



## Background

In January of 2019, The Innovation Project implemented research in order to learn about storm impact in TIP districts that were declared disaster areas. These counties include those impacted by Hurricane Florence (Craven, Onslow, Wayne, Lenoir, Cumberland), and one impacted by Hurricane Matthew (Edgecombe). Former state superintendent Mike Ward conducted the inquiry.

The purpose of this research was to learn from the experiences of school leaders in LEAs impacted by severe weather. TIP members wanted to discern how they could be of support in addressing ongoing challenges related to these storms, and how they might support innovative planning for large-scale emergencies in the future. This research focused primarily on the impact of the storms on teaching and learning. With that in mind, the emphasis was placed on students and school personnel who are directly involved with instruction.

The following sections describe the perspectives of selected central office leaders and principals in six TIP school districts that were impacted by Hurricanes Florence and Matthew. These perspectives were derived largely from interviews. The summary of these perspectives was further informed by responses to selected-response and constructed-response items in a survey completed by central office leaders and principals in these districts. Pages 1-5 describe the storms' impact and aftermath, along with participants' reflections on policy revisions/flexibilities that might be needed. Pages 6-7 report the responses of participants to an invitation during the interview to describe innovations that could diminish the time that students are separated from the teaching/learning/support systems of school in the wake of a weather disaster. Page 7 reports the results of a similar inquiry with a Florida school crisis management expert. Appendix A on Page 8 details the research process. Appendix B on Pages 9-10 provides guidance on the interpretation of the results in the spreadsheets of results from the survey completed by participants.

## General Impact of the Storms

1. Hurricanes Florence and Matthew were devastating for the hardest hit districts and schools.
  - a. Descriptions of the impact of the storms included the words catastrophic, significant, incredible, major, extreme, disruptive, immense, devastating.
  - b. The impact was manifested in flooding, water damage, wind damage, loss of electricity and connectivity for extended periods of time.
  - c. Nearly half of the participants described the damage to school facilities as extensive.
  - d. Some, whose schools had been spared, spoke of the damage in the communities that surrounded their schools.
  - e. *And, according to the majority of those interviewed, more severe storms are likely to continue. A few speculated that this could be as frequently as every year or two.*

## Impact on People

### 1. Impact on students

- a. Nearly 70% of the interviewees reported a significant number of students who'd been displaced from their homes.
- b. Two-thirds of the individuals who mentioned student displacement said that a number of these students are still not able to return home. Students and their families lived (and some still live) with relatives or friends in a single hotel room. Some children lived apart from their parents and siblings, having been spread across multiple households.
- c. Homelessness among students increased. There was significant discussion of McKinney-Vento provisions that allowed for transporting students to their base schools from outside of school attendance zones and even across LEA lines.
- d. Half of the interviewees spoke of psychological trauma among students that manifested itself in anxiety, stress, depression, emotional outbursts, and acting out. Some recounted instances of students who, months later, continued to be anxious about rain and wind.
- e. In response to the trauma experienced by students, the participants spoke of providing counseling, mental health services, and social worker supports to students. They also spoke of the need to secure more of these services and to sustain these services.
- f. Only a few participants spoke of the need to track students in order to continue to be aware in the future of who was deeply impacted. In the survey, the idea of a system to follow such students was rated as moderately important, and participants were split as to whether the responsibility for such a system resides at the state or local level.
- g. Several participants noted that, while the storm affected a large swath of the community in many places, those families with the least, who often resided in the lowest elevations, were typically the most heavily impacted.
- h. Several noted the importance of rapidly returning students to school as essential to restoring a sense of normalcy. This benefited parents/caregivers as well.

### 2. Impact on staff

- a. Three-quarters of the participants spoke of at least one staff member who'd been displaced by the storms. Others added reflections on the number of staff members whose residences had been significantly damaged.
- b. Several described the emotional toll of the storm on staff members. Many were dealing with their own losses while comforting students about theirs. A few mentioned staff members' grief at the loss of their classroom resources and materials...and, in some cases, the room itself.
- c. A few interviewees noted that increased absenteeism among staff members once schools reopened compounded the impact of time lost while schools were closed.
- d. A couple noted the importance of contact and updates from administrators to staff members in the days following the storm.

## Impact on Teaching and Learning

### 1. Impact on the instructional program

- a. The theme that arose most consistently among the interviews was the significant loss of instructional time. This concern was mentioned by every interview participant and noted by two-thirds of survey respondents in the constructed response item that queried them about the ways in which students and staff were most heavily impacted. This dimension of impact was described in different ways by different people.

