



# iPad in Education

## Worldwide Results

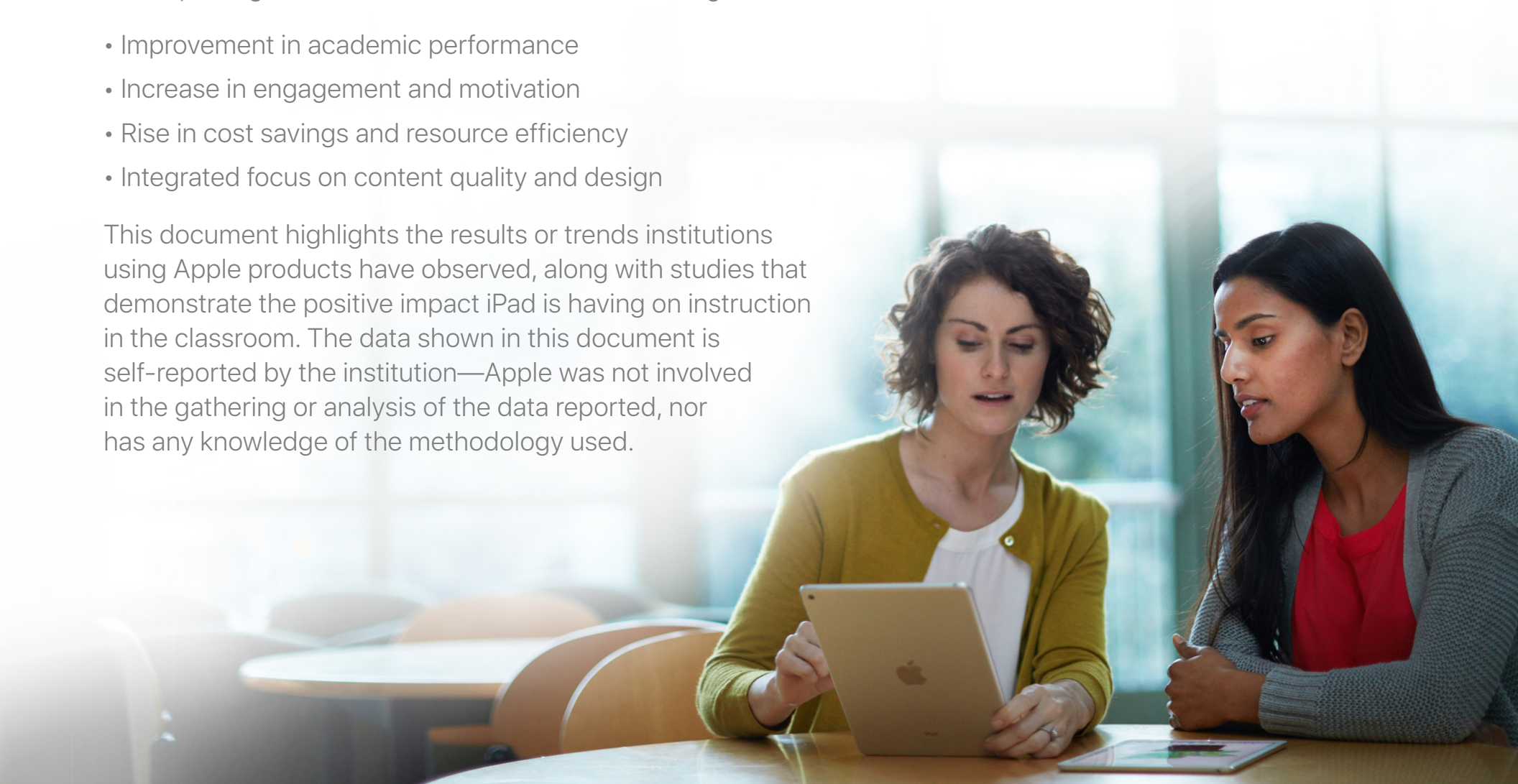


# Using iPad changes the way teachers teach and students learn.

Students, educators, and institutions around the world are using iPad to inspire creativity and hands-on learning that makes learning more powerful. Since Apple launched iPad in 2010, millions have made their way into education. They continue to show significant promise in teaching and learning, often with impressive results. The examples in this document highlight the amazing success stories institutions worldwide are self-reporting in the areas below across K–12 and higher education:

- Improvement in academic performance
- Increase in engagement and motivation
- Rise in cost savings and resource efficiency
- Integrated focus on content quality and design

This document highlights the results or trends institutions using Apple products have observed, along with studies that demonstrate the positive impact iPad is having on instruction in the classroom. The data shown in this document is self-reported by the institution—Apple was not involved in the gathering or analysis of the data reported, nor has any knowledge of the methodology used.





# Academic Performance

Schools report that academic performance—as measured by standardized test scores and other key student outcomes—is improving with iPad use. A number of K–12 schools, districts, and higher education institutions have reported substantial gains when comparing current student test scores with prior-year test scores, pre- and post-test measures, and increases in student performance on state, provincial and national assessments.





## Drayton Hall Elementary School

*Charleston, South Carolina, United States*

Drayton Hall Elementary puts students at the centre of its classrooms with iPad that fosters learning through apps, interactive lessons, and teacher-authored Multi-Touch books.

