

A photograph of two female students in a laboratory setting. They are wearing white lab coats over dark clothing. The student in the foreground is smiling and holding a small petri dish and a marker. The student in the background is looking towards the camera. The lab bench is cluttered with various scientific equipment, including pipettes, test tubes, and petri dishes. The image has a blue and purple color overlay.

# ANNUAL REPORT 2018

**acera**  
The Massachusetts School of  
Science, Creativity and Leadership





*"The inspiring 'learning without limits' environment at Acera has helped my daughter develop leadership skills that she will keep for life."*

— Nasim Maleki, parent

## LETTER FROM DIRECTOR & FOUNDER COURTNEY DICKINSON

Dear Community,

What happens when students have an individualized learning path and plan that fits their capacity and interests? What happens when they get to go to a math class that fits what they are ready to learn? Or learn science concepts in a way that brings alive — or even leverages — innovations happening in the world? What if students can find — and express — their voice at school — to create and catalyze their own passion project?

Acera is ready to move to the next stage in our mission: transforming STEM education by developing the next generation of scientists, innovators, and leaders. We've gathered incredibly talented and creative teachers who constantly invent new and clever approaches to learning. Our school functions as an Innovation Hub, in which we collaborate with thought leaders to create novel curricula that engages students with a sense of purpose. We partner with researchers, academia, and institutes to test new learning approaches here, so that we can share them with the world beyond our walls. Examples from three of our partners are embedded in this year's annual report:

- **One Brave Idea** is a new medical innovations institute focused on preventing cardiovascular disease by closely examining wellness starting at childhood; we are OBI's partner school.
- **Tami Lieberman** is a thought partner and collaborator at **MIT**. This year, our students had the opportunity to learn about skin microbiomes and mutagenesis, and even participate in a actual research study — a game-changing way to connect learning at school to real issues in the world.
- **Peter Blake** is director of the **Social Development and Learning Lab** at Boston University. Under his mentorship, Acera middle school students created a human behavior study in the form of a game.

And this incredible place that is Acera? A community where kids engage, belong, and become brave? We believe that this approach to school should happen everywhere. To that end, we've launched the Acera Education Innovation Initiative to help other schools and learning centers be places where kids have a personal learning path that fits them, where learning taps their internal sense of purpose, and where school culture honors each students' voice and enables them to have a sense of belonging.

How can this happen? Curricula hatched at Acera is being leveraged as toolkits to ignite a whole new generation of teachers and students. Working with our partners, we can help students far beyond our walls; we can help students find their voices, feel fearless and confident in STEM topics, and learn to think at a systems level to solve problems. We invite you to join us on this next stage of our journey — to transform what is possible in education and to develop the next generation of innovators and leaders for our world!



Best,

A handwritten signature in black ink that reads "Courtney Dickinson".

Courtney Dickinson, Founder and Director





## ACERA'S INNOVATOR SYMPOSIUM

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Will a new gene therapy mitigate hearing loss? This is one of the questions being asked in innovation labs right in our backyard. Acera's annual Innovator Symposium is a free community event that brings these scientists and inventors — and their groundbreaking work — to the public for people of all ages to enjoy. More than 300 kids, adults, researchers, and tinkerers attended to explore the worlds of climate change and clean energy, 3D printable robots, and therapeutic tissue engineering.

At this unique and interactive event, there are no assumptions about what content is “too old” or “too young” for attendees. As a result, children and adults alike enjoyed conversations with leading scientists on music-based treatments for traumatic brain injuries, and learned how to tell time with an iodine clock in the hands-on chemistry lab. The symposium is one of the many ways Acera makes real-world innovations accessible to all ages and learning styles.





## PAST SPEAKERS

### Yael Arbel

Associate Professor & Co-Director, Cognitive Neuroscience Group, MGH Institute of Health Professions

### Adam Cantor, B.E. & M.E.

Senior Mechanical Engineer, iRobot

### Anthony Chhoy

Co-Founder and CFO, Makers Empire

### Rich Colvin, M.D. PhD

Executive Director, Translational Medicine, Novartis Institute for Biomedical Research

### Will Collins, Ph.D. student

Tufts University School of Engineering

### Martha Fishman, M.D.

Co-Director, Interstitial Lung Disease Program and Director, Ambulatory Clinics, Boston Children's Hospital

