

# TEACHING & LEARNING IN THE TIME OF COVID-19

## RESEARCH BRIEF: FOOD INSECURITY, DIGITAL DIVIDE, WORK, & CAREGIVING



October 1st, 2020

photo by Julie Ann Matonis, Northside ISD

# ABOUT THE URBAN EDUCATION INSTITUTE

## OUR MISSION

The Urban Education Institute at UTSA produces scientific research to raise educational attainment, advance economic mobility, and help people achieve their potential in the greater San Antonio region.

We pursue our mission by (1) producing rigorous and actionable analysis that supports education policymaking, program implementation, and philanthropic giving; (2) convening community leaders to address entrenched challenges that harm education and human development; and (3) training the next generation of social scientists and educators to address education challenges through inquiry, analysis, and discovery.

# INTRODUCTION

How do you feel when you are hungry? Are you at your best? We all have basic needs that must be met if we are to pursue and realize our fullest potential (Maslow, 1962). This is true for all of us. It is especially true for children because early development affects later development (Heckman & Kautz, 2013).

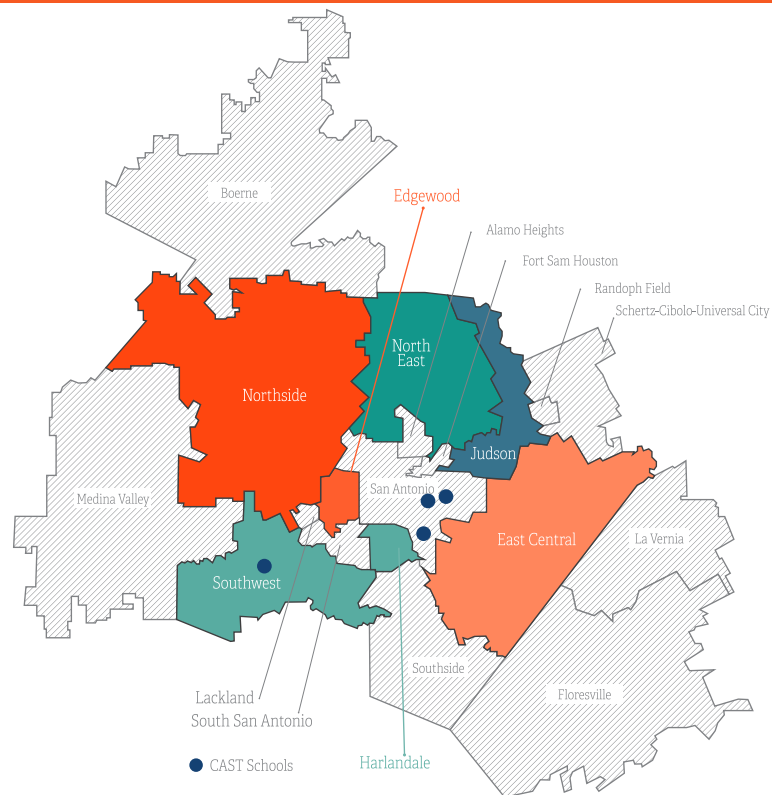
Today, we are seeing increasing attention given to narrowing the digital divide, as there should be. But just as the pandemic has caused us to recognize that lacking technology is a barrier to learning, we too should recognize how hunger and larger issues of family instability harm a child's growth.

In this third report on teaching and learning during the Spring 2020 pandemic, we present survey research findings that describe the socioeconomic context our public school families lived through. Readers will learn about how 26 percent of families reported being without money to buy food when they ran out, and about how this food insecurity was negatively associated with student engagement. In the end, we will see how vital our public school systems are to bridging divides—not just in technology—but also food, safety, and security.

This groundbreaking, community-wide survey of the most important members of our San Antonio educational ecosystem—students, parents, and teachers—would not have been possible but for the participating school districts, in alphabetical order: East Central, Edgewood, Harlandale, Judson, Northside, North East, and Southwest. An eighth set of schools that partner with traditional school districts known as the Centers for Applied Science and Technology (CAST) Network also participated. We also want to thank the San Antonio Food Bank and the City of San Antonio’s Office of Innovation for informing us about their work to feed families, connect families to the internet, and for responding to our early findings. These partnerships demonstrate that the values of science – such as truth-seeking, honesty, and discourse – make us stronger together. The authors of this research are deeply grateful for their participation.

## PARTICIPATING SCHOOL SYSTEMS

- CAST Schools
- East Central ISD
- Edgewood ISD
- Harlandale ISD
- Judson ISD
- North East ISD
- Northside ISD
- Southwest ISD



# KEY FINDINGS

*Many San Antonio students faced new and difficult socioeconomic realities while trying to keep up with school demands and academics during the pandemic.*



**Many local families struggled with food insecurity and older teen learners in those homes were less motivated and engaged during distance learning.**

- 26 percent of students and parents surveyed said they were experiencing food insecurity – food ran out and they didn't have money to buy more
- Families in each school system surveyed reported having experienced food insecurity, with the highest rates of 49 percent found in Edgewood ISD and 41 percent in Harlandale and Southwest ISDs
- A higher incidence of food insecurity was correlated with higher numbers of children in households
- Food-insecure high school students were less motivated during distance learning. While food-insecure high school students represented 20 percent of all high school students, they represented 65 percent of high school students who said they never turned in assignments
- Food-insecure high school students were also overrepresented among those who said they were never engaged by school lessons. They represented 25 percent of high school students who said they were never engaged by classroom lessons



**Job losses and the economic downturn have affected many households and caused a significant number of teens to enter the workforce or increase their paid hours. That has made it difficult to keep up with schoolwork.**

- 48 percent of students and parents said they or family members lost a job, work hours, and/or income during the pandemic

- 30 percent of older high school students worked for pay during distance learning and 22 percent of them increased their hours during the pandemic
- 67 percent of employed students said working made it harder to keep up with academics during distance learning
- 34 percent of students and parents reported feeling overcrowded in their homes during distance learning
- About 45 percent of survey respondents said their households were not financially impacted by the pandemic in the spring



**Caregiving responsibilities increased during distance learning, especially among older teens who said the new duties affected their schoolwork.**

- 25 percent of students reported caregiving during distance learning, compared to 19 percent before the pandemic hit
- 59 percent of student caregivers reported difficulties keeping up with schoolwork
- In 6 of 8 school systems surveyed, 20 percent or more of parents and guardians reported caring for four or more children during distance learning at home

