dynamic teaching and learning, increased organizational efficacy, and more strategic resource alignment.

Organizational Effectiveness: How is the state using or advising districts and schools to use multi-tiered systems of support (MTSS) for "needs-driven" decision-making? Have instructional teams discussed contingencies for rolling Tier II interventions and increased supports down to the universal level in anticipation of larger-than-normal academic gaps and heightened trauma for students and educators?

Capacity Assessment: Has the state identified or produced an example of a capacity assessment for districts to use in determining readiness and planning needs for digital learning in order to strategically target limited resources? Does this assessment provide enough information to support planning for distance learning as a central tenet of the district's high-quality teaching and learning strategy, rather than a temporary or emergency response, for the 2020–21 school year? EdTrust and Digital Learning have developed an online self-assessment that addresses equity and access to distance learning. Click this link to access the site: 10 Questions for Equity Advocates to Ask About Distance Learning

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Curriculum Selection and Development: Has the state provided guidance to districts and schools on supporting educators at the building and classroom level in applying universal design for learning (UDL) principles and selecting high-quality, grade-level appropriate instructional materials and the necessary supports to allow <u>all</u> students to engage with all materials? To reduce burden in finding and selecting high-quality curriculum, are resources vetted, evidence-based, and organized clearly by grade level, content area, and academic standard or skills addressed?

Professional Supports: What professional supports, beyond professional development training in digital learning, is the state recommending districts provide to support educators, such as increased planning time, co-teaching teams, or additional coaching from instructional, data, and technology coaches? How are grade-level teams, subject area teams, and teacher leaders and coaches being utilized: 1) for improved curriculum and lesson planning and 2) to reduce burden on individual teachers in order to reserve their time for small group instruction and individual student supports? The International Society for Technology in Education and EdSurge have curated numerous helpful online resources for educators available here: Learning Keeps Going

Conditions for Learning: What guidance is the state providing to districts for structuring the physical and digital classrooms? Does the guidance support the varied social-emotional and instructional needs of students? Does the guidance address school connectedness, given the importance of relationships to academic and well-being outcomes? For related strategies and ideas developed by the Regional Educational Laboratory Central, click the link: Strategies to Support Learning Along a Continuum of Internet Access

Family Support: What specific and actionable guidance, supports, and training are the state and district providing to parents to build capacity to support their children's learning at home, based on caregiver and community feedback in the capacity assessment and their Spring 2020 experiences with remote learning?

Additional considerations are given in a report prepared by The MIT Teaching Systems Lab. It is a relevant, comprehensive report with recommendations on best practices providing distance learning during COVID-19. To access the report and website, click this link: Remote Learning Guidance from State Education Agencies During the COVID-19 Pandemic: A First Look.

Conclusion

Educators at state, district, and local levels require evidence-based information to support them with developing effective systems to address instruction during the COVID-19 pandemic. *Issues centered on instructional equity must be at the forefront of their work* to allow continued learning for all students during these challenging times. *Developing capacity to implement and scale up instructional technology has become paramount.* Fortunately, distance learning has been a part of the education system for decades and is more relevant now as schools develop plans offering an array of educational platforms, including distance learning, traditional learning on campus, and a hybrid of the two. The information provided in this Fast Response report summarizes best practices on distance and online learning discussed in the literature and offers reflective questions to support educators who are tackling these new problems of practice. The second part of this Fast Response series highlights approaches four states are using to address instruction during COVID-19.

References

Journell, W. (2015). Practical guidelines for creating online courses in K–12 education. In T. Heafner, R. Hartshorne, In T. Petty (Eds.), *Exploring the effectiveness of online education in K–12 environments* (pp. 86–107). Hershey, PA: IGI Global.

Pulham, E., & Graham, C. R. (2018). Comparing K–12 online and blended teaching competencies: a literature review. *Distance Education*, 39, 411–432. doi: 10.1080/01587919.2018.1476840