### Nabeel Gillani, MSc

Research Assistant, MIT Media Lab

### Ed Hight, Ph.D student

Polley Lab, Harvard University

### Cody Ben Lewis

Experimental artist, designer, developer and creator of String & Loop

### Evan Morales

360Video Production Lead, Boston360.video

### Christopher Morse

Chief Mechanical Engineer, BionX Medical Technologies

### Lee Perlman

MIT Prison Program

### Latanya Sweeney, Ph.D.

Professor of Government and Technology, Harvard University

### Alex Vasquez

Events Lead, Bose

### Fernanda Viégas, Ph.D &

### Martin Wattenberg, Ph.D

Data Visualization Research Group, Google

### Kevin Watters

Founder, Big Data Solutions Architect, KMW Technology

### Andrea Yodsampa, Ph.D

Founder and CEO, DeployUS

### Susana Zhang, Ed.M, User Experience

Specialist, and Chuong Ngo, M.S. & TzuHsuan Wang, Software Engineers, Woobo, Inc.







## REALIZING HUMAN IMPACT IN SYSTEMS

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*"Acera's teachers have given my son a fantastic foundation in critical core capacities — like systems thinking, perspective-taking, and problem solving. His development in these areas has grown exponentially; they are simply organic parts of his thinking now. I am forever grateful for the adherence to these core commitments at the school."*

— Jenna Gillespie, parent



## HOW DO WE SUSTAINABLY MANAGE A SHARED RESOURCE?

To grow up in this complex world is to see the natural systems that sustain us as fragile. It can be a frightening introduction to life. In this context, it is incumbent upon us to empower children with the knowledge and agency to understand the realities of our present and shape a vision for the future.

Since the fall of 2016, students in Ms. Kim's class have worked with Peter Blake of the Boston University Social Development and Learning Lab to build ideas for a sustainable future. Together, they designed, tested, and implemented a human behavior study based upon "Minali," a game created by Ms. Kim.

Out of a desire to teach systems thinking and social and economic cooperation, Ms. Kim designed Minali to include both cooperative and competitive elements, which increase in complexity and challenge as students succeed in sustainable ecosystem and economy management. Student researchers, many of whom had played Minali in their earlier years at Acera, simplified the game to a single foundational element: harvesting fish from a shared lake.



★ Dr. Peter Blake,  
Curriculum Collaborator

With guidance from Dr. Blake (fondly called "Captain") and Ms. Kim, students considered study conditions, honed a research question, challenged adult assumptions about children's perspectives and tendencies, created game materials, and received research ethics training that allowed them to test study subjects during a Saturday event at Acera.

In the course of this work, these 9-12 year olds engaged with questions that vex even the most experienced among us: What does fairness look like around a common resource? How do we hold each other accountable? Should greed be punished, and how? How do we manage the complexities and impacts of inequality? How important is winning?





## CROSSING BOUNDARIES

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### HOW DO WE DESIGN WALLS THAT CONNECT PEOPLE INSTEAD OF KEEPING THEM APART?

*Something there is that doesn't love a wall*, wrote Robert Frost in “Mending Wall,” a poem that inspired world-renowned artist Ai Weiwei’s timely exhibition “Good Fences Make Good Neighbors.” Using the art show as a catalyst, students explored the theme “movement of people” through the lens of architecture and space design.

A highlight of the unit was a trip to New York City to see Weiwei’s display in person. The unique geographic distribution of the exhibition — with its monumental sculpture and site-specific interventions — challenged the students to think deeply about the visible and invisible barriers they encountered. Traversing sidewalks with scholars from the Zolberg Institute on Migration and Mobility, students participated with true Acera zeal. Each activity, be it pushing through a turnstile, entering an art installation, or taking a break, was an opportunity to closely examine the way in which movement is controlled or encouraged, and how it empowers or disempowers people.

Perspective taking is an essential Acera core capacity, enabling students to navigate their world and build their own sense of identity. The voyage to and from New York inspired the group to be critical observers of their environments and experiences, and bring that perspective to Acera’s playground.



Analyzing and responding to both communal and individual narratives of place-making — such as forts, chill spots, and trading posts — the students conceptualized and created a series of nets suspended in the trees, acting as bridges between the playground’s quiet and busy places. By creating an opportunity for students of all ages and abilities to connect without a prescribed narrative, this team of young designers became agents for change.