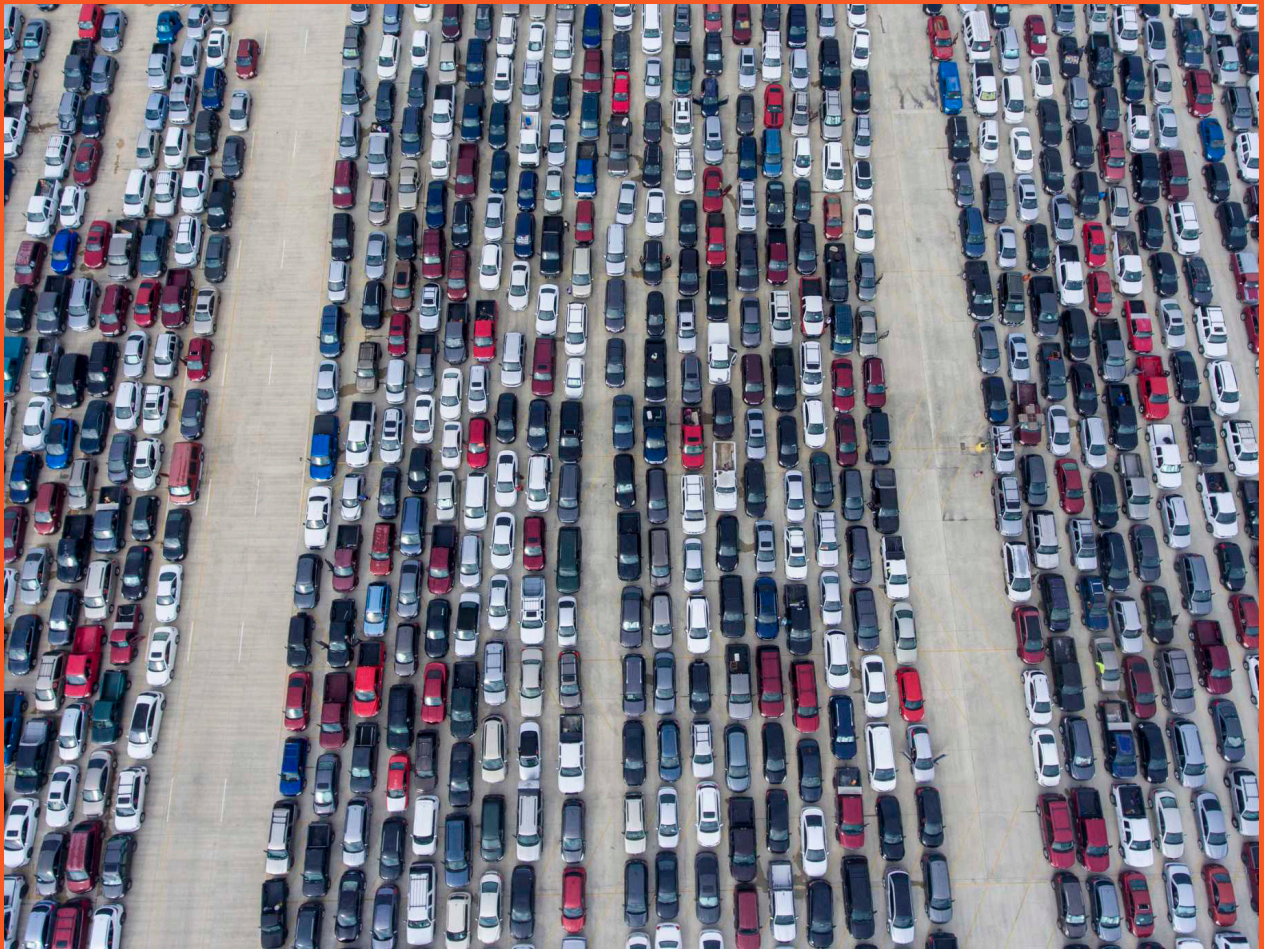


**Most students reported having adequate technology and internet access for distance learning, but disparities exist.**

- 89 percent of students were always able to access the internet for school when they needed it
- 79 percent of students were always able to use a computer/digital device for school when they needed it
- 6 percent of all students surveyed said they mostly used a smartphone for distance learning. Smartphone use rates varied among districts, with higher rates occurring in East Central and Harlandale ISDs
- 64 percent of families purchased or already owned digital technology for student learning at home; while 34 percent received their computer technology from their school

# FOOD INSECURITY

They are symbols of San Antonio's pandemic spring – aerial photos of a vast parking lot crammed with cars as far as the eye can see. Inside the vehicles, families wait for Food Bank volunteers to load heavy boxes of fruit, vegetables, and frozen meals into their trunks.



*Thousands wait at a San Antonio Food Bank distribution at Traders Village in April 2020, a reflection of the economic hardship here. Photo courtesy William Luther/San Antonio Express News*

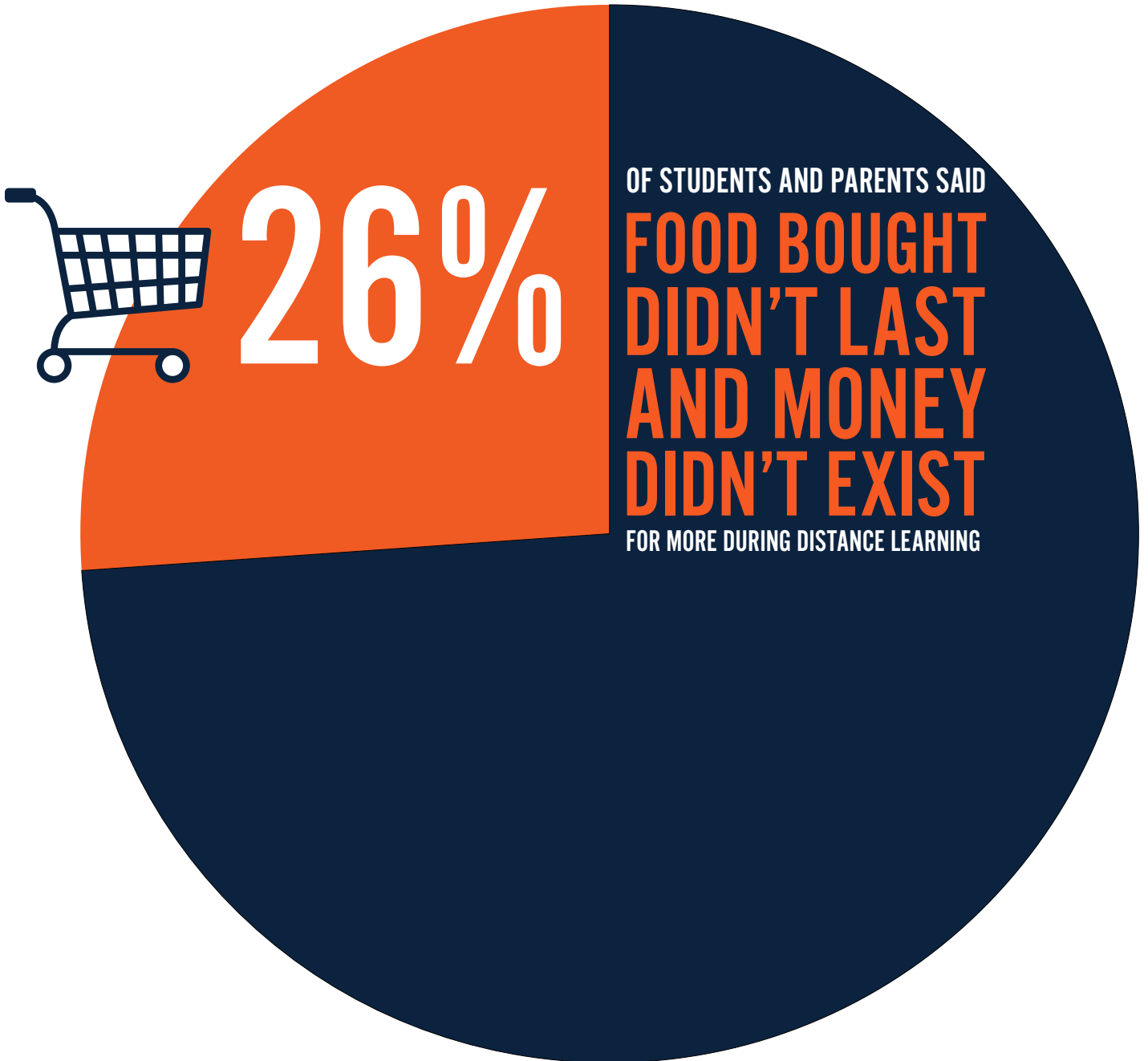
The images by the *San Antonio Express-News* of the food distribution quickly made national headlines. In normal times, such giveaways draw about 200 families. On this day in April, 10,000 waited in line – a reminder of how unprecedented hard times can impact a city already known as one of the poorest in the nation.

Food insecurity is defined as the disruption of food intake or eating patterns because of a lack of money and other resources. Bexar County's pre-pandemic rates of food insecurity already were hovering at about 14 percent in 2018. That number doubled by the spring of 2020 and tripled among households with children, according to a study by the Northwestern Institute for Policy Research using the U.S. Census Bureau Household Pulse Study.

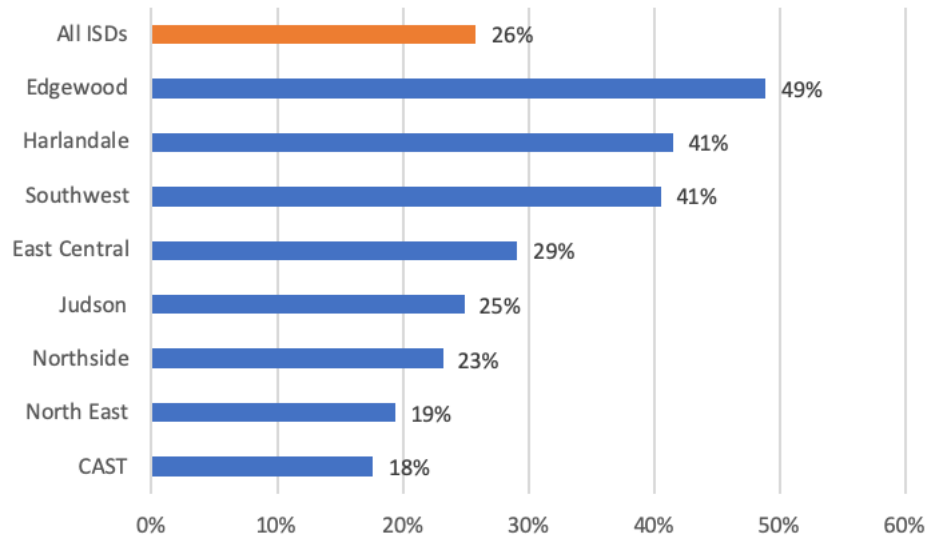
Food insecurity does not necessarily cause hunger, but families in crisis are at high risk for that outcome. Local school districts mobilized quickly during distance learning to distribute to-go meals, but gaps remained. Of those surveyed, 26 percent said they had experienced food insecurity since the pandemic began. Reaching school meals was difficult, many said, because their own transportation was limited and some school schedules for pickup were rigid. Food would run out before money existed to buy more. Close to 50 percent of those surveyed from Edgewood ISD said this was happening regularly at home. Such scarcity has been identified in the scientific literature as a precursor to decreased student learning and school engagement (Ashiabi, 2005). So while much of the talk on distance learning and school reopenings has focused on the digital divide and technology, we must continue to focus on ensuring students' basic needs are met.