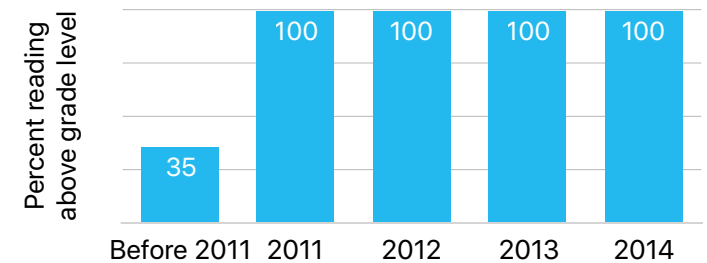
- Before iPad was introduced in Kristi Meeuwse's kindergarten class, about 35 percent of her students entered grade 1 reading above grade level. Since iPad was introduced, Meeuwse reports 100 percent of her students have been reading above grade level for four years in a row.
- Kristi uses iPad to help teach the Common Core State Standards, which requires presenting nonfiction text to the class. Because of the limited number of nonfiction books available at the kindergarten level, she creates her own books, taking advantage of the Multi-Touch features of iPad to make them engaging for her students.

[See how Kristi Meeuwse teaches with iPad >](#)

[Read more about Drayton Hall Elementary in their Multi-Touch book >](#)

# 100%

of kindergarten students reading above grade level for four consecutive years after iPad implementation



*Kristi Meeuwse, kindergarten teacher*







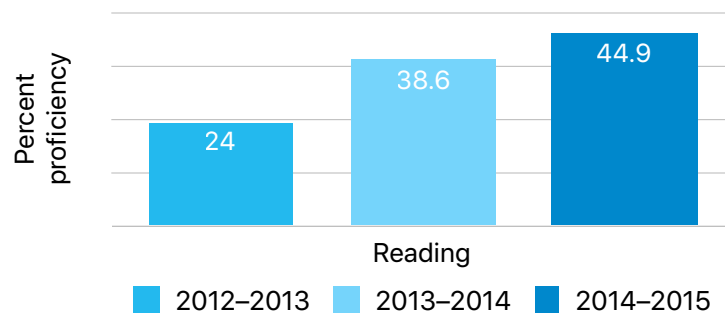
## Montlieu Academy of Technology

*High Point, North Carolina, United States*

Five years after implementing their one-to-one iPad program, this Title 1 school reports growth in test scores in all core subjects. The use of iPad has transformed the way the students learn and in the most recent year, their academic achievement has improved by 44.9 percent in reading and over 55 percent in math and science.

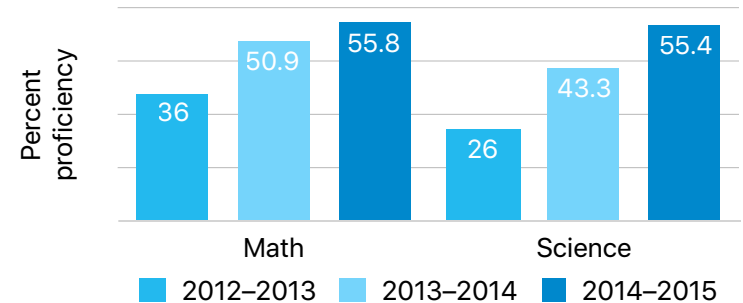
# 44.9%

increase in reading test scores



# 55%

increase in math and science test scores





## Victoria Department of Education

*Victoria, Australia*

In 2012, the government in Victoria completed a trial of 700 iPad devices in primary and secondary schools to test whether education outcomes improved. The results were positive, with 83 percent of primary teachers and 67 percent of special education teachers observing improvement in literacy outcomes. In addition, they reported 85 percent of primary teachers and 90 percent of special education teachers thought that students were more motivated and engaged in learning.

# 83%

of primary teachers reported improved literacy outcomes

# 67%

of special education teachers reported improved literacy outcomes

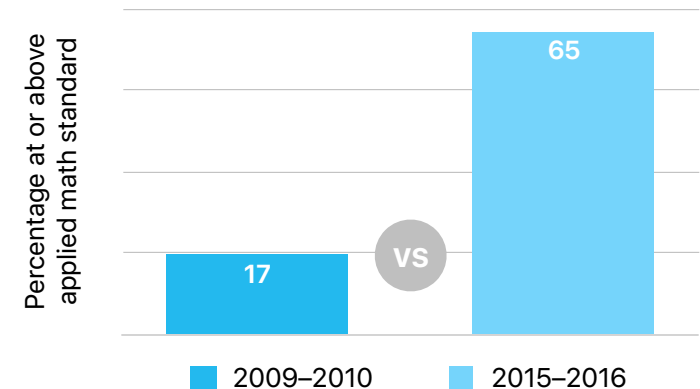


## Monsignor John Pereyma Catholic Secondary School

*Oshawa, Ontario, Canada*

In 2009, Monsignor John Pereyma's results on the provincial Grade 9 applied mathematics test (EQAO) were at an all-time low. With a focus on improved personalized learning, a growth mindset, and technology-based tasks that supported student achievement in math, they created the Ultimate Potential (U.P.) math program.

In 2016, they reported the program, along with their one-to-one iPad implementation, resulted in 65 percent of Grade 9 students performing at or above the provincial standard in applied math compared with 17 percent before the program. In addition, 70 percent of Grade 9 applied math students at Pereyma reported they like math compared with 35 percent provincially. The program has been so successful, that it's now offered in all seven secondary schools across their district.







## Mater Dei High School

*Santa Ana, California, United States*

Mater Dei addressed the individual learning styles of students with a one-to-one iPad initiative launched in 2011. iPad provides the tools they need to shift from traditional pedagogy to classroom instruction, and students take ownership of their learning.

Many classrooms are equipped with Apple TV, and teachers and students use AirPlay to collaborate, project, play, and stream projects created on iPad. The class of 2015, Mater Dei's first class to use iPad for four years, broke the school record for the number of students with a 4.0 Grade Point Average (GPA).