- i. Some expressed the impact in terms of number of days missed.
  - ii. Some described the return to school, in spite of the roughly two weeks they'd been in session prior to the storm, as a restart of the school year.
  - iii. Some expressed concern about the potential impact of the lost time on student learning, achievement, and accountability.
  - iv. Some mentioned teacher absenteeism as compounding the impact of lost time.
- b. Several interviewees pointed out that the storm had reduced time and resources for professional development.
- c. A couple of participants noted that recently adopted strategic aims, new projects, key initiatives, and innovations had been sidelined.
- d. Several talked about reorganizing calendars, instructional plans, streamlining content, adjusting pacing.
- e. A few mentioned the likelihood of drops in student performance.

### Support for the District and Schools

1. Participants were largely positive about the support that their schools/districts had received.
  - a. They were most positive about faith-based organizations and community organizations.
  - b. There was praise for other local government agencies with whom the LEAs interfaced before, during and after the storm.
  - c. Perceptions about FEMA and DPI, though more positive than negative, were a little more mixed.
2. Participants were, in turn, proud of the support that their schools/districts had extended.
  - a. Their schools served as shelters and they and their colleagues helped staff the shelters.
  - b. Their schools served as bases for emergency services—one even served as a hospital.
  - c. District resources undergirded emergency response; for example, school districts supplied fuel for emergency vehicles.
  - d. Staff and students went out into the community to help with food distribution, clean-up, and provision of resources to families.

### Policy Flexibility Needed

1. In the interviews and in the survey, participants were asked about policy revisions and flexibility that are needed in times of weather crises. Interviewees also noted whether they believed the jurisdiction for such policies resides at the local, state, or federal level. The following categories of flexibility were those that were most frequently stressed.
  - a. *Calendar, days of instruction.* The need for calendar flexibility was mentioned by two-thirds of interviewees. In the survey, respondents rated the importance of policy revisions related to allowable days of instruction and student attendance at 3.9 on a 4-point scale. The majority of survey respondents indicated that the jurisdiction for such policies resides at the state/federal level.
  - b. *Teaching and learning.* The development and expansion of personalized learning was rated as important by survey participants (3.0 on a 4-point scale) and even higher by respondents in the most heavily-impacted locations (3.3 on a 4-point scale). The expansion of alternative settings for instruction, such as community-based facilities and online classrooms, was also rated as moderately important (2.9 on a 4-point scale). However, survey respondents in the hardest-hit locations rated policy revisions for alternative settings higher (3.3 on a 4-point scale). The majority of the participants indicated that jurisdiction for these policy revisions/flexibility resides at the local level.

- c. *Accountability.* There was consensus among those who addressed this issue that the state testing program should still be implemented. However, the importance of policy revisions/flexibility related to accountability was rated 3.5 on a 4-point scale. Just under half of the interviewees mentioned the need for some type of relief on accountability. The consensus of a significant majority of survey respondents was that jurisdiction for such flexibility resides at the state/federal level rather than at the local level.
- d. *Transportation.* Half of the interviewees spoke of increased costs of transportation related to the re-routing of buses that was prompted by damaged roads and picking up students who'd been displaced to a location outside their school attendance zones. Relief from state efficiency formulas and the need for reimbursement by the state for extra transportation costs were cited most frequently.
- e. *Personnel/human resources.* In the survey, the importance of policy revisions/flexibility related to staff attendance and contract calendar policies (including offsite work rules) was consistently ranked high (3.3 on a 4-point scale), as was the importance of latitude with payroll policies (3.2 on a 4-point scale). The majority of survey respondents believed, at a rated of more than 2 to 1, that jurisdiction for these policies resides at the local level. Emergency provisions for licensure, work hour constraints, and payroll policies were ranked moderately high and most respondents indicated that jurisdiction for these policies resides at the state level.
- f. *Fiscal management.* Roughly a third of interviewees mentioned financial flexibility. Issues included a desire for greater latitude in moving funds among line items, the belief that allotments should be held harmless for a year in the event of student enrollment drops, and a need for flexibility in competitive procurement processes. Policy revisions/flexibility with such policies were consistently rated as important on the survey (3.3 to 3.6 on a 4-point scale). Survey respondents, with relatively few exceptions, indicated that jurisdiction for such latitude was at the state/federal level.
- g. *Class size.* A few individuals mentioned the need for flexibility with state class size regulations during the interviews.

## Emergency Planning

1. Just over half of participants spoke positively about their emergency response and operations plans and about collaboration with other agencies during and after the storm. That said, another 7 interviewees expressed concerns about one or more dimensions of the plan or the coordination and execution of the plan by the LEA and partner agencies.
2. Half of the participants believed that the processes set up for locating and checking in with staff members and students had worked well. A few others, however, stated that these processes needed improvement.

## Pride in Schools in the Crisis

1. Participants were proud of the fact that staff and students took to the streets, getting food and supplies into the community and helping with cleanup.
2. Schools served their communities as shelters...in several instances, on short notice. Staff members worked in the shelters, principals stayed at the shelters, and teachers visited their students in the shelters.
3. LEAs were a key support to other agencies.
4. Some educators set up spontaneous learning sessions in the community.
5. Students banded together to support one another's schools.