# FAMILIES AND FOOD INSECURITY



## PERCENT OF HOUSEHOLDS THAT EXPERIENCED FOOD INSECURITY SOMETIMES OR OFTEN, BY SCHOOL SYSTEM



## WHAT THEY SAID:

*“All of our bills went up, and we were spending more on food. We didn’t get to benefit from the school meals because they had it at midday until a certain time [of the day], and it didn’t work for our schedule.” – Parent of 1st grader with three children at home*

*“I couldn’t keep up with groceries because I have all my grandkids living with me, and they go to school and my grocery bill has been wiped [out]. I had to have a gallon of milk and a loaf of bread every day – it’s nonstop.” – Grandparent of 5th grader with more than five children at home*

*“We were very affected - everyone was at the house... More electricity, more food, more water. We would have to go to the Food Bank when we ran out of food.” – Parent of 3rd grader with five children at home*

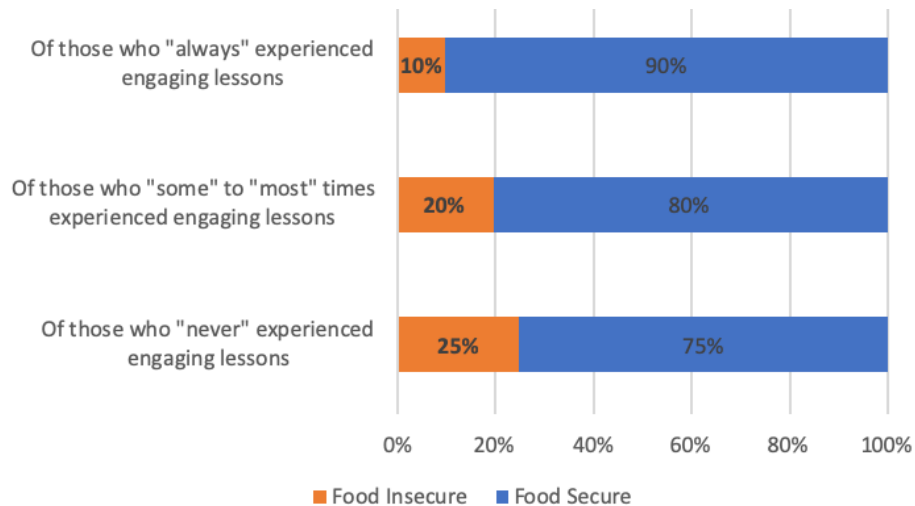
*“I am a small business owner and my business has had to be closed since COVID-19. We are struggling getting food. It is hard because I was one that donated and worked at food banks, and now we need the food.” – Parent of 8th grader with two children at home*

*“It was hard to get enough food to feed the family. We know the school was delivering food to families, but the school was far away, so we couldn’t go all the time. That was really hard.” – 11th grader*

# FOOD INSECURITY AND SCHOOL ENGAGEMENT

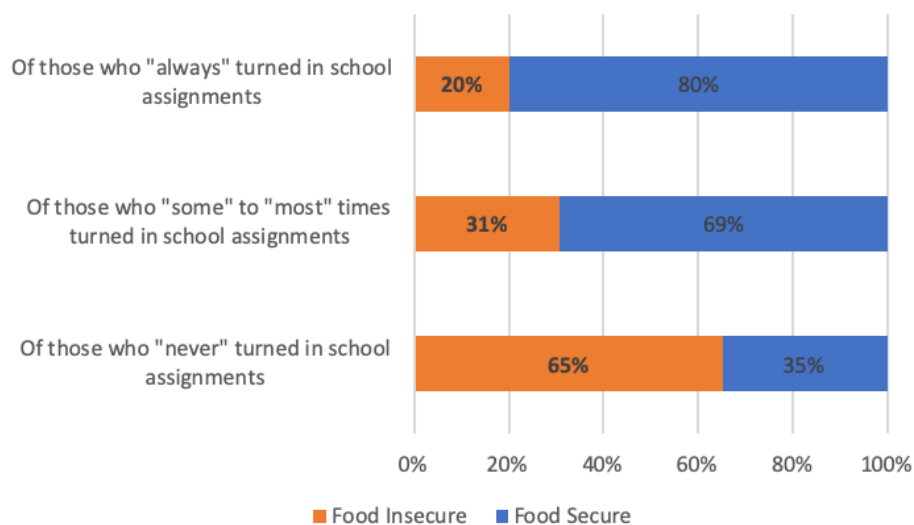
## FREQUENCY THAT FOOD-INSECURE HIGH SCHOOL STUDENTS REPORTED RECEIVING ENGAGING LESSONS DURING DISTANCE LEARNING

Of all high school students surveyed, 20 percent reported experiencing food insecurity.



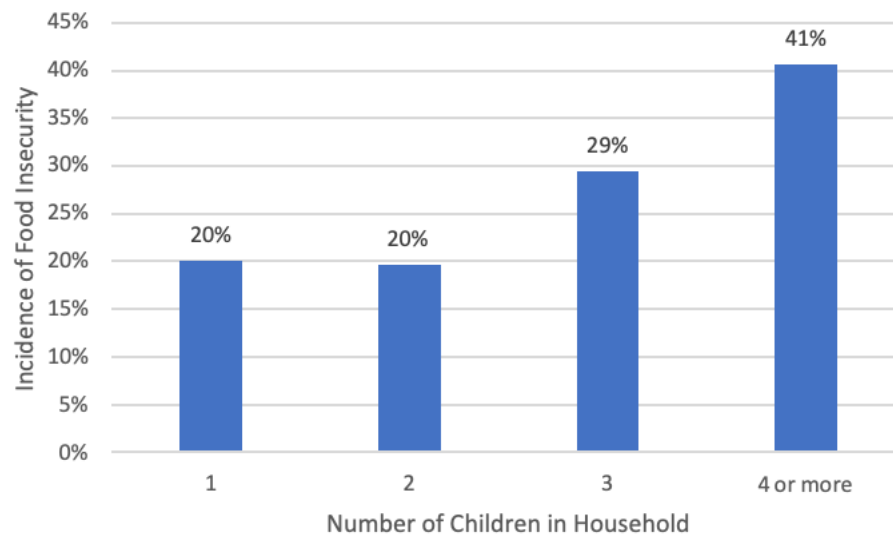
## FREQUENCY THAT FOOD-INSECURE HIGH SCHOOL STUDENTS REPORTED TURNING IN ASSIGNMENTS DURING DISTANCE LEARNING

Of all high school students surveyed, 20 percent reported experiencing food insecurity.

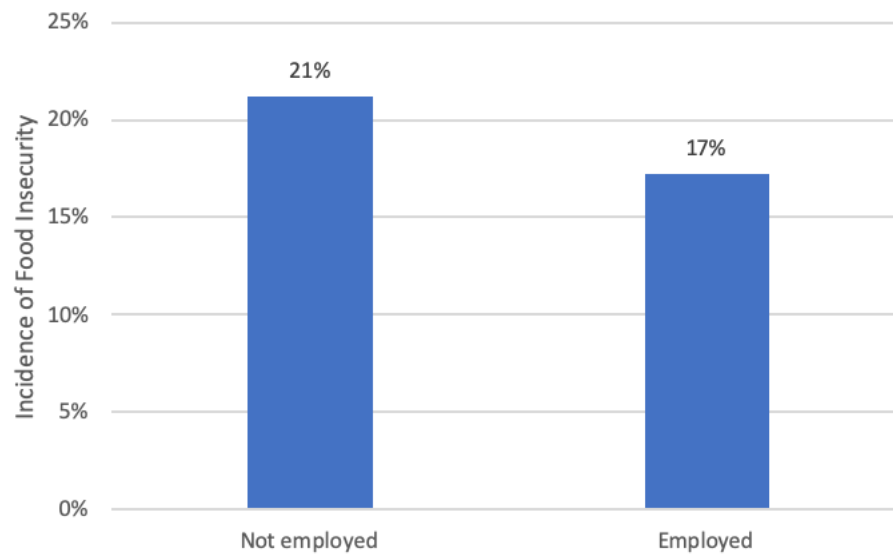


# FOOD INSECURITY AND HOUSEHOLD CHARACTERISTICS

## INCIDENCE OF FOOD INSECURITY RELATED TO NUMBER OF CHILDREN IN HOUSEHOLD



## INCIDENCE OF FOOD INSECURITY RELATED TO PARENT EMPLOYMENT



# WORK, HOME, & FINANCES

About half of the survey respondents said their households either lost income or saw their budgets significantly tighten during the pandemic. Parents lost jobs. Grocery and utility (including internet) bills increased with more people sheltering in place and eating and working at home. Some teens got jobs or upped their work hours to help out. But the stress of it all took a toll on schoolwork. Most employed high school students said their paid work made it harder to keep up academically. That tracks with overall trends in research literature that suggest an intense work schedule – even in “normal” times – can have negative implications on academic achievement (Marsh & Kleitman, 2005, High & Collins, 1991, Tyler, 2003). Other studies, however, have shown that a small amount of work may actually increase school success (Quirk, Keith & Quirk, 2001).

# WHAT WAS THE IMPACT ON WORK, HOME, & FINANCES?



48%

OF STUDENTS AND PARENTS SAID THEY  
**LOST A JOB,  
WORK HOURS,  
AND/OR INCOME**  
DURING THE PANDEMIC

# HOW WERE HOUSEHOLDS IMPACTED BY THE PANDEMIC?



## LOSS OF NET INCOME

Households experienced a loss in net income due to job loss or reduction in hours, and due to increased food and utilities costs that resulted from shelter-in-place requirements.