## MAKING EVOLUTION VISIBLE



### WHAT ARE THE RELATIONSHIPS THAT MAKE UP A BIOME?

Much like animals on a savannah, microbes coexist and survive on the surface of our skin, vulnerable to threats such as viruses, other microbes, and our own immune system. This year, students took on a multi-year investigation of the science behind evolution by natural selection using the skin microbiome, culturing *Cutibacterium acnes* (C. acnes) from samples collected from their own face.

*“Acera was great. Every day I came home with a smile on my face!”*

— Ari, Acera summer camp participant

As they studied the relationships within the microbiome, students learned about the evidence for natural selection, its ties to cell theory, and the role that genes play in determining evolutionary success. They also conducted a natural selection simulation in which they played the role of hunters and performed mathematical analyses about how populations are shaped by predator-prey relationships.

The unit served as a springboard for more advanced curriculum, where students will broaden their research to include macrobiomes and environmental science, as well as gene sequencing. In addition, students will use their C.acnes cultures to explore epidemiology, sequencing the camp5 gene to detect interpersonal transference of microbes.



## LEARNING THROUGH PROJECTS AND **AUTHENTIC INQUIRY**

### HOW DOES PROJECT-BASED LEARNING TAKE FLIGHT AT ACERA?

Project-based learning is an integral part of the experience of an Acera student. It is woven into the school's focus on voice, choice, and development of core capacities, manifesting in classroom explorations, inquiry with specialists and elective teachers, and individually designed initiatives. Through themes and guiding questions, students and teachers work together to chart a path for learning. As students develop and deepen their understanding — and as what they learn informs where they are going — the process allows students the room to revisit and revise project outcomes.

To begin any individual or group project, students first connect their inquiry to a real life question or problem. Through research, consultation with experts, and an iterative design cycle, they begin to both build their understanding and move towards an outcome, where the culmination of their learning is shared through the development of an authentic solution, product, or showcase.



### Spice Museum

In an Intermediate Elementary classroom (grades 2-3), students explored the theme of “pirates” through a deep study of the spice trade. Their essential question was “how do we give and assign value?” The children began by researching how and why trade routes were formed, tracing the routes of individual spices and creating interactive games that immersed them in the realities of trade systems. Their learning culminated in the creation of a Spice Museum, where students served as guides showcasing their projects, including books written by each student detailing the history of the spices they had researched, interactive spice-themed educational games, and a ship built by the class for visitors to tour.



### Water Infrastructure

In an Upper Elementary classroom (grades 4-6), students focused a year of learning around a water theme, asking questions like “how does water move through our social and ecological systems?” and “what are the cultural and symbolic meanings of water?” Presented with the real-world challenge “what should be done with an aging dam on a local river?” students conducted a stakeholder research project. They identified the many different groups that may have a vested interest in the river and then, in small groups, researched potential solutions through the perspective of each stakeholder. Groups concluded the project with persuasive position papers and a presentation of their rationale.



### Sidewalk Scenes

In a Middle School Flash Fiction elective, students created and published an Acera-wide literary magazine. The kids worked together to come up with a title for the edition and visited classrooms to present the project and ask their peers for content. Fellow students enthusiastically shared their poems, short stories, essays, artwork, and photographs. In sifting through the submissions, the students learned how to think like editors. They wrote acceptance letters to the children who contributed content, and also drafted an example of what a rejection letter might look like, practicing the valuable skills of empathy and constructive feedback. The result was “Sidewalk Scenes,” a vibrant and diverse collection of student expressions.





## DESIGNING A **MULTI-SENSORIAL** PERFORMANCE SPACE

### HOW DO YOU PUT THE VIEWER AT THE CENTER OF AN ART PERFORMANCE?

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Seeking to create “the magic of collective engagement,” students in the elective course Multi-Sensorial Pop-up Performance set out to collaboratively design and build a modular structure that could serve as a multi-sensorial performance space for schools that do not have a dedicated auditorium or theater. Their goal was to create a temporary architectural installation that appeals to various senses, using lighting effects, colors, textures, movements, and sounds.

Over the elective term, students explored a modular design approach, subdividing a larger system into smaller parts that could be independently created and then used in different systems. They also experimented with construction techniques, using corrugated plastic as the base material and various connectors as building blocks. The final design was a life-sized geodesic dome, a unique and structurally stable space that could accommodate 20 people at a time, engaging them in a mindful art experience using the wonder and power of projection mapping.