# 4.0

GPA earned by the highest number of students in the school's history

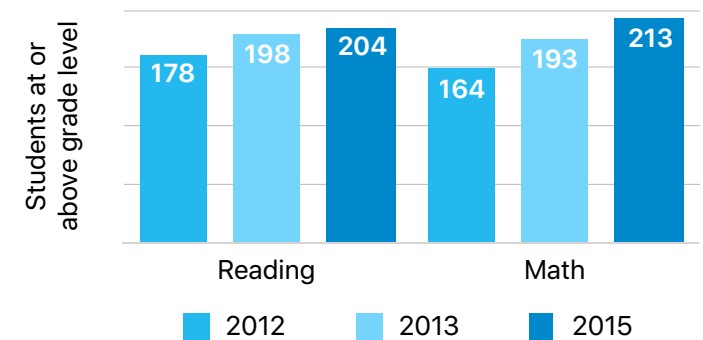


## Cathedral School

*Portland, Oregon, United States*

For three consecutive years, Cathedral School has enhanced teaching and improved learning with iPad by engaging students in the research and critical-thinking skills needed for success in the 21st century. Cathedral continues to see growth. During the 2014–2015 school year, Cathedral School reports that 87 percent of Cathedral School students in grades K through 8 performed at or above grade level in reading and 92 percent of students were at or above grade level in math.

Increases in reading and math proficiency based on assessments



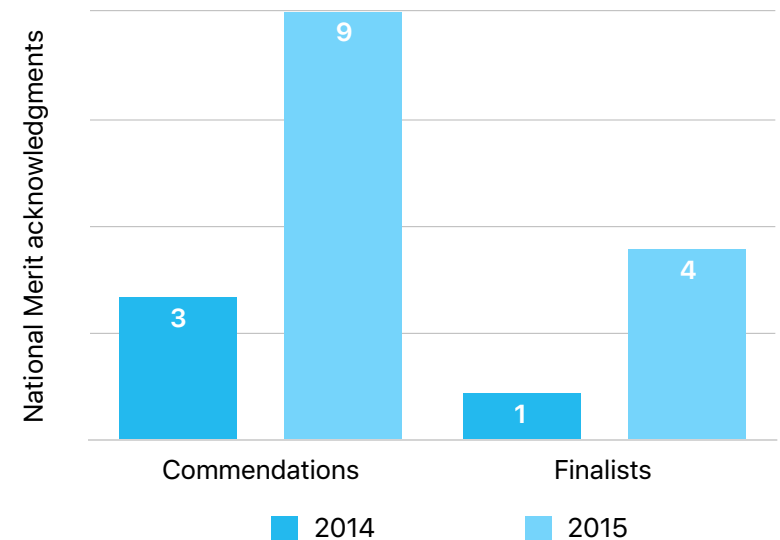


## Archbishop Edward A. McCarthy High School

*Southwest Ranches, Florida, United States*

The academic achievements of students at Archbishop Edward A. McCarthy are evidenced by the number of National Merit acknowledgments, which rose from three to nine commendations and from one to four finalists—an increase of more than 200 percent since the introduction of iPad in the classroom. As a result of the rise in academic achievement, Archbishop reports that their 2015 graduates were accepted to colleges and universities such as Cornell, Princeton, Brown, and Duke, just to name a few.

More than  
**200%**  
increase in student academic  
achievement evidenced by rise in  
National Merit acknowledgment







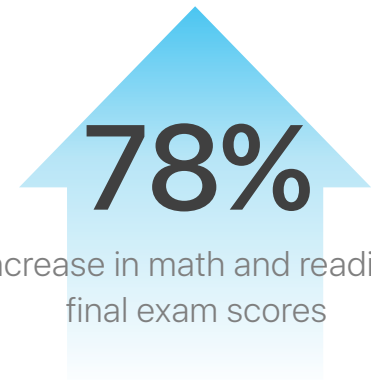
## Søndervangskolen

*Aarhus, Denmark*

Søndervangskolen, a K–10 public school with disciplinary problems, poor student performance, and high student transfer rates, was in danger of closing in 2008. When the school's results declined, Søndervangskolen gained a poor reputation and was considered a failing school.

Following a strong vision that included a one-to-one iPad program, leadership was able to turn the school around in 2012, just four years into the program. With iPad, the school experienced fewer disciplinary problems, decreased student absence rates, and increased academic results.

Søndervangskolen was able to report a 78 percent increase in student test scores on final exams, a decrease of nine days per year in student absences, and an increase from 63 percent to 90 percent in the number of students ready for secondary education.



## Bråtenskolan

*Karlskoga, Sweden*

In 2012, Bråtenskolan implemented a shared iPad initiative, so all students had access to iPad in the classroom. The school reported 98 percent achievement on national reading and math tests for grades 6 and 9.

These improvements were based on the goals the student must reach by the end of school year 5, including the ability to read and understand simple text, inform others through written messages, and listen to and read literature suitable for their age.

98%

achievement of goals on national reading  
and math tests for grades 6 and 9



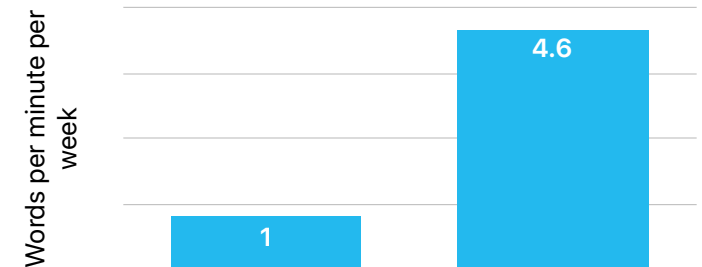
## Valencia Park Elementary School

*Fullerton, California, United States*

All classrooms at Valencia Park have implemented a one-to-one iPad program, and they've been recognized as one of the top elementary schools in the state for using Apple technology to transform teaching, learning, and their community.

For most grade 2 students, the average expected words per minute reading fluency rate increase is one word per week. Yet, over the course of 8.4 weeks, Valencia Park reports that grade 2 students participating in the Young Scholars Program, where they used iPad in the classroom, increased their reading fluency rate by 4.6 words per week. Because of this success, they have expanded the Young Scholars program to include a VIP take-home-pad-program for grades 5 and 6.