## OVERCROWDING

Respondents reflected on the challenges of being stuck in the house, including feeling overcrowded, which impacted the ability to concentrate on schoolwork and professional work.



## EMOTIONAL, PSYCHOLOGICAL BURDENS

Families struggled with a variety of emotional and psychological challenges, including missing connections with friends and family; increased stress about finances and meeting basic needs; anxiety about staying healthy; and exacerbated tensions with household members in close quarters.



## GETTING WORK DONE

Parents expressed concern about their children not learning enough during distance learning, and about their inability to adequately support their students in their learning. High school students and parents shared that getting school and professional work done at home could be particularly challenging due to competing demands and/or a lack of resources or equipment.



## ADAPTING TO COVID-19 HEALTH AND SAFETY ROUTINES

Some respondents highlighted challenges related to getting used to new routines for staying healthy in the pandemic – learning how to use face masks, washing hands, and social distancing. Others talked about needing to take care of sick family members.

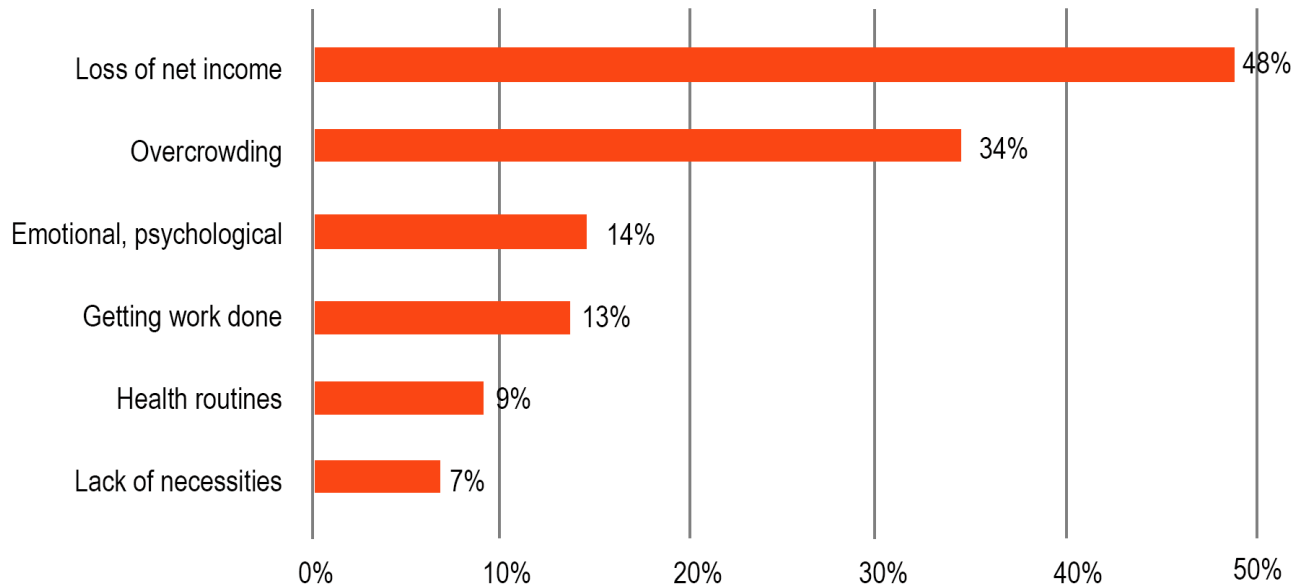


## LACK OF NECESSITIES

Families found it difficult to find basic necessities like toilet paper, cleaning products, and some specific food items.



## HOUSEHOLD IMPACTS OF THE PANDEMIC, REPORTED BY PARENTS AND HIGH SCHOOL STUDENTS



### WHAT THEY SAID:

*“We had to buy more food. Our utilities bill went up, and we really had to make sure we had good internet service because of all of the people using devices in the home. The internet service was so important because of how much we relied on it for school and work.” – Parent of 5th grader*

*“We were greatly affected. My husband works two jobs, and one of his jobs had to let him go. We are greatly behind on our bills, and we can’t find help. It is very bad and is hurting us greatly.” – Parent of 7th grader*

*“You can’t find a job right now, and the food costs rise when the kids are home during the day, all day.”*

*– Parent of 8th grader*

*“We were affected a lot. I was the only one who was working, and I have six kids, so it was very difficult. I got food stamps but not child support.”* – Parent of 9th grader

*“My kids’ mental health was affected because they were stuck in the house and there are a bunch of us. They have all their siblings around all the time. They got angry and upset easily.”*

*– Parent of 8th grader*

*“My kids have special needs, and that was more of a challenge. Having to explain everything to them was hard. I would have anxiety and depression, and that impacted them. It was very stressful. It’s hard for children to accept this situation. It’s frustrating for me because I don’t know what’s gonna happen. It was very hard for them to understand that I don’t have answers. But we hang in there and keep helping each other.”* – Parent of 1st grader

*“[The challenges were] mainly trying to share the devices and juggling work and having my eight kids do work. My calendar was so full. It was very stressful for everyone.”*

*– Parent of 6th grader*

*“Our home is not a conducive environment for learning. It was difficult having to be a teacher for five kids at five different grade levels.” – Parent of 5th grader*

*“We were affected time-wise. We didn’t have the time to do everything. I would take care of my siblings so much, I couldn’t focus on my schoolwork. I also felt trapped inside. My family was paranoid about COVID, so there was lots of handwashing and sanitizing.” – 10th grader*

*“I think the kids were upset by the news. They were worried and asked questions like, ‘Are we going to die?’ Also, the mental strain of thinking what might happen... They were scared and anxious. They were worried about people. Also, they wanted to go out and couldn’t. We had to stop watching the news. We just prayed every day.” – Parent of 4th grader*

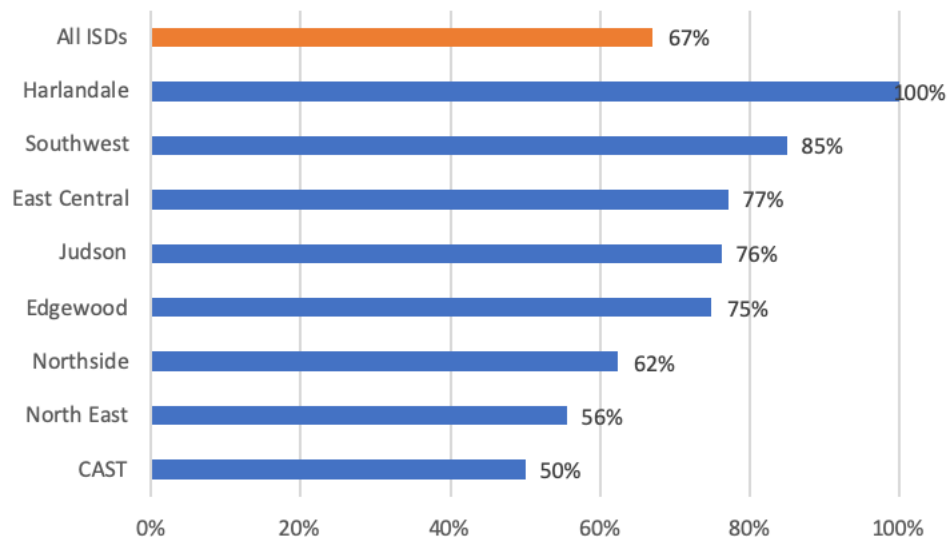
# STUDENTS' SCHOOL AND WORK RESPONSIBILITIES



# 67%

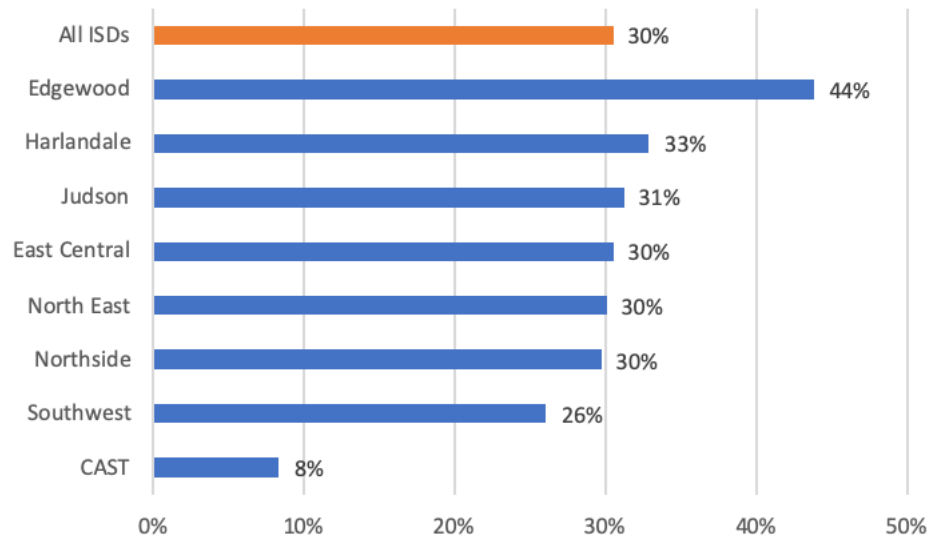
OF EMPLOYED STUDENTS SAID  
WORKING MADE IT  
**HARDER**  
TO KEEP UP WITH  
**SCHOOLWORK**  
DURING THE PANDEMIC