With the help of Acera parents and volunteers, the dome was assembled and showcased at the Cambridge Science Festival. Inviting the audience to be part of the art experience, the team led a hands-on activity in which hundreds of people gathered to make mini light-up paper lanterns. Soon, the entire dome was illuminated by the collective creativity of the audience members, who completed the installation by adding their mini-lanterns to the inside walls.

Back at Acera, the dome was reassembled during the Museum Walk, where participants enjoyed the spatial and sensory delight of calm music and kaleidoscopic interior projections. Described by one as a “zen pod,” the installation allowed people to detach from the exterior buzz, be playful, and be present.





## LEADING TEACHER DEVELOPMENT WORKSHOPS: **SEEDS**

*In 2017, I was invited to speak at “Learning and the Brain,” an annual conference that connects educators around the world with the latest research on the brain and learning and its implications for education. My presentation focused on the use of science, engineering, esthetics, design, and storytelling (SEEDS) to engage children in creating impactful and personally meaningful projects.*

*Among the attendees were the directors of Brilliant Labs, a Canadian not-for-profit, hands-on technology and experiential learning platform. With the mission to promote creative and meaningful learning explorations in classrooms, they invited me to lead a SEEDS curriculum workshop for nearly 50 educators at Brilliant Labs’ location in Saint John, New Brunswick.*

*This full-day event was an important opportunity for us to hear the hopes and dreams of public school educators in a global context and engage them in believing that they can transform their classrooms into creative maker-spaces and be the curators of creativity in their learning settings.*

— Alisha Panjwani-Collins, SEEDS Design Studio Manager

*“The joy of learning is palpable upon entering the school. We appreciate the freedom of inquiry that allows students to pursue their own interests within a classroom community ... and the understanding of the different gifts and challenges that each student brings.”*

— Elizabeth Osgood-Campbell, parent



# ACERA PARTNERS WITH MAJOR

## What is different about the people that end up having plaque buildup and those who don't?

This question is the core of **One Brave Idea** (OBI), a new initiative to understand the earliest stages of heart disease funded by Verily, the American Heart Association, and Astra Zeneca.

By bringing together innovators in the fields of medical sciences and education, the OBI-Acera Partnership connects 21st century research with 21st century learning, paving the way for truly novel ideas, products, knowledge, and change-agents to emerge.

During the 2017-18 school year, projects in this partnership included:

A Middle School elective course on hacking wearable devices that measure health data taught by Alisha Collins, Acera's SEEDS Studio Lab Manager & Research Practitioner.

A collaboration with MIT professor and lead investigator Tami Lieberman, which brought cutting-edge expertise and guidance to a new curriculum on skin microbiomes developed by our resident scientist Michael Hirsch and rolled out to all Acera middle school students.



An MIT study, led by Tami Lieberman's Lab, enables students to collect and analyze their skin microbiome. Many students — and their parents — chose to join in this research. Thanks to our great community for the terrific participation rate!





# INNOVATOR IN HEALTH SCIENCES

Recognizing the power of students as catalysts of innovation and research, OBI and Acera have launched a visionary partnership to break new ground on understanding health and wellness in children and adolescents.

Students sample and sequence their own skin microbiome, hack wearables that measure biometrics, invent and build apps and discuss what it means to be healthy or sick.

Building relationships with partner pilot schools, such as the KIPP Charter School Network, for future rollout of these innovative curricula.



An investigation of novel ways to enable students as researchers, providing them with the appropriate framework, ethics training and content knowledge for studies they'd like to pursue.

A final showcase during which students presented their product ideas and prototypes and discussed their work with members of the OBI team such as lead investigator Calum MacRae, pictured below, Chief Scientific Officer Stanley Young, Chief Information Officer Dana Vuzman, American Heart Association's Alex Foti and Amazon's Elizabeth Boudreau.



Over the next five years, through pilots at Acera and in public schools, the OBI-Acera Partnership will be developing a roadmap for investigating contributors to cardiovascular (CV) health in children and adolescents in school settings (such as sleep, nutrition, stress and anxiety, microbiome). We will create curricula that deeply connects to this research and allows teachers in diverse educational environments to engage students in learning about CV health and overall wellbeing in hands-on, student-driven ways. We will involve students in the innovation process, recognizing their potential as agents and creators of new approaches, devices, and campaigns that speak to peers their age.