[Read more about Valencia Park Elementary School in their Multi-Touch book >](#)



Grade 2 students increased their reading fluency rate by 4.6 words per minute per week from one word per minute per week







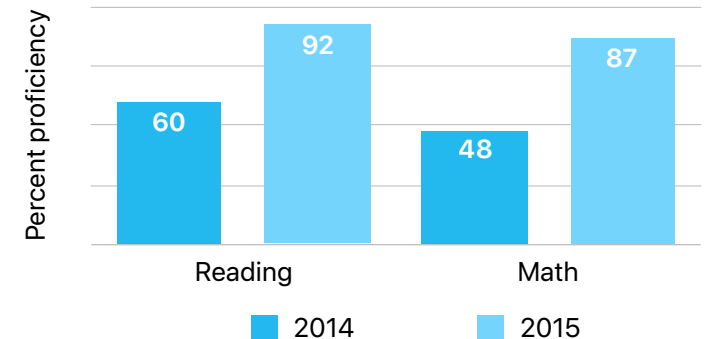
## EPiC Elementary School

*Liberty, Missouri, United States*

EPiC centers learning on empowering creativity by equipping students with mobile technology. In just one academic year, they have seen great results in student academic achievement using iPad that personalizes instruction and I-Ready, an online tool that measures growth. At the beginning of 2014–2015, 60 percent of students were proficient in reading and by the end of the year, student reading proficiency was at 92 percent. Students also experienced growth in math, with 48 percent math proficiency at the beginning of year, increasing to 87 percent by the end of the year.

[Read more about EPiC Elementary School in their Multi-Touch book >](#)

Increase in reading and math proficiency  
with personalized iPad instruction



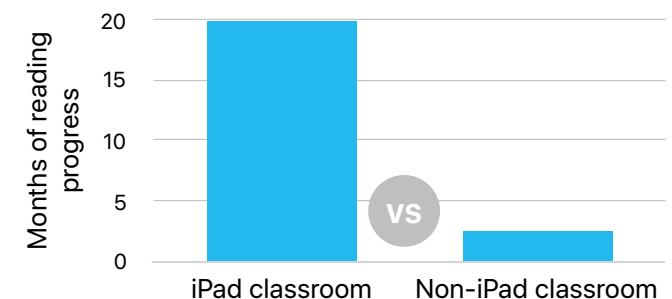
## Escondido Union School District

*Escondido, California, United States*

For the past eight years, Escondido has documented significant student achievement gains in the area of reading comprehension. With two different iPad implementations across their district—100+ classes with shared iPad and 150+ classrooms with a one-to-one model—Escondido observed that students in the district's first one-to-one mobile device classroom made nearly two years (one year and eight months) of progress in reading comprehension in just six months, while a comparative classroom showed just two and a half months' growth in reading comprehension in six months.

# 2 years

of progress in reading comprehension  
in just six months





## Dingtuna skola

*Västerås, Sweden*

In 2011, Dingtuna skola reported that their one-to-one iPad pilot program provided a rich learning environment focused on the individual learning needs of students. They selected iPad for its mobility and student preference. It was also easy to deploy and secure.

Based on their experience, they created “Innovative Learning Environments,” an educational program that inspired the launch of a one-to-one iPad implementation across the entire municipality of Västerås. After the program launched, students and teachers reported a more joyful and creative environment that inspired and engaged students.

Students learned to read faster and handle larger amounts of text, which improved their overall reading comprehension. In 2014, three years after their one-to-one iPad implementation, 98 percent of Grade 4 students scored with passing rates on the national reading comprehension test.

“We are so proud of what we’ve achieved with iPad—and now we can help others to be successful too.”

Anna-Karin Florén Ström, Educator

# 98%

passing rate on national reading  
comprehension test





## The de Ferrers Academy

*Burton upon Trent, United Kingdom*

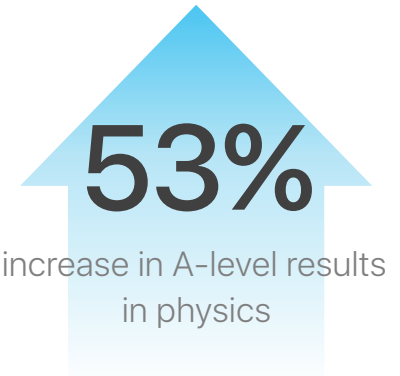
The de Ferrers Academy—one of the largest academies in the UK, serving more than 2100 middle and high school students from various backgrounds and abilities—launched their one-to-one iPad program in 2012. Initially deploying iPad to teachers, they expanded the number of devices to students over the course of two years, resulting in 1300 total devices deployed.

To improve student engagement, progress, and exam results, the Academy wanted to offer tools that encouraged creativity and collaboration. With the one-to-one iPad program, they observed greater engagement in lessons, better feedback from teachers, higher grades, and increased passing rates on exams.

In the third year of the iPad implementation, de Ferrers reported a 53 percent increase in the number of students earning A-level grades in physics.

“We wanted every one of our students to have access to the game-changing educational opportunities that iPad could provide—it was important that no child was left behind.”

Greg Hughes, Vice Principal





## Gurnee School District 56

*Gurnee, Illinois, United States*

For the past four years, Gurnee reports that the one-to-one iPad program revolutionized the learning experience in Gurnee School District 56 for students, staff, and parents. The program incorporates learning tools that support reflective thinking, match student skill sets, and encourage a free exchange of ideas. The initiative has led to a transformation of student learning through the use of apps, allowing students to demonstrate their learning and open the possibilities to their most creative ideas.