## PERCENT OF OLDER HIGH SCHOOL STUDENTS WHO SAID THEIR EMPLOYMENT MADE IT HARDER TO KEEP UP WITH SCHOOLWORK DURING DISTANCE LEARNING, BY SCHOOL SYSTEM

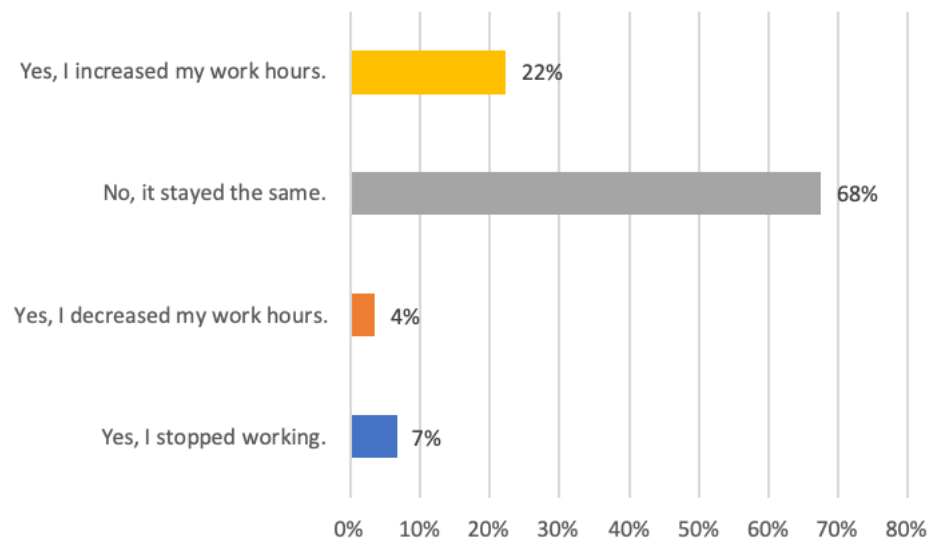


## PERCENT OF OLDER HIGH SCHOOL STUDENTS WHO WORKED FOR PAY DURING DISTANCE LEARNING, BY SCHOOL SYSTEM

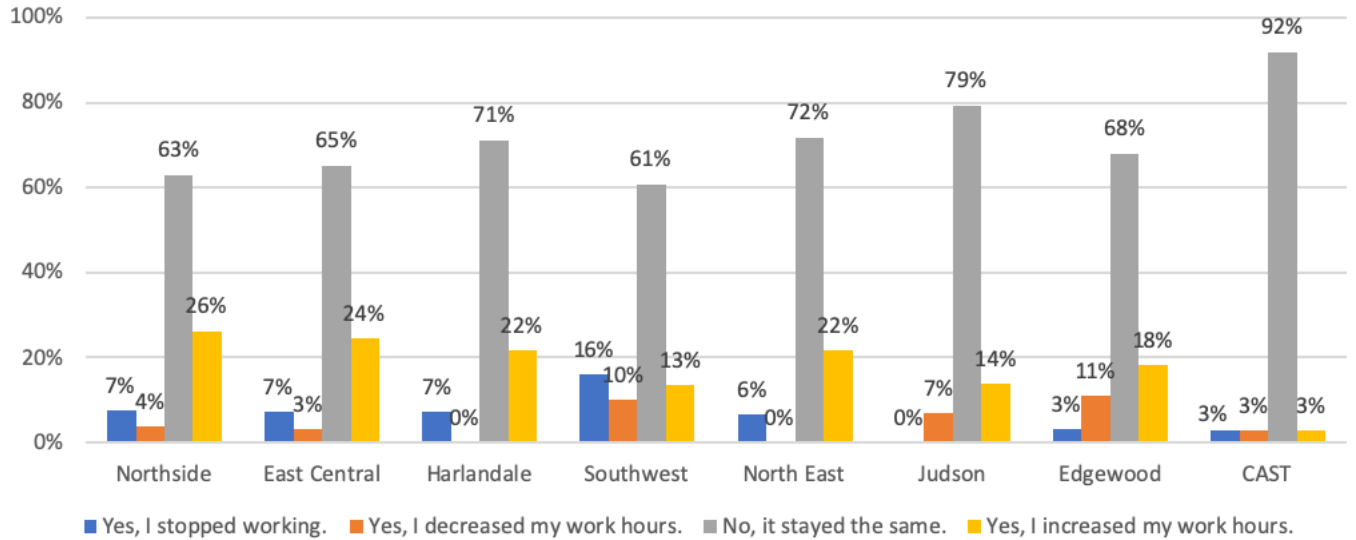
On average, students surveyed in the CAST Network were younger than students in the other ISDs.



## PERCENT OF OLDER HIGH SCHOOL STUDENTS WHO SAID THEIR PAID WORK HOURS INCREASED, STAYED THE SAME, DECREASED, OR STOPPED DURING DISTANCE LEARNING



## PERCENT OF OLDER HIGH SCHOOL STUDENTS WHO SAID THEIR PAID WORK HOURS INCREASED, STAYED THE SAME, DECREASED, OR STOPPED DURING DISTANCE LEARNING, BY SCHOOL SYSTEM



# CAREGIVING AND LEARNING AT HOME

The pandemic and resulting stay-at-home orders severed ties to some of our most important people: the caregivers. Almost overnight, families, single parents, foster care parents and those caring for the sick and the aging were told to stay within their own social bubbles. Many grandmas, grandpas, tíos, tías, teachers, home health aides and senior-day-care workers could no longer comfort students or their family members, leaving individual households to take care of their own while juggling shifting work arrangements, economic hardships, and kids learning at home – often in cramped quarters. In many homes, children stepped forward to feed and look after a younger sibling or grandparent in need. That increased load significantly reduced student caregivers' abilities to keep up with schoolwork. The finding has implications for schools as they continue seeking ways to support students who must juggle learning and caregiving at the same time.

# SCHOOLWORK AND CAREGIVING



59%

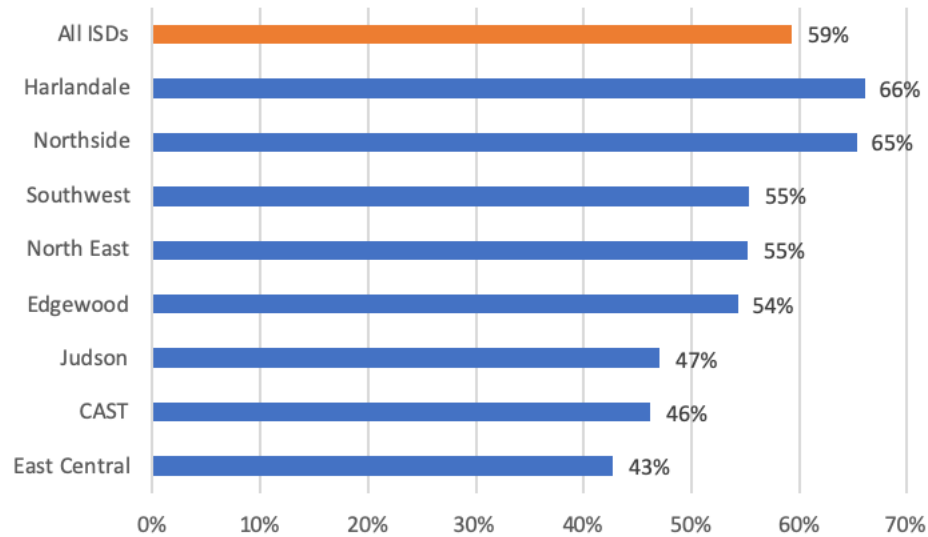
OF STUDENTS WHO HAD  
CAREGIVING RESPONSIBILITIES SAID

