CONCLUSION: A review of the information technology (IT) programs and expenditures for the reviewed Mississippi school districts in FY 2023 showed opportunities for districts to improve service levels and increase efficiency. Many school districts lack critical plans to manage technology and disaster recovery. Eight districts reviewed keep data backups onsite only, which puts IT functions at risk. Ten districts reported that 50% or less of their students' households have access to the internet. All districts reported network bandwidth per student below that of regional and national peers. There have been both state and federal efforts to increase access to quality internet in Mississippi, but implementation of those efforts will take time.

BACKGROUND

In FY 2024, PEER received funding to contract with Glimpse K12 (an education technology company headquartered in Huntsville, Alabama) to conduct a comparative review of 50 school districts. This report focuses on one of six areas of review—information technology (Volume III). Other non-instructional reports include:

- Finance and Supply Chain (Volume I);
- Human Resources (Volume II);
- Nutrition (Volume IV);
- Operations (Volume V); and,
- Transportation (Volume VI).

KEY FINDINGS

- **Of 46 reporting districts, 23 (50%) had a documented technology plan and 30 districts (65%) had a technology disaster recovery plan.**
  Such plans are critical for managing technology and disaster recovery.

- **Eight districts (17%) keep data backups onsite only, which puts district IT functions at risk in the event of an emergency, disaster, or cyberattack.**
  Offsite backup is critical to recovering vital records and data.

- **Seven districts (15%) do not track daily network usage.**
  By tracking daily network usage, a district can identify potential network capacity problems and also have insight into network usage patterns.

- **Of the 23 districts that surveyed student households for FY 2023, ten reported that 50% or less of students' households had access to broadband internet and Wi-Fi capabilities at home.**
  School districts play a critical role in providing students with broadband and Wi-Fi access at school for assignments.

- **All districts reported network bandwidth per student below that of regional and national peers.**
  Such a condition could have negative impacts on students' education.

- **Of the districts reporting, 15 reported at least one day in the school year in which internet usages reached more than 75% of standard available bandwidth for five minutes or longer.**
  If districts and teachers have access to higher bandwidth, additional programs and assignments could become feasible.

- **Of 47 reporting districts, 30 (66%) use a single department for traditional IT support and educational technology support functions. Twelve districts (26%) use two separate IT departments, and four districts use another type of structure.**
  Each model for IT support has advantages and disadvantages.

The Legislature has made efforts to expand broadband in the state, including the creation of the Broadband Expansion and Accessibility of Mississippi (BEAM) office in 2022. The office, functioning under the Mississippi Department of Finance and Administration, is responsible for overseeing all broadband expansion efforts in the state and will administer broadband grants. According to BEAM's website, in May 2023, the U.S. Department of the Treasury approved BEAM's plan for $151.4 million through the Capital Projects Fund (CPF). BEAM recently approved 24 broadband projects to be funded by the CPF; these projects are projected to serve 27,000 households in 19 counties across the state.

Additionally, Mississippi was allocated $1.2 billion from the federal Broadband Equity, Access, and Deployment (BEAD) program. Mississippi's BEAM office will allocate the funds through grants to increase access to quality internet.

Although steps have been taken by policymakers to improve broadband access, implementation of the systems will take time.

A Look at Internet Bandwidth

- For FY 2023, the median network-bandwidth per student was 0.87 for the districts reviewed, while the regional peer average was 26.35 and the lower range for national peers was 256.1. These numbers clearly demonstrate the need for improved bandwidth in the districts.

- Seven districts did not track network usage levels in FY 2023. Of the districts that did track network usage levels, twenty-four reported one day or less when they experienced network capacity issues. Another eight primarily experienced capacity issues during annual testing, ranging from nine to 40 days per year. Five districts reported exceeding 75% capacity for 81 days or more.

- Most districts are only maximizing device usage for testing and not for daily learning. If districts and teachers have access to higher bandwidth, additional programs and assignments could become feasible and offer students a wider range of educational opportunities not currently available due to bandwidth restrictions.

- Districts should balance investments in internet bandwidth and the educational usage of devices.

Device Inventory and Staffing

Based on the data provided, the number of devices per IT staff member ranged from 510 to 2,791. Fifteen districts should remove obsolete devices from their inventories, and then evaluate their staffing levels. In addition to the performance measures in this report, evaluation of staffing should include other factors (e.g., volume and complexity of support tickets, district goals, expertise of IT staff).

Issues with Missing Data

Only 19 of the 50 districts included in this review (38%) provided all of the benchmarking and performance data requested for this review. This inhibited the assessment team's ability to conduct a complete analysis of IT functions in the selected districts.

SUMMARY OF RECOMMENDATIONS FOR DISTRICTS

1. In FY 2025, each district superintendent, in consultation with the district's technology program personnel, should review the information from this report and implement each of the relevant district recommendations to increase efficiency, improve service levels, and/or achieve cost-savings.

2. For districts that were unable to provide certain information during this review pertaining to their technology programs (e.g., network usage levels), technology program personnel should begin collecting and monitoring this data on an ongoing basis.

3. Technology program personnel should provide an annual report to the district superintendent regarding the status of the technology program using the measures included in this review.

4. Districts should continue investing in network bandwidth, especially those experiencing capacity issues.

5. Districts should look to their high-performing peers to determine strategies for becoming more cost-effective.

SUMMARY OF RECOMMENDATIONS FOR THE MISSISSIPPI DEPARTMENT OF EDUCATION (MDE)

1. To aid school districts in creating technology and disaster recovery plans, MDE should develop a plan template and provide guidance documents for technology staff to use when developing these plans.

2. MDE should periodically (e.g., every two years) conduct the following surveys, which would enable it to better understand the resources and support needed to assist districts in improving their technology programs:

   a. a detailed technology survey for district technology leaders, and,

   b. a detailed survey for teaching staff regarding technology use in the classroom.