[Read more about Gurnee School District 56 in their Multi-Touch book >](#)



20%

increase in students who met growth projections in math within two years



13%

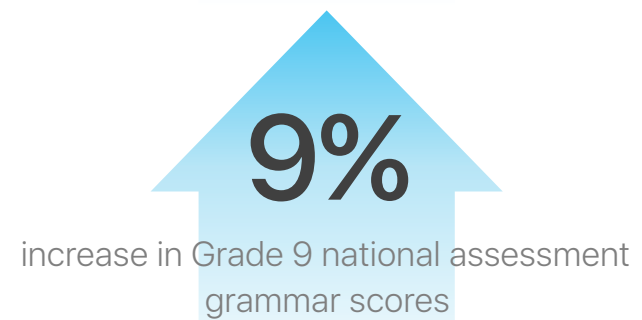
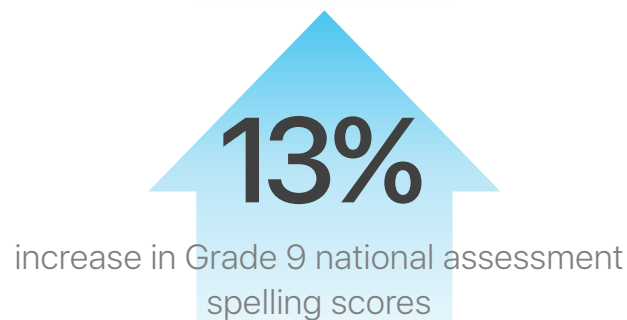
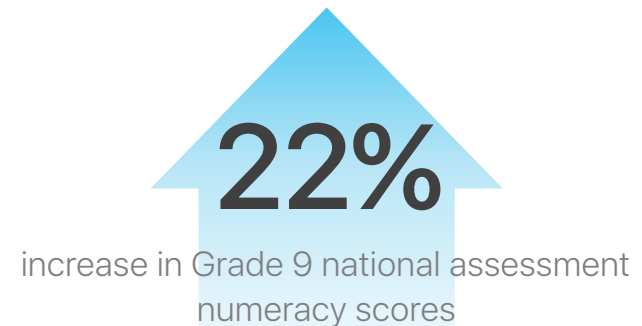
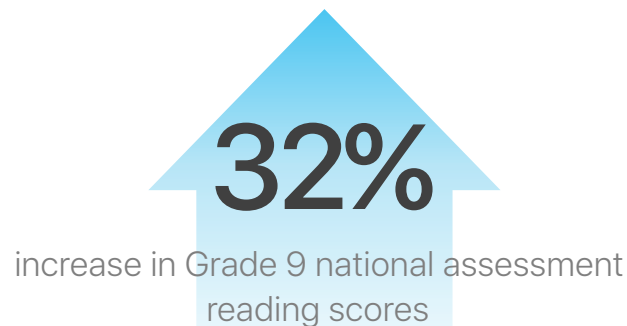
increase in students who met growth projections in reading within two years



## East Hills Girls Technology High School

*Sydney, Australia*

East Hills Girls Technology High School consistently applies innovative and inspiring learning strategies to enhance and support learning. In 2014, they implemented a one-to-one iPad program for students in grades 7, 8, 9, and 10. These students had access to technology and interactive textbooks for learning in the classroom and at home. Two years following the implementation, East Hills reported improvement in student academic achievement on the National Assessment Program Literacy and Numeracy (NAPLAN) exams in reading, numeracy, spelling, and grammar.







## Roy B. Kelley Elementary School

*Lockport, New York, United States*

A three-year longitudinal study performed by Roy B. Kelley in partnership with the University of Buffalo compared the academic achievement of students who used iPad in the classroom with other students in the same grade level who didn't. Roy B. Kelley reported results that showed significant achievement on New York State Assessments in English language arts and math with students who used iPad.

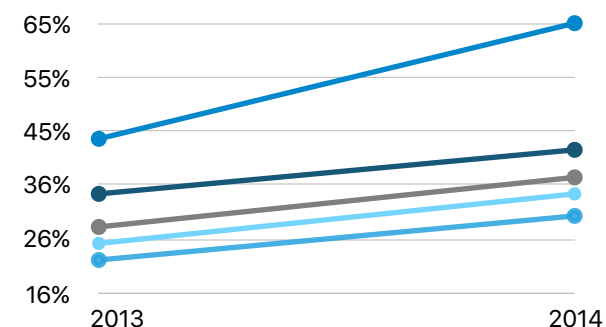
When comparing the 2013 and 2014 test results, a higher percentage of students using iPad scored proficient in English language arts and math (scored a 3 or a 4) than students not using iPad, and this percentage increased greatly year over year.

### Key

- iPad-only class
- Other classes in the same building
- Other classes in the same district
- Other classes in the region
- Other classes across the state

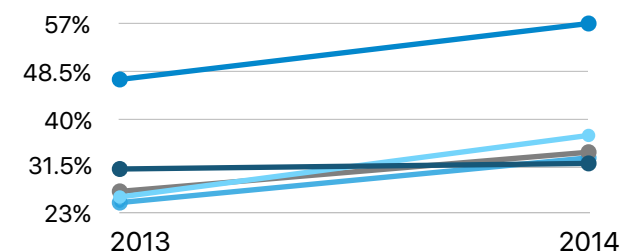
# 41%

increase in math proficiency  
on state assessment



# 10%

increase in English language arts  
proficiency on state assessment





## Villa Wewersbusch

*Langenberg, Germany*

Students and staff at Villa Wewersbusch were frustrated with outdated machines, time-consuming IT support, and technology solutions that didn't reflect or support the needs of a digital society.

In 2011, the school launched their first iPad-based program on a trial basis, and the following year all teachers and students received their own devices. With iPad, Villa Wewersbusch's students were empowered to take responsibility for their own unique ways of learning. Students were able to use Apple apps like Keynote for creative projects and iBooks Author to develop content alongside teachers.