**CAREGIVING  
REDUCED ABILITY  
TO KEEP UP  
WITH SCHOOL**

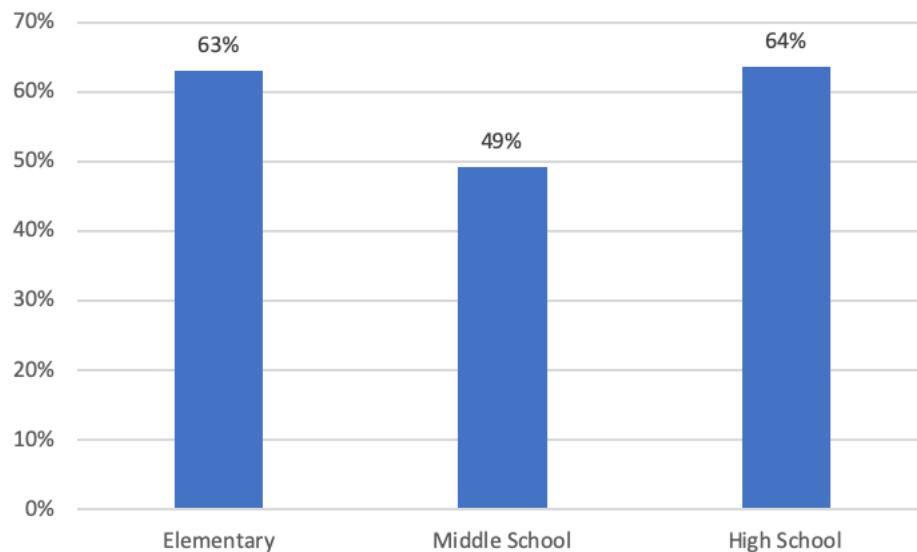
DURING THE PANDEMIC



## PERCENT OF STUDENTS WITH CAREGIVING RESPONSIBILITIES WHO FOUND IT DIFFICULT TO KEEP UP WITH SCHOOL, BY SCHOOL SYSTEM

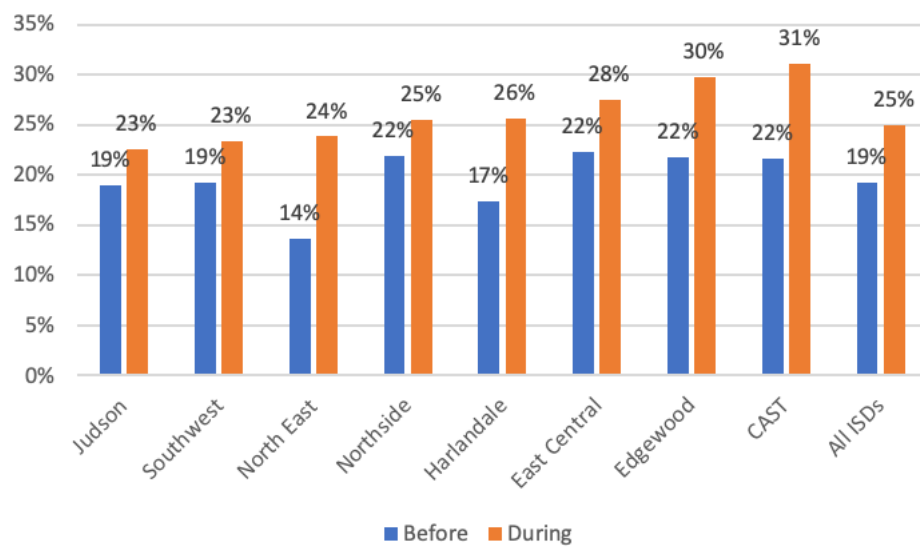


## PERCENT OF STUDENTS WITH CAREGIVING RESPONSIBILITIES WHO FOUND IT DIFFICULT TO KEEP UP WITH SCHOOL, BY SCHOOL LEVEL

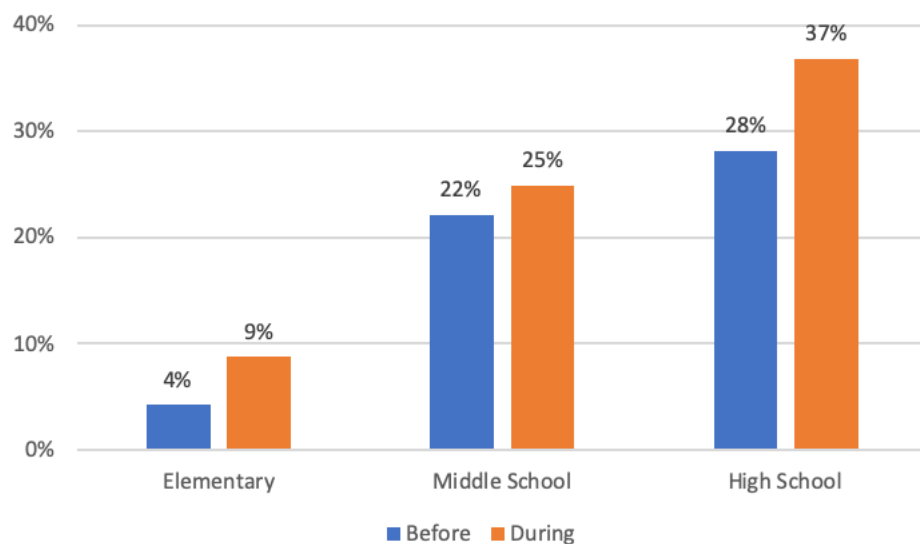


# CAREGIVING DUTIES BEFORE AND DURING THE PANDEMIC

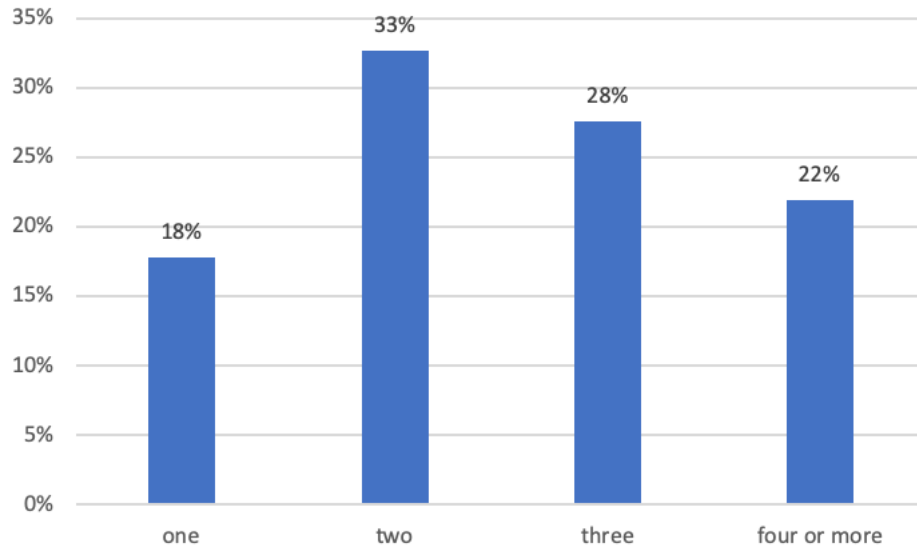
## PERCENT OF STUDENTS WITH CAREGIVING RESPONSIBILITIES BEFORE DISTANCE LEARNING COMPARED TO DURING DISTANCE LEARNING, BY SCHOOL SYSTEM



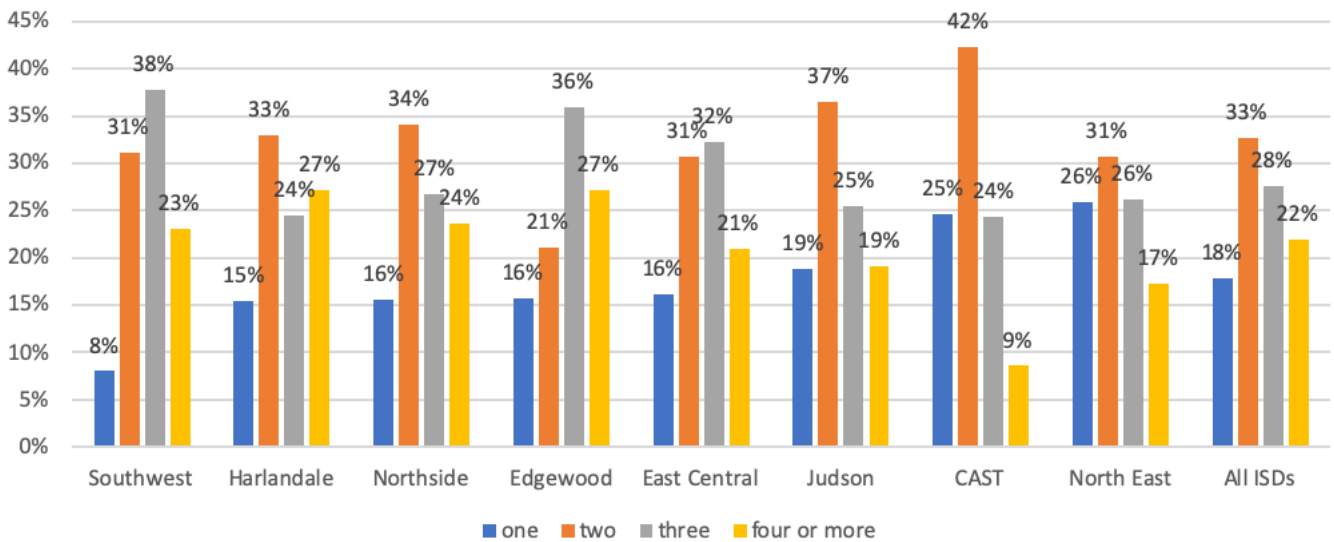
## PERCENT OF STUDENTS WITH CAREGIVING RESPONSIBILITIES BEFORE DISTANCE LEARNING COMPARED TO DURING DISTANCE LEARNING, BY SCHOOL LEVEL



## NUMBER OF CHILDREN PARENTS WERE RESPONSIBLE FOR DURING DISTANCE LEARNING



## NUMBER OF CHILDREN PARENTS WERE RESPONSIBLE FOR DURING DISTANCE LEARNING, BY SCHOOL SYSTEM



# DIGITAL ACCESS AND EQUITY

For all the initial concerns about San Antonio's digital divide, our survey – taken in the spring of 2020 – found that most students reported having adequate technology and internet access for distance learning. The landscape likely has improved because school districts mobilized quickly and have been continually handing out computers, tablets, and internet hot spots. These technology costs were unplanned and caused districts to seek out external support still to this day.