## SOLVING REAL TECH NEEDS AT SCHOOL

### CAN UNDERSTANDING VINTAGE TECHNOLOGY LEAD TO FUTURE INNOVATIONS?

Acera's Tech Hub is a place for students, faculty, and staff to discover and explore computers, smartphones, tablets, robotics, and other technology. In addition to the latest Apple equipment — such as MacBooks, iMacs, and iPads — the Hub features a variety of working vintage computer equipment dating back to the early 1980s. Here, students can repair their own computers, phones, and smartwatches, bringing an iPhone back to life and upgrade a MacBook to run the newest operating system smoothly.

Every week during Creativity Morning, the student members of the TechTeam gather in the Tech Hub to work on their computer hardware, repair vintage gaming consoles, and create their own electronic projects. Inspired and supported by Acera Technology Specialist David Olson, the team delves into new projects, interacting with — and increasing their understanding of — both old and new technologies. Along the way, they develop skills and become known community-wide as Tech Team members who can help others solve real problems. The deep integration of technology throughout Acera gives students ample opportunity to grow as tech leaders every day!





## APPLYING MATH TO THE REAL WORLD

### WHAT HAPPENS WHEN STUDENTS ARE TAUGHT BASED ON WHAT THEY'RE READY TO LEARN?

At Acera, we believe in teaching kids the math that they're ready to learn, not holding them back based on grade level. Our 130 students are placed across nearly 20 different math groups, where they can each learn without limits. An applications-based approach allows them to grow their problem solving and critical thinking capacities, interweaving probability, logic, and statistics along with more traditional math concepts and skills.

In Acera's Statistics and Applied Algebra class, for example, students who have taken Algebra 1 go deeper into their algebraic thinking and skill development, while emphasizing connections between math and real world situations, such as voting systems and apportionment. This year students studied recursively defined sequences and non-linear equations; modeled exponential functions and logarithms; used algebra to model physics phenomena; and explored statistics using correlation, linear and exponential regression, chi-square tests, and data collection methods.

The class is designed to be both challenging and incredibly fun. Students and teachers developed a shared mythology over the year; jokes and comments turned into a shared lexicon of references that found its way into problems in class, homework, and tests. By weaving this humor into the course, students were inspired to work hard while sharing a lot of laughter in math class. All the while, the relevance of math and algebra came alive!

*"Acera's strengths are its individualized curriculums and its small math classes that are both challenging and appropriate for the child's abilities."*

— Jennifer Bahnson, parent



## SOCIAL EMOTIONAL LEARNING

*“Please keep pursuing this aspect of education; it is a very important component that will pay dividends in the future.”*

— Chris Nasveschuk, parent

### WHAT IS THE INTERSECTION BETWEEN SOCIAL EMOTIONAL LEARNING AND CORE CAPACITY DEVELOPMENT?

All people benefit from self awareness about who they are and how they impact others. As we grow in areas of social emotional learning (SEL), we intuitively become more collaborative, responsible, and productive members — and leaders — of teams. At Acera, these capacities are addressed in specific classroom and Individual Learning Plan goals.

Intermixed with all their projects, students develop skills such as regulating reactions to challenging situations, developing a tolerance for frustration, and sticking to a task even when it is difficult. Learning to press “the pause button” on your idea so you listen and consider the ideas of others is the type

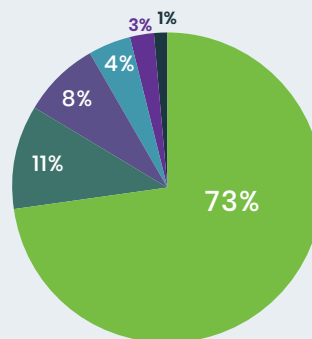
of practice written into goals that young elementary students explicitly check themselves against each day. As they grow in their own reflection, receive coaching from teachers, and seek input and suggestions from classmates, they evolve their SEL goals.

This anchor, around which other human growth can occur, enables the emergence of perspective taking, systems thinking, and collaborative problem solving, empowering students to develop more agency within their classroom and the school community and positioning them to step into leadership roles now and in the future.