By 2017, their sixth year of implementation, they reported a 100 percent passing rate on exams as compared with 75 percent in 2016.

# 100%

exam pass rate in year 6  
of 1:1 iPad implementation



## Istituti Edmondo De Amicis

*Milan, Italy*

In September 2010, Istituti Edmondo De Amicis launched "De Amicis 2.0," a program that facilitated a total restructure of the school and its curriculum. The integration of technology and iPad were at its center. In 2015, five years into the program, they deployed 869 iPad devices to achieve full one-to-one iPad implementation across both of their campuses. The initiative was a success. With its modern use of iPad, the school built a reputation for being visionary, attracting students and leading to a 35 percent increase in enrolment. They experienced record improvement on final exams across many subjects, including English, math, physics, and chemistry.

# 100%

of students passed final exams



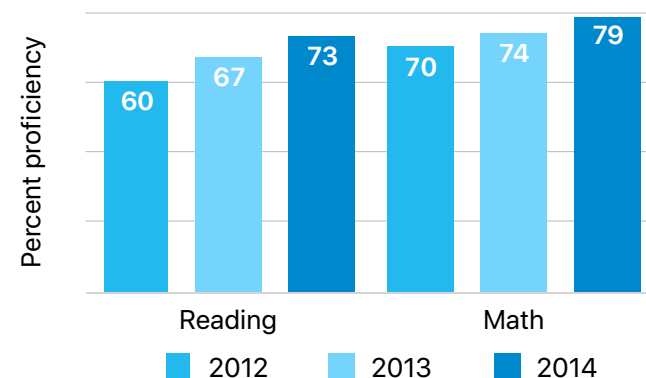
## Mineola Middle School

*Mineola, New York, United States*

For five years in a row, Mineola has used NWEA\* student performance data to assess student progress. Since spring 2012, they've measured student performance in reading and math. Mineola reports results that show aggregate proficiency in grades 3 through 7 over a three-year period that coincides with their iPad initiative, which they say allows students to stay engaged, create, explore, and learn in new ways.

\*NWEA = Northwest Evaluation Association

Increased reading and math scores  
on state assessments



## South Belton Middle School

*Belton, Texas, United States*

State testing results from 2014–2015 show that students at South Belton Middle School are achieving academic success with the 2011 implementation of project-based learning and the integration of a one-to-one iPad environment. For many high schools, Algebra I can become a stop-gap course for students, but with the implementation of iPad, SBMS reports that it's been able to realize academic success with its students.

[Read more about South Belton Middle School in their Multi-Touch book >](#)

# 100%

of students passed the state-mandated  
assessment in Algebra I



## Eastern Howard School Corporation

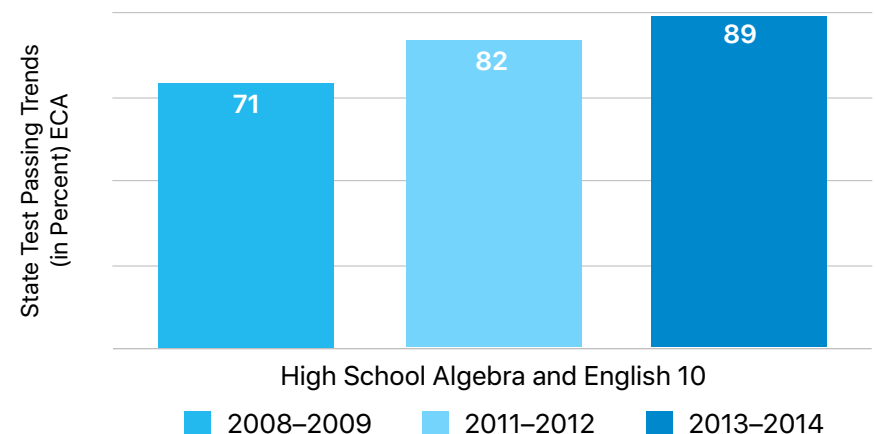
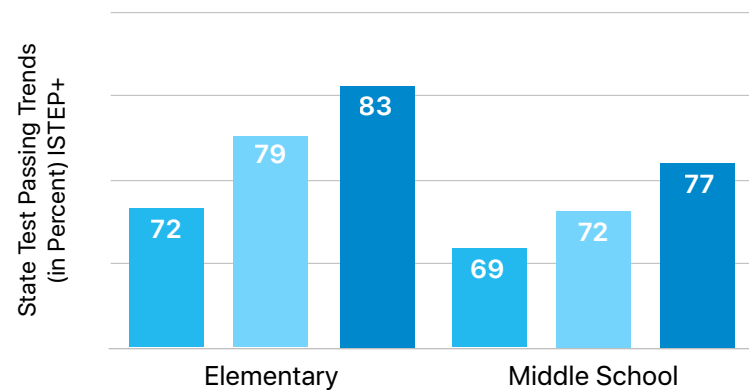
*Greentown, Indiana, United States*

Serving grades K–12 in a rural area, Eastern’s one-to-one iPad program provides a model for districtwide iPad adoption by shaping educational practices with state-of-the-art resources and continuous professional development. Students use apps like iTunes, iMovie, and GarageBand tailored to their grade level and subject, along with digital books created by teachers that students can access through iPad.

For the last six academic years in a row, Eastern has seen growth with all grade levels when comparing passing rates for ISTEP\* and ECA\*\* standardized tests in English and math.

\*ISTEP+—Indiana Statewide Testing for Educational Progress Plus. \*\*ECA—End of Course Assessment.

