EXECUTIVE SUMMARY

From the onset of the COVID-19 pandemic in early 2020 through the present day, Mississippi leaders have confronted evolving challenges to the state's public education system. The efforts of state leaders as well as local educators, administrators, students, and families to meet these challenges are not only inspirational, but they offer important lessons for the future of digital learning and academic acceleration post-pandemic. These are the efforts that this research project set out to examine.

This study includes qualitative research in three Mississippi school districts to explore the impact of the pandemic on student learning in Spring 2020 and in the 2020-2021 school year as well as a follow-up in 2021-2022 school year. Also included is examination of available quantitative data from 2018-2019 through 2021-2022 for Mississippi public PK-12 schools. Both the qualitative and quantitative research portions were reviewed by an expert peer panel of Mississippi leaders. This study also includes information regarding the Mississippi Connects Digital Learning Coaching Program. This final report offers policy recommendations to inform future education delivery policies and programs and related supports for students, families, and educators.

Key findings across the study are as follows:

Mississippi Transformed its Education Technology Infrastructure

- State leaders collaborated to prioritize access to technology tools and resources for all families through the Mississippi Connects initiative,[i] resulting in the purchase of nearly 400,000 devices by 148 out of 150 Mississippi districts by December 2020, and 144 districts leveraging broadband support.[ii] Before the pandemic, only 23 out of the state's public school districts had a 1:1 technology initiative.[iii]
- Other elements of Mississippi Connects include digital curriculum and learning management systems; professional development; telehealth and teletherapy;[iv] a Digital Learning Coaches program, a Digital Teacher Academy,[v] and a Digital Learning Instructional Guide with detailed guidance, tools, and resources.[vi]

Mississippi Developed and Adapted State Virtual Learning Policies

- The Mississippi Department of Education (MDE) developed and adapted virtual learning policies throughout the pandemic. As districts planned for the 2020-2021 school year, the State Board of Education provided three options for delivery of instruction: in-person, virtual, or a hybrid of both.[vii]
- In Spring/Summer 2021, the state provided a draft virtual learning policy, collected public comments, and published the policy in mid-July.[viii] For the start of the 2021-2022 school year, the state initially required districts to operate fully in person or to also offer a fully virtual option following specified criteria with local board approval. However, pandemic spikes during that school year resulted in state flexibility allowing districts to offer virtual or hybrid instruction[ix] for set windows of time.[x]
- For the start of the 2022-2023 school year, MDE directed that the State Board of Education policies that directed in-person instruction as the primary model remain in effect. MDE provided links with details about the virtual learning policies and related information on its website.[xi]

Mississippi School Districts Adjusted to Changing Conditions

An examination of efforts in three case study districts – Gulfport, Leland, and Marshall County – in 2020-2021 showed the following themes:

- The greatest overall areas of challenge included: Attendance; Instruction; Academic Policies; Student Well-being; and Virtual and Family Engagement.
  - Stakeholders consistently described learning loss and social and emotional challenges for students despite improvements to delivery of instruction. They were consistently concerned about the need to sustain technology and connectivity supports for families and many were also concerned about screen time for students and teachers.
- Innovative practices were found in the following general areas: Staffing; Training; Assignments; Scheduling; Devices; and Family Engagement.
  - Districts with stronger technology systems and supports in place already were better prepared at the onset of the pandemic but still faced issues.
  - Stakeholders reported a variety of perspectives about resources and policies, most commonly pointing to online platforms or learning management systems (LMS) as well as improved training being the most helpful. They all noted improvements by the end of the 2020-2021 school year, with several cases of teachers becoming more adept and receiving more support.
  - Districts noted significant improvements to reduce the digital divide; while more support will be needed to sustain these improvements, much progress has been made. These results suggest technology in education is here to stay.

Statewide Data Points to Promising Trends About Academic Recovery

- Instructional Delivery:
  - It appears that nearly half of districts reopened for the 2020-2021 school year using an instructional delivery model different than what they originally planned for in July. By the middle of the school year, it appears that the same number of districts were operating in person, with a virtual option available to students.
  - A lack of reliable data about instructional delivery limits the capacity of this full quantitative study to examine specific correlations between learning modes and outcomes across student populations.