## Appreciation

There were several expressions of appreciation.

1. A number of participants expressed gratitude for acts of kindness, support, and assistance from so many organizations.
2. There was affirmation of the additional appropriations from the General Assembly.
3. Some interviewees expressed appreciation for the fact that staff members were paid for days missed.

## What's Next?

**If we combine the most consistently voiced concern (loss of instructional time) with the belief that damaging weather events are likely to persist, we are obliged to ask: *What might we do a) diminish the impact of future storms on teaching/learning and b) sustain support to traumatized students?***

1. Interview participants offered a number of recommendations and perspectives in response to this question.
  - a. Over three quarters of those interviewed discussed implementing an innovation that employed the internet to diminish the time students are separated from instruction.
    - i. Over half of the interviewees recommended housing instruction online. A third recommended developing materials and pre-loading pre-arranged websites as preparatory steps in anticipation of extended school closure in a weather crisis.
    - ii. Nearly half of those interviewed spoke of their implementation of, or plans to implement, or desire to implement a 1-to-1 device program.
    - iii. Even as they noted the usefulness of online delivery of instruction to diminish the time that students are separated from instruction, half of the respondents pointed out that such a solution depended on access to the internet and electrical power.
    - iv. Concerning the latter, participants offered a number of ideas: mobile hotspots/charging stations, rapid response internet restoration by service providers, satellite-based delivery of internet, universal access plans for citizens.
  - b. Nine individuals recommended expanded use of community facilities and/or shared use of limited school facilities as they reopen.
    - i. Community facilities: Several participants recommended pre-arranged locations that could serve as teaching/learning spaces. Some recommended advance resolution of insurance and transportation issues related to the use of such facilities.
    - ii. Shared use of school facilities ideas: A few of the participants recommended sharing school facilities when the nature of storm damage necessitates re-opening schools on a staggered basis. One plan would be an A-day/B-day alternating schedule for shared use of a facility by students from different schools. Such a plan would be accompanied by the use of pre-loaded and updated devices on the days that students are not at the school. Another option would utilize morning and afternoon shifts for students from different schools.
  - c. Several participants offered the idea of a mobile school. Options included having a mobile school, a modular-unit school, a field (high quality, climate-controlled, tent-based) school, and/or classroom buses at-the-ready as part of the state's emergency response system.
  - d. Three individuals recommended that LEAs work out advance mutual assistance plans. Elements of such a plan differed across these conversations, but included such things as:

- i. Forming and training a rapid-response team of superintendents and their key colleagues to convene with leadership teams in the impacted districts.
  - ii. LEAs working out systems in which different districts send various resources on a rapid response basis into impacted areas. Obligations to provide different types of resources to support various sectors of school operations could be divided among non-impacted districts.
- e. Some additional food for thought.
- i. Participants revisited the issue of student trauma and cautioned that restoration of teaching/learning processes are important, but not sufficient. Immediate and sustained counseling, mental health, and social work supports are critical.
  - ii. While web-based innovations for rapid restoration of teaching and learning processes came up most often, several individuals cautioned that steps be taken to ensure that such a system doesn't further exacerbate inequities and gaps for disadvantaged students.

### **Interview with Florida crisis-management expert:**

1. Measures to expeditiously restore a teaching/learning environment.
  - a. This participant observed right away that Florida, which has dealt frequently with hurricanes, "does not pay to help get a district back on its feet." He then proceeded to make the following recommendations:
    - i. Close down shelters efficiently to expedite the return of students.
    - ii. Focus construction and maintenance on "hardening" schools. Build schools to better withstand intense disasters.
    - iii. He liked the idea of a centrally based system of mobile trailers or "bus classrooms" with ready-to-go learning spaces. He noted the importance of careful planning of routes to move such instructional spaces. But he also said that Florida does not provide such resources and then asked, "Is it scalable?"
    - iv. Open schools on a staggered basis as they become ready. Use an alternating day schedule or shared morning/afternoon schedules for groups from different schools.
    - v. Pre-clear other facilities in the community for use as temporary classroom space. Pre-plan transportation systems for getting students to these locations.
    - vi. Web-based solutions are viable, but this should be a "very temporary" solution. Partner with mobile providers in advance to expeditiously set up mobile stations in the wake of a storm.
    - vii. Have a robust food delivery system that can replenish supplies expeditiously, especially when schools have served as shelters.
    - viii. Provide support for traumatized students and staff. Florida has a contractual agreement with a private organization to get additional counselors, social worker, mental health professionals into disaster areas.

### **For Further Research:**

Knowledge Works; Follow-Me Schools. "These schools use smart contracts, learner resource accounts, and searchable and customizable repositories of vetted educational options to configure themselves around students wherever they are."