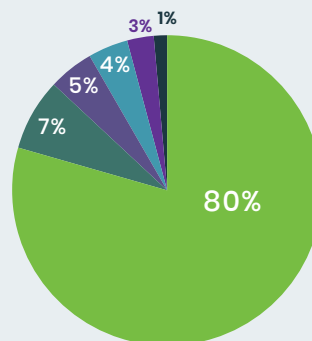
# ACERA SCHOOL FINANCIALS 2017-2018

Since its beginnings in 2010, Acera has been a bootstrap start-up that provides an exceptional educational experience for all students. Tuition accounts for approximately 80% of the targeted budget; the remainder of the operating budget is raised each year through generous donations from our families, friends, and funders and through our STEAM Learning Lab enrichment programs throughout the year. We are actively building our network of academic institutes, corporations, collaborators, and foundations, enabling expansion of our Innovation in Education mission.



## INCOME

Gross School Tuition	\$2,591,468
Donations	389,167
Summer Enrichment	284,570
After School Fees	154,835
Build Out Fees	93,000
Other	42,386
	<b>\$3,555,426</b>



## EXPENSES

Salaries, Benefits & Taxes	\$2,567,259
G&A	241,596
Classroom expenses	155,632
Facilities	132,283
Depreciation	93,663
Marketing	36,115
	<b>\$3,226,548</b>





## The Reed Hollett Enrichment Scholarship Fund

In addition to Acera's other fundraising campaigns, the school raises money throughout the year for the Reed Hollett Enrichment Scholarship Fund. Acera School established the Fund in 2016 to provide scholarships for low-income students to participate in Acera's after school and summer enrichment programs. The Fund honors the memory of Reed Hollett, a beloved Acera teacher who passed away unexpectedly in 2015. Reed believed passionately in the importance of getting children outdoors to experience nature; he led the Outing Club and the Construction Corner in Acera's after school programs. Reed was a person of life and light who had an incredibly pervasive presence throughout our community. He engaged each student as an individual and had a special, rare gift for truly seeing and knowing the person within.

## ACERA STAFF\*

**Courtney Dickinson, Founder & Director**  
B.A., Dartmouth College Certified Teacher  
Leadership & Company Culture Consultant/  
Culture Architect, Sapient Corporation

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M.Ed., Lesley University

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B.A., Swarthmore College  
M.S., Wheelock College

**Josh Briggs M.S., Woodworking & Engineering  
Teacher, Workshop Manager**  
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M.S., University of New Hampshire

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M.A., Counseling Psychology, C.I.I.S.

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Operations and Administrative Assistant**

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M.A.T., Salem State

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M.Ed., Tufts University

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M.Ed., Lesley University

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B.A., Birmingham Southern College

**Elena Rossen, Cross-Classroom Teacher**  
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M.Ed., Lesley University

**Joshua Schuler, Director of Partnerships  
and Outreach**  
B.A. & B.S., Tufts University  
S.M., Massachusetts Institute of Technology  
M.B.A., Collège des Ingénieurs

**Debbie Seidell, M.S., Math Specialist  
& Coordinator**  
B.A., Brown University  
M.S., University of Washington

\*Full Time Acera Staff as of printing 12/1/18. Additional part-time staff include math, computer science, creativity morning, and woodshop teachers.

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Elementary Teacher**  
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M.Ed., Tufts University

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M.A., School Counseling, University  
of Saint Joseph

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Professional Diploma,  
Berklee College of Music

**Sarah Zuckerman, M.Ed., Director of Faculty**  
B.A., Indiana University  
M.Ed., Harvard University  
Graduate School of Education



*“Courtney is incredible, her vision for this school is awesome, and she has put together an amazing team of brilliant, friendly, down-to-earth, and caring people to make that vision a reality.”*

— Franklin Shearer, parent

## BOARD OF DIRECTORS

Acera’s Board of Directors has as its foremost charter to safeguard the fiscal stability and sustainability of the school. Its approach is modeled more after the for-profit sector than the typical non-profit board approach, to enable the rapid and flexible growth of a start-up school.

**Courtney Dickinson, B.A., CHAIRMAN**  
Founder & Director, Acera School

**Michael K. Barron, J.D., SECRETARY**  
Partner, Morgan Lewis

**Richard J. Morello, M.B.A., TREASURER**  
President, Life Sciences Division, Aptus Health

**David Grayzel, M.D.**  
Partner, Atlas Venture

**Greg Phelps, M.B.A**  
Independent Advisor; Former Chairman  
of the Board, Charles River School

**Holly Whittemore, C.P.A.**  
Head of Finance, Nimbus Discovery



# ANNUAL LOVE TO LEARN EVENT THANK YOU!

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Thank you to our generous families and friends of Acera for your financial contributions to the school and our community this year. We also want to thank the following businesses for their generous contributions to our Annual Fund and Love To Learn event. This support makes it possible for us to serve more families in Massachusetts.