In spite of local efforts, six percent of respondents said they primarily used a smartphone for schoolwork. This trend varies among school districts, with low-income and rural areas showing less likelihood of being able to use the internet for school whenever they needed it and more prevalence of students using smartphones.

# WHAT ACCESS DID FAMILIES HAVE TO TECHNOLOGY AND THE INTERNET?



89%

OF STUDENTS WERE

**ALWAYS**  
ABLE TO USE  
THE INTERNET

FOR SCHOOL WHEN THEY NEEDED IT



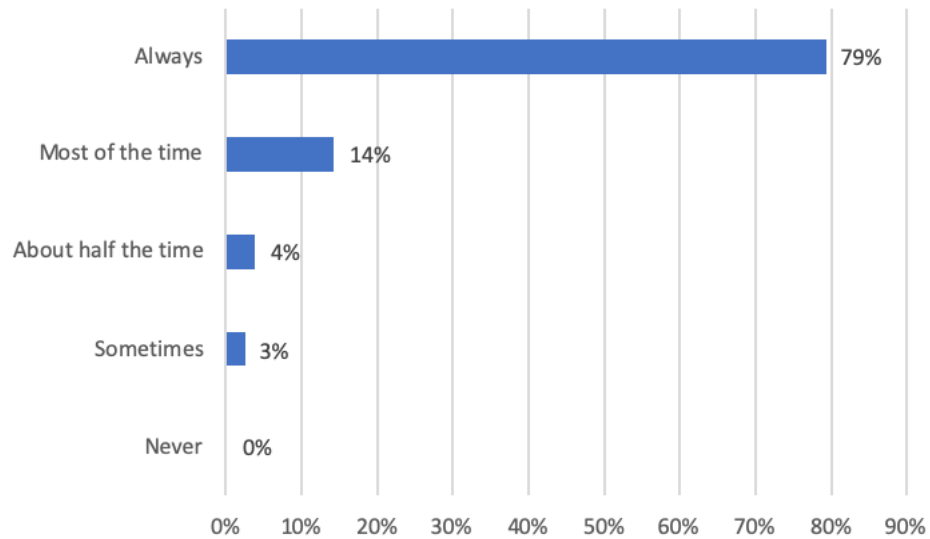
79%

OF STUDENTS WERE

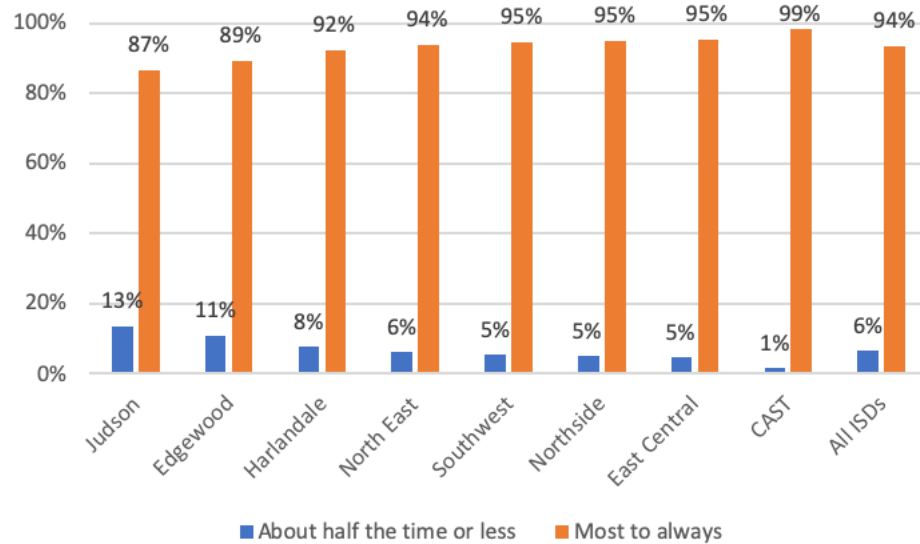
**ALWAYS**  
ABLE TO USE  
A COMPUTER

FOR SCHOOL WHEN THEY NEEDED IT

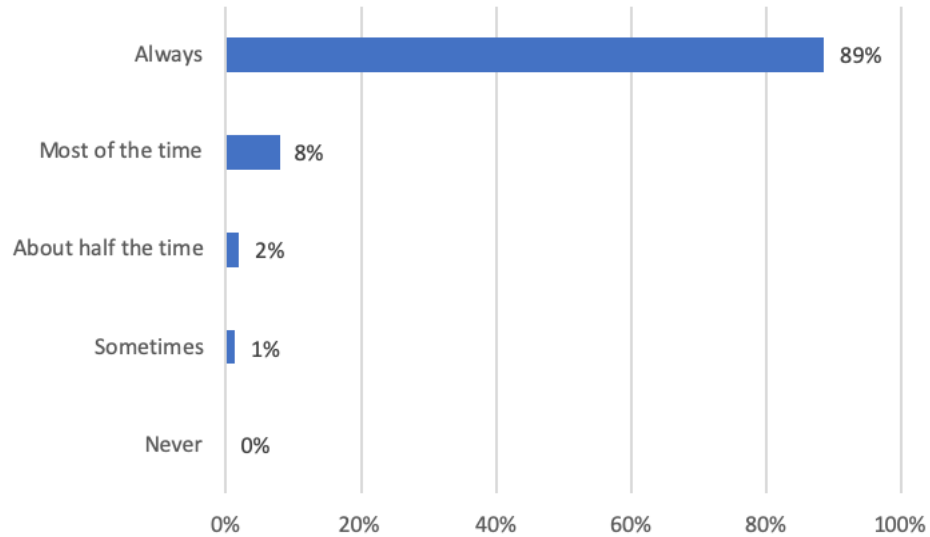
## HOW OFTEN STUDENTS WERE ABLE TO USE A COMPUTER DEVICE FOR SCHOOLWORK WHEN THEY NEEDED IT



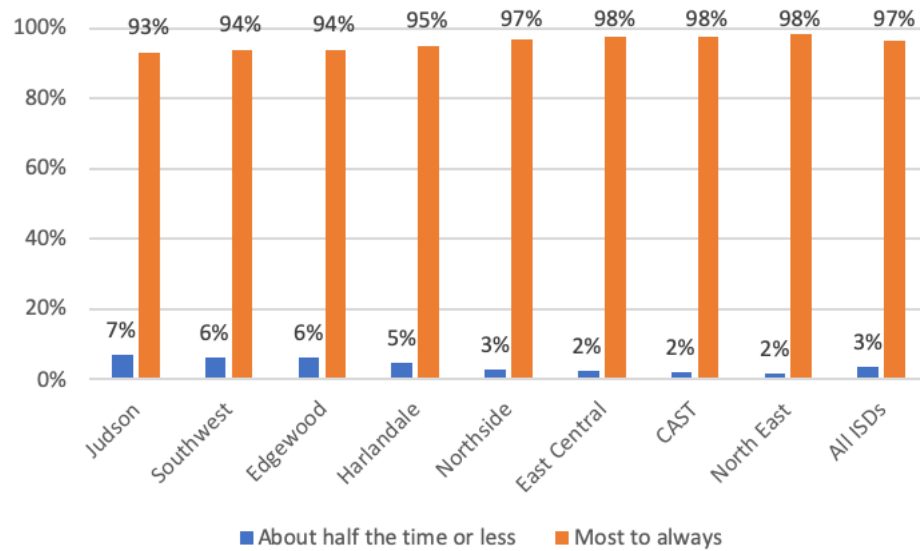
## HOW OFTEN STUDENTS WERE ABLE TO USE A COMPUTER DEVICE FOR SCHOOLWORK WHEN THEY NEEDED IT, BY SCHOOL SYSTEM



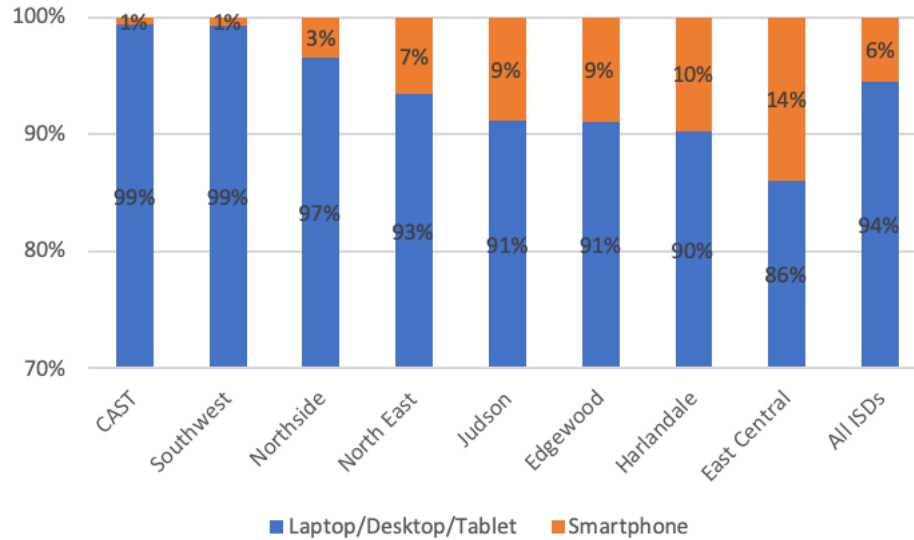
## HOW OFTEN STUDENTS WERE ABLE TO USE THE INTERNET FOR SCHOOLWORK WHEN THEY NEEDED IT