- Enrollment and Attendance:
  - The state reported an overall enrollment decline since 2018-2019.
  - The greatest relative enrollment decline by student subgroup was for Alaska/Native American students (who make up a small percentage of the total statewide student population) and White students.
  - There was an increase in enrollment for Hispanic/Latino and Two or More Races.
  - Enrollment changes between the 2020-2021 and 2021-2022 school years were much smaller than the drops experienced between 2018-2019 and 2020-2021, indicating a leveling off as the effects of the pandemic started to lessen.
  - Significantly more students missed 50 or more days of school in 2021-2022 compared to 2018-2019 and over 50,000 more students statewide missed between 18-50 days of school in 2021-2022 compared to 2018-2019; these figures are likely impacted significantly by quarantines related to the ongoing spread of COVID-19 and require further study.
- Devices and Broadband:
  - Generally, districts with the largest enrollment had the greatest number of devices purchased and expenditures for broadband, with some notable exceptions.
  - Of the top 10 districts in terms of expenditures for devices through Mississippi Connects, four already had a 1:1 device initiative prior to the pandemic.
  - Larger concentrations of districts with larger device expenditures were found in the Delta and Southwest regions, while concentrations of districts with smaller device expenditures were found in the North and East regions.
  - According to the BrightBytes Technology and Learning Survey in Spring 2022, 9-10% of parents, teachers, and students do not have access to broadband internet.
- Student Achievement:
  - Average kindergarten readiness scores in Fall 2021 and Spring 2022 (end of school year) were lower than in 2018-2019, but the overall percent of growth over time (percent change) was similar to the 2018-2019 school year. This growth trend holds promise for future years.
  - Over the last decade, Mississippi has made historic gains in student achievement, especially in NAEP reading scores. While the pandemic caused many Mississippi school districts to see declines in student achievement (following national trends), Spring 2022 assessment results demonstrated a significant rebound in student achievement.
  - Districts with the steepest declines in 2020-2021 tended to be districts with a high proportion of low-income students (using percent Title I as a proxy for income), and the opposite was generally true for districts with the least declines.
  - Higher performing districts in 2020-2021 typically had more explicit resources, communications, and programming details in their reopening plans for that school year.
  - More districts with the steepest declines in ELA and math 2020-2021 were located in the North and Delta regions, which differed from the most common region of the districts with the smallest declines – the Gulf Coast.
  - When full district and subgroup level data is available for the 2021-2022 school year, it will be important to examine outliers from the state average to identify needed supports for students and schools.
- Student Participation and Graduation Rates:
  - Mississippi bucked the national trend of much lower participation in state assessments in 2021, boasting an overall participation rate in line with previous years.
  - Districts that saw large declines in MAAP participation generally saw greater declines in math participation than in ELA in 2021.
  - Many of the same districts that saw the largest declines in MAAP participation also saw the largest declines in MAAP proficiency statewide in 2021.
  - Nine of the 10 districts with the largest declines in both ELA and math participation from 2018-2019 through 2020-2021 were in the Delta region. Of the 10 with the smallest decline in ELA participation, five were in the North. For the smallest decline in math participation, four were in the Gulf Coast and four in the North.
  - As of September 30, 2022, MAAP assessment participation data from 2021-2022 school year were unavailable for public release.
  - Overall, the state of Mississippi improved from a graduation rate of 84% in 2018-2019 to 88.4% in 2021-2022.
  - From 2018-2019 to 2020-2021, Alaskan Native or Native American students and Asian students were the only groups to decline in graduation rates, but both showed positive gains in 2021-2022.
  - Black or African American students showed the greatest graduation rate gains from 2018-2019 to 2021-2022, outpacing the state average along with Hispanic or Latino students.
  - An important area for further exploration can be found in student groups or districts that saw significant declines in student academic performance through the pandemic, yet had an increase in graduation rates.

Recommendations for How State Leaders Can Help to Shape the Future of Digital Learning

This research project indicates the following themes that policymakers should consider when examining options for digital learning and education recovery post-pandemic:

- A need to focus on students most impacted according to available evidence;
- The need and potential for cross-sector collaboration;
- The importance of effective communication and dissemination of information;
- The critical role of high-quality curriculum and training;
- Identification of ongoing funding to support education technology and other innovations; and
- Support for continued and coordinated data collection and research.