A Tavola  
BK Organizing  
Boda Borg  
Book Ends  
Cafe Zen  
Cambridge School of Culinary Arts  
China Sky  
Discovery Museum  
Dr. Soumya Ganapathy MD

Fells True Value Hardware  
Firebeat Dancesport Studios  
Gardens by Demetra  
Get in Shape for Women  
GrandTen Distilling  
Griffen Museum of Photography  
Handyman Matters  
Kidstock Creative Theater  
La Patisserie

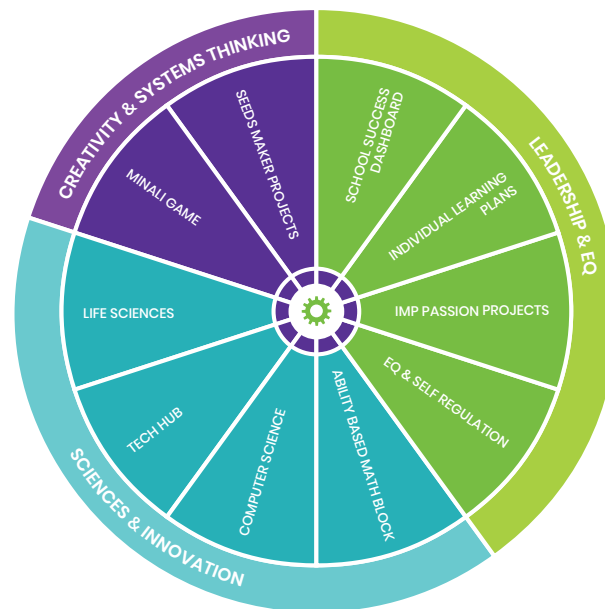
Lexie's Durham, NH  
Mahoney's Garden Centers  
MetroRock Climbing in Newburyport  
Mountain Strength CrossFit  
Mystic Station  
New England Aquarium  
New Look Optical  
Oral History with Joanna Shea O'Brien  
Pinot's Palette

Privateer Rum Distillery  
Salon Estetica  
Short Path Distillery  
The Greek Grille  
The Inn at Hastings Park  
UNH Athletics  
Yoga Mandala





## 10 Tools To Transform Schools



You've read what we did in 2017/18 school year; now here is a look ahead. . .

We are launching our Education Innovation initiatives and are poised to share a toolkit of Acera Tools to Transform Schools! Working with industry and academic thought partners over these nine years of building our school, we have invented and pilot-tested a wide array of evidence-based educational approaches and curricula. In our first substantive partnerships, with Lowell Public Schools and KIPP Lynn Charter Schools, these tools are being tailored to uniquely fit the goals of these school districts.

Our first **Life Science Change Agent Workshop Series** cohort launched in December 2018! Cohort 1 is **enabling teachers to lead gene editing lab experiments using CRISPR technology**. This workshop series is partially funded by Bristol Myers Squibb's Cambridge office. Teachers engage in hands-on lab experiments during workshops, including two days in Acera's life sciences lab to understand and practice the gene-editing curricula, and one day at Novartis' CELL location to learn how scientists think about therapeutics and innovation.

We have built this program to empower KIPP Academy Lynn Collegiate High School — and other biology teachers in the cohort — to run this new unit in their biology classrooms. With additional funding, we can expand the life sciences curricula toolkits into year-long curricula that reinvents high school biology into a discipline that is lab based and links to innovations happening in the world today. We also plan to launch more life science teacher cohort groups and create a community engagement platform for updated curricula and ongoing support.

We are inspired by the eagerness with which our public school partners seek and adopt these new toolkits. With the support of Acera's Education Innovation team, they are excited and committed to enabling a new generation of change agents in their districts — teachers who can lead discovery, early and deep exposure to STEM topics, creative problem solving, and fearless inquiry in their classrooms!

We are actively seeking funding partners to be part of our effort to transform science education in public schools across the country. Join us!

*"I loved music and storytelling in Scratch! Learning programming was really fun because you can do whatever you want and use your imagination. When I made the maze, I got to solve problems and fix mistakes. The camp was inspiring and made me want to program more, so I did!"*

— Eli, Acera summer camp participant

If you are interested in becoming a curriculum collaborator or would like more information on investing in Acera's work in education, please contact:

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