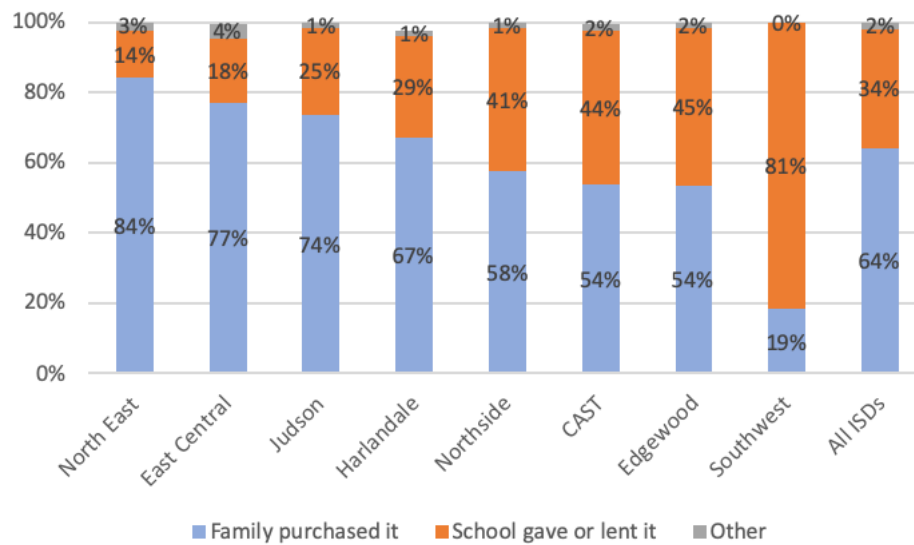
## HOW OFTEN STUDENTS WERE ABLE TO USE THE INTERNET FOR SCHOOLWORK WHEN THEY NEEDED IT, BY SCHOOL SYSTEM



## TYPE OF DEVICE STUDENTS MOSTLY USED FOR SCHOOLWORK, BY SCHOOL SYSTEM



## HOW STUDENTS RECEIVED THEIR DEVICE, BY SCHOOL SYSTEM





# METHODOLOGY

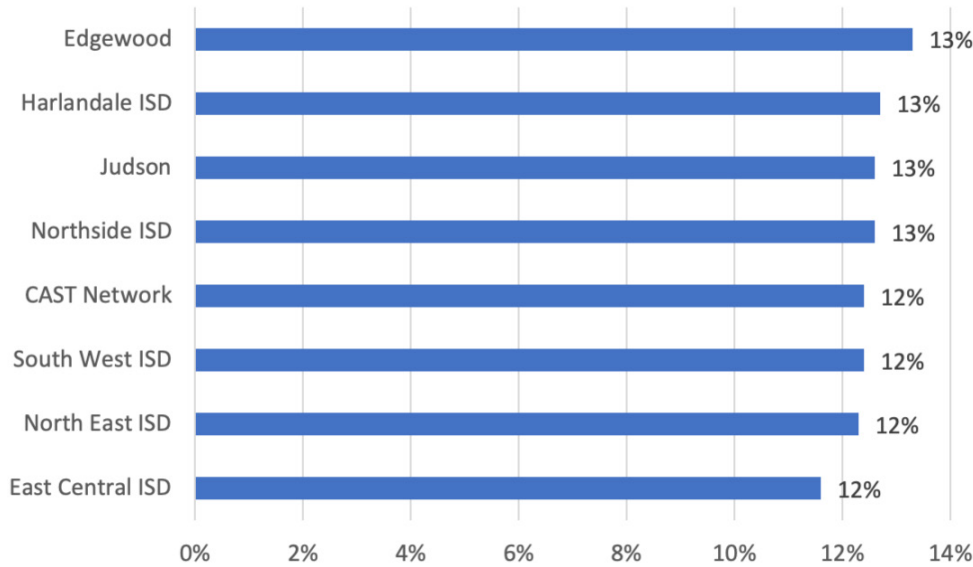
## **SAMPLING STRATEGY**

We adopted a stratified random sampling scheme to ensure the respective representation of all K-12 students in participating seven independent school districts (ISDs) and CAST Network schools. For the purposes of this section, we use the term “school system” to include the ISDs and CAST Network.

We utilized student directories provided by participating school systems to determine the appropriate sample sizes. This approach enhanced our ability to calculate the weighted average of survey responses within and across school systems. We targeted around 136 randomly selected students to interview in each of the eight school systems. Samples were split proportionally according to the distribution of students by grade.

We interviewed parents of students ages 15 years old or younger, while students 16 or older were interviewed directly. A total of 1,125 parents and students participated in this study, comprised of 884 parents and 241 students from the ISDs, and 104 parents and 36 students from the CAST Network. See figure below for the detailed distribution of the sample across the participating school systems.

## PARENT AND STUDENT SURVEY SAMPLE DISTRIBUTION BY SCHOOL SYSTEM



### OPEN-ENDED ANSWERS

For the student and parent surveys' open-ended answers, we conducted human-based content analysis to identify the manifest and latent ideas within response data. We developed a coding system per question that was uniformly applied to quantify qualitative data. Researchers discussed their approaches and questions that arose during coding to improve inter-rater reliability.

### LIMITATIONS

This study may have two sources of biases stemming from the voluntary nature of study participation. Specifically, respondents voluntarily participated in the study as well as answered the questions. If certain characteristics of the respondents were correlated with survey response rates, our study results should be interpreted with caution.

# REFERENCES

- Ashiabi, G. (2005). "Household food insecurity and children's school engagement." *Journal of Children and Poverty*, 11(1), 3-17
- Butler, R., & Mordecai, N. (1986). "Effects of no feedback, task-related comments, and grades on intrinsic motivation and performance." *Journal of Educational Psychology*, 78(3), 210.
- Heckman, J., & Kautz, T. (2013). "Fostering and Measuring Skills: Interventions That Improve Character and Cognition." Website: <https://doi.org/10.3386/w19656>.
- High, R., & Collins, J. W. (1991). "High school student employment: At what cost?" *The High School Journal*, 75(2), 90-93.
- Marsh, H. W., & Kleitman, S. (2005). "Consequences of employment during high school: Character building, subversion of academic goals, or a threshold?" *American Educational Research Journal*, 42(2), 331-369.
- Maslow, A. H. (1962). *Toward a psychology of being*. Princeton: D. Van Nostrand Company.
- Quirk, K. J., Keith, T. Z., & Quirk, J. T. (2001). "Employment during high school and student achievement: Longitudinal analysis of national data." *The Journal of Educational Research*, 95(1), 4-10.
- Tyler, J. H. (2003). "Using state child labor laws to identify the effect of school-year work on high school achievement." *Journal of Labor Economics*, 21(2), 381-408.

# ACKNOWLEDGEMENTS

## **ABOUT THIS RESEARCH BRIEF**

This research brief was created through the contributions of a team at the Urban Education Institute that included our entire staff, a team of UTSA student field researchers, and through the insights and work of other contributors.

## **OUR STAFF**

Michael Villarreal, Ph.D.

Han Bum Lee, Ph.D.

Nicole Foy

Matt Singleton

Elena Serna-Wallender

Cambrey Sullivan

**STUDENT RESEARCH TEAM**

Valery Assad Gil

Melissa Barrera

Joseph Briones

Sandra Bustamante

Elena Caballero

Luisa Castelan

Kaileigh Castillo

Bianca Garcia

Alida Gutierrez

Cheyenne Hall

Sarah Hamm

Moises Hernandez

Julia Lopez

Miranda Martinez

Marc-Anthony Medina

Evan Moore

Danielle Morales

Natalie Morales

Josh Peck

Susan Richardson

Ruby Rodriguez

Morgan Salari

Peyton Spriester

Charlie Rae Sullivan

Glenda Treviño

Jordan Weinstein

Clarissa Venegas

**CONTRIBUTORS**

Sharon Nichols, Ph.D.

Cathy Green

Kim Kennedy, Ph.D.

Melisa Perez-Treviño

Lisa Espinoza

Lahnee Paschen

Julianna Martinez

Erin Jaques

Simone Carnegie-Diaz

Jasmine Victor

**CONTACT US**

Urban Education Institute  
 501 W. Cesar Chavez Blvd.  
 San Antonio, TX 78207  
 phone: 210.458.3348  
 email: uei@utsa.edu



**FOLLOW US ON FACEBOOK**  
[facebook.com/UTSAurbaned](https://facebook.com/UTSAurbaned)



**FOLLOW US ON TWITTER**  
[@UTSAurbaned](https://twitter.com/UTSAurbaned)