The recommendations below draw on these themes:

- **Create a State Advisory Task Force and Regional Acceleration Hubs.**
  - Convene a State Advisory Task Force to Advance Education including students, families, educators, and local and state leaders, drawing from existing cohorts (MDE Advisory Councils, Digital Learning Coaches, Technical Advisory Committee) to:
    - Examine all relevant data on pandemic recovery efforts and identify implications for state and district actions.
    - Lead efforts to explore sustainability of funding for evidence-based best practices.
  - Create Regional Acceleration Hubs for collaboration across organizations by geographical locations to:
    - Promote coordination of resources from existing community organizations, government, philanthropy, advocacy, business, and other groups and extend the reach of services.
    - Empower representatives of these organizations to help match local needs with regional offerings. Existing Mississippi Regional Education Service Agencies (RESA) could be leveraged and/or expanded to support these efforts. One leader from each Hub could participate in the Advisory Task Force.
- **Promote High-Quality Digital Learning.**
  - Support equitable digital learning programming and access statewide:
    - Continue to support all districts in their efforts to leverage elements of digital learning that are proving successful in accelerating student learning and preparing students for college and career by:
      - Widely communicating efforts such as the Digital Learning Coaches program[xii] and Digital Learning Instruction Guide[xiii].
      - Hosting and sharing a list of approved district-run virtual learning programs.
      - Requiring all districts to maintain an up-to-date emergency response plan for virtual learning with clear communications mechanisms.
    - Continue to review and approve district-run virtual options on a yearly basis:
      - Study and adapt specified conditions in the state virtual learning policy.
      - Explore ways to expand student access to virtual learning options for students in districts without an approved program.
      - Depending on the results of the efforts above over the next few years, the Task Force could consider plans to initiate development of a full-time state-run virtual learning option.
    - Continue and consider expanding "a la carte" access to virtual and digital programming for courses students can't access otherwise through their school district.
    - Avoid having teachers simultaneously instruct both in-person students (i.e., in a classroom) and students participating remotely in a virtual program.
    - Highlight high-quality digital instructional materials and practices for a virtual environment; expand and promote aligned professional learning opportunities; and prioritize adapting social and emotional learning curriculum to virtual environments.
    - Incorporate some in-person assessments into any fully virtual instructional model.
- **Drive Learning Acceleration.**
  - Focus on the academic advancement of all students through supports that meet individual needs through:
    - Vetted tutoring and credit recovery programs with subsidized costs for low-income families;
    - The state's successful coaching programs;
    - Guidance and/or resources to before- and after-school child care providers and other community support organizations;
    - Appropriate technology, connectivity, and training supports for these programs through Mississippi Connects; and
    - Data collection efforts to understand which groups of students are most in need of support.
  - Utilize Regional Acceleration Hubs to coordinate and distribute information about these offerings.
- **Continue to Support Technology Infrastructure and Training.**
  - Support district procurement, implementation, and effective use of LMS and education technology tools.
  - Expand upon successes and further the reach of effective education technology efforts statewide. This includes:

- Continued training on the use of technology accessibility tools;
- Conducting a program evaluation study on the impact of digital learning resources and supports;
- Expanding a consistent statewide data system for tracking the use of devices and reliability of internet connectivity in districts and homes;
- Adding a navigator component to family engagement efforts; and
- Developing a statewide plan to ensure device replacement for technology purchased during the pandemic.

- Create an intergovernmental working group of leaders from relevant state agencies (the new Broadband Expansion and Accessibility of Mississippi (BEAM) office, MDE, Mississippi Department of Information Technology Services, Mississippi Public Service Commission) focused on internet access to share data, resources, and strategies with families. Coordinate information-sharing through Regional Acceleration Hubs.