Continuous improvement in state test assessment results at all grade levels for the past six years





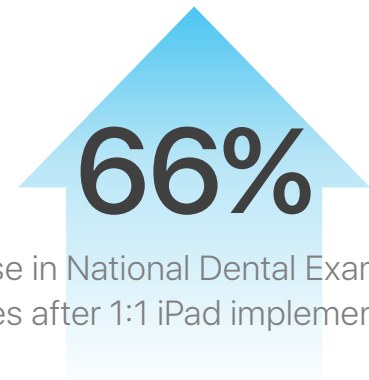
## Dental School, University of Münster

*Münster, Germany*

In 2011, the University of Münster, one of Germany's largest universities with 44,000 students, launched a one-to-one iPad program in the Department of Orthodontics. They reported a positive impact on the learning environment and student performance during the clinical and testing phases of the program.

During the clinical phase, Münster reports iPad enabled distribution of anonymous patient cases that facilitated problem-based learning; access to scientific papers, textbooks, and student-generated content for flexible learning; and opportunities for communication between students. The clinical phase was key to preparing students for the National Dental Examination (Parts I and II), a test that measures students' abilities to understand biomedical and orthodontic research and apply such information to diagnostic and treatment concepts.

In the end, the university reported that students who participated in the iPad program scored 66 percent higher on the exam than students not using iPad.







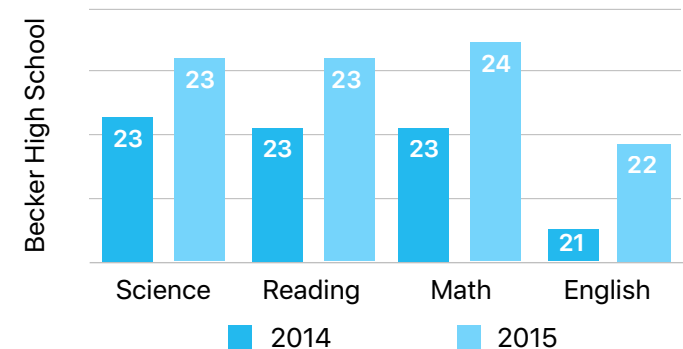
## Becker Public Schools

*Becker, Minnesota, United States*

Becker Public Schools is considered a K–12 technology leader in the state of Minnesota. In 2012, Becker High School became one of the first area schools to begin deploying one-to-one iPad in the classroom. As the first class of students to be a part of one-to-one iPad implementation from the beginning, Becker’s graduating class of 2015 observed gains in composite ACT\* scores in science, reading, math, and English.

\*ACT—American College Testing

Higher composite ACT scores in science, reading, math, and English when compared with state performance



## University of Zagreb School of Medicine

*Zagreb, Croatia*

In 2012, professors at the University of Zagreb School of Medicine looked to innovate the learning environment in their anatomy labs. Working with students and professors, they built new labs and changed the learning approach to improve results in the classroom.

Using iBooks Author, they produced new learning materials and made them available on each student’s iPad. They also loaded world-class apps, such as the Carl Zeiss app—which allowed students to transform their microscopes and cameras into a Wi-Fi-enabled imaging environment.

After one semester with iPad, student results on anatomy exams—typically the most challenging subject area—improved by 40 percent.

# 40%

improvement on anatomy exams after one semester of iPad deployment



## Saskatchewan Rivers Public School Division

*Saskatchewan, Canada*

Rooted in indigenous learning models, the Help Me Tell My Story assessment app on iPad provided a new way for measuring early learning success and real change in the oral language development of children across the Saskatchewan Rivers Public School Division.

During the 2014–2015 school year, four years after they launched the program, the Saskatchewan Rivers Public School Division measured the impact of using the app in the classroom by correlating the data with report cards at the end of the school year. They found significant academic improvements in students who had participated in the Help Me Tell My Story program, compared with those who didn't complete the program.

They reported an increase in reading behaviours and skills, including comprehension, fluency, and listening. The Help Me Tell My Story app has been used in more than 125 schools across Saskatchewan, reaching more than 4000 children.



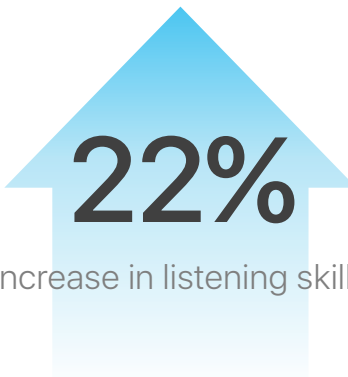
52%

increase in achieving proficiency or mastery in reading behaviours



29%

increase in reading skills



22%

increase in listening skills



## California State University Northridge

*Northridge, California, United States*

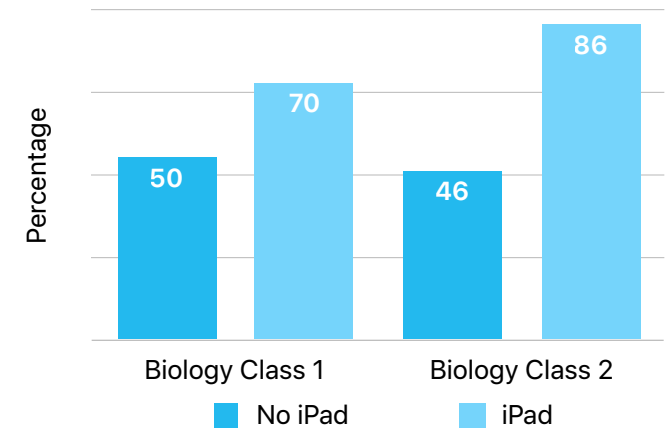
In 2013, Cal State Northridge launched the myCSUNtablet initiative, a one-to-one iPad deployment with the goals of increasing student engagement, improving the quality of teaching materials, and reducing cost. A simple six-step process was developed jointly with CSUN's Centers for Universal Design and Disability Resources toward the goal of making apps easy for faculty to test. The myCSUNtablet initiative has cross-campus commitment of leaders, with a deliberate focus on ADA accessibility.