- **Conduct Ongoing Research to Drive Informed Strategies.**
  - Continue to document and analyze the impact of the pandemic on student learning and identify evidence-based interventions.
  - Create a longitudinal study of PK-12 student cohorts comparing annual progress through at least 2026. Identify consistent reporting methods and infrastructure to ensure comparable data across districts.
  - Study the effectiveness of state-approved virtual instruction programs, including conditions for success, enrollment and participation (including chronic absenteeism) by student population, and student outcomes.
  - Measure student usage of digital applications and their impact on student success through BrightBytes EdTech Impact and expand this analysis statewide.
  - Continue to evaluate parent, teacher, and student use of technology through evaluation tools such as BrightBytes Technology and Learning Survey.
  - Include qualitative research to examine specific districts and their instructional approaches over time to dig more deeply into emerging data trends.
  - Make as much data publicly available as possible so that independent entities can do their own analyses and use the information to make strategic decisions.
  - Tap the recommended State Advisory Task Force to Advance Education to collectively examine the data and its implications for state and district actions and to inform any needs for updating data collection.

ENDNOTES

[i] Mississippi Department of Education. (2020). Mississippi Connects. Retrieved March 17, 2022, from https://www.mdek12.org/MSConnects.

[ii] Wright, Carey M. (2021, March 25). Mississippi Connects Status Report. Mississippi Department of Education. Retrieved March 17, 2022, from https://docs.google.com/presentation/d/1cHW2Wm6lHp-so-EmNtt0h0_sbJrHEJUO/edit#slide=id.p1.

[iii] Copley, L., & Ballard, T. (2021, May 6). Access to technology is the future of education: Here's what Mississippi schools need to do. Clarion Ledger. Retrieved March 17, 2022, from https://www.clarionledger.com/story/opinion/2021/05/06/technology-access-computers-implementation-critical-mississippi-schools-commentary/7400214002/.

[iv] Wright, Carey M. (2021, March 25). Mississippi Connects Status Report. Mississippi Department of Education. Retrieved March 17, 2022, from https://docs.google.com/presentation/d/1cHW2Wm6lHp-so-EmNtt0h0_sbJrHEJUO/edit#slide=id.p1.

[v] Mississippi Department of Education. (2021). Mississippi Connects: Digital learning coaches. Retrieved March 17, 2022, from https://www.mdek12.org/DLCoaches.

[vi] Mississippi Department of Education. (2022). Digital Learning Instructional Guide. Retrieved August 15, 2022, from https://www.mdek12.org/sites/default/files/Offices/MDE/OTSS/DL/dl_instructional_guide_final.pdf.

[vii] Mississippi Department of Education. (2020). Mississippi schools: Guidance for the 2020-21 school year. Retrieved March 17, 2022, from https://www.mdek12.org/guidance2020-21.

[viii] Mississippi Department of Education. (2021, July 15). State Board of Education sets policies to resume in-person schooling as primary teaching mode. Retrieved March 17, 2022, from https://www.mdek12.org/news/2021/7/15/State-Board-of-Education-Sets-Policies-to-Resume-In-Person-Schooling-as-Primary-Teaching-Mode_20210715.

[ix] Mississippi Department of Education. (2021, August 19). Clarifications to State Board Policy Chapter 9, Rule 9.3, Designated School-Wide/District-Wide Virtual Learning Days and Chapter 56, Rule 56.2, Virtual Students. Retrieved March 17, 2022, from https://www.mdek12.org/sites/default/files/Offices/MDE/OCGR/virtual_policies_q_a_v2.pdf.

[x] Mississippi Department of Education. (2020). Mississippi schools: Guidance for the 2020-21 school year. Retrieved March 17, 2022, from https://www.mdek12.org/guidance2020-21.

[xi] Mississippi Department of Education. (2022). Mississippi schools: Guidance for the 2022-23 school year. Retrieved August 15, 2022, from https://www.mdek12.org/guidance2022-23.

[xii] Mississippi Department of Education. (2022). Mississippi Connects: Digital learning coaches. Retrieved March 7, 2022, from https://www.mdek12.org/DLCoaches.

[xiii] Mississippi Department of Education. (2022). Digital Learning Instruction Guide. Retrieved August 23, 2023 from https://www.mdek12.org/sites/default/files/Offices/MDE/OTSS/DL/dl_instructional_guide_final.pdf.

THE UNIVERSITY of MISSISSIPPI