To address whether iPad has an impact on student learning outcomes, a straightforward "micro-assessment" technique was developed over one academic year, whereby faculty would teach a similar Biology lesson two different ways—once with iPad and once without—and then measure the results of each method.

More than

# 20%

increase in student assessment scores in Biology classrooms using iPad as compared with students not using iPad





## Te Akau ki Papamoa Primary School

*Papamoa, New Zealand*

Te Akau ki Papamoa Primary School introduced its one-to-one iPad pilot program in 2009. Initially, they observed that 70 percent of students were reading under the expected standard.

In the sixth year of the program, the school reported dramatic student achievement, with 90 percent of students reading at or above the expected standard. The Māori population in particular closed the performance gap by almost 100 percent.

# 90%

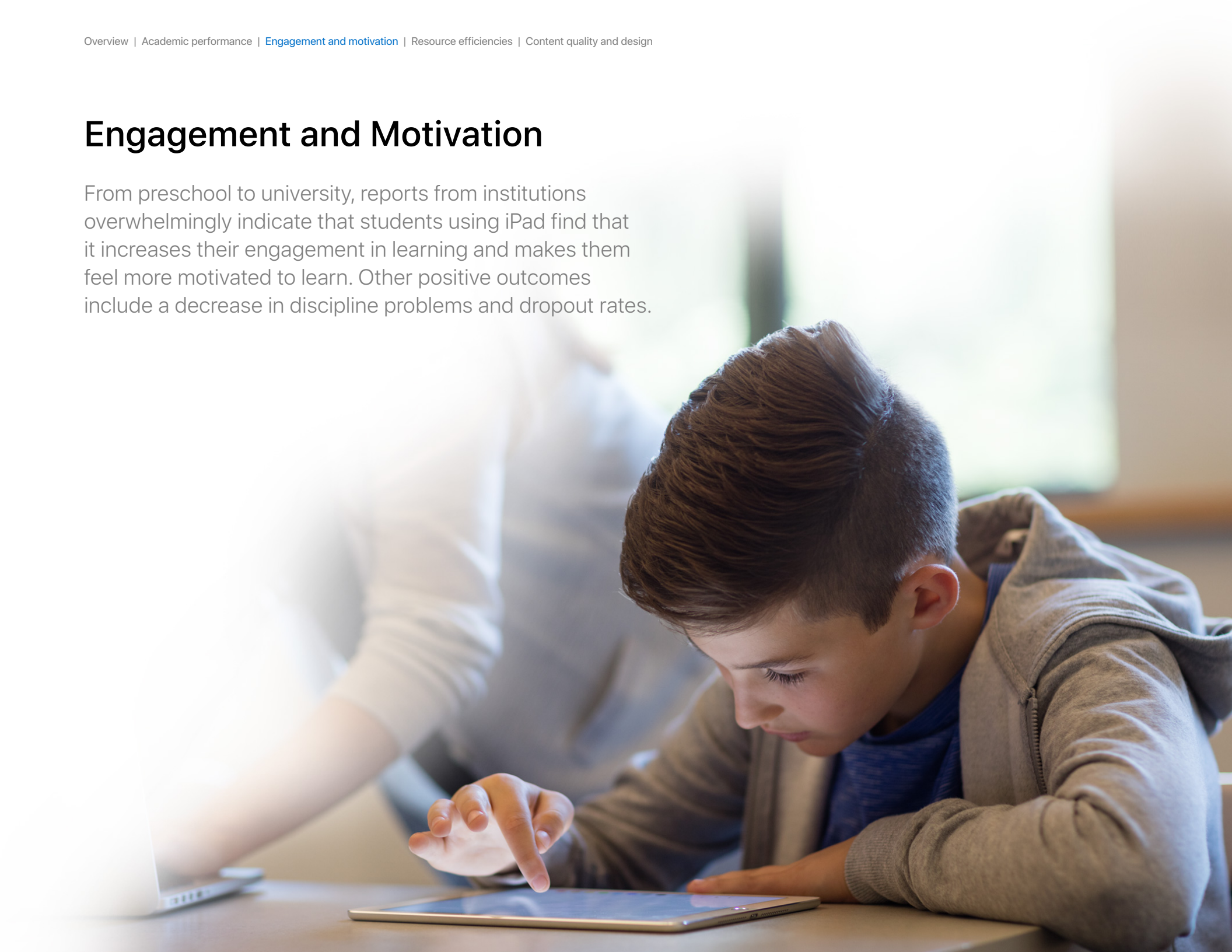
of students reading at or above the  
expected standard reading level





# Engagement and Motivation

From preschool to university, reports from institutions overwhelmingly indicate that students using iPad find that it increases their engagement in learning and makes them feel more motivated to learn. Other positive outcomes include a decrease in discipline problems and dropout rates.





## Goodland USD 352

*Goodland, Kansas, United States*

In a rural county where over half of the students are economically disadvantaged, Goodland USD 352 was previously designated as “needing improvement.” Goodland reports that the most recent year of their one-to-one iPad program resulted in a decrease in classroom failure rates, discipline issues, and dropout rates while attendance and graduation rates increased for middle and high school students.

**25%**

decrease in high school students  
failing one or more classes

**18%**

decrease in middle school students  
failing one or more classes

**10%**

decrease in dropout rate



## Wilhelm Ferdinand Schüssler Day School

*Düsseldorf, Germany*

In 2013, Wilhelm Ferdinand Schüssler Day School implemented a shared iPad program in two classrooms, and decided quickly that all students should benefit from the continuous, personalized learning that a one-to-one iPad program enables.

With the one-to-one iPad program, it became clear that classroom behaviour shifted. Students were more engaged than they'd ever been, appreciated the ability to work when and how they wanted, and had the opportunity to be creative using apps like iMovie and Keynote. As a result, the school reported a 100 percent graduation rate among students who participated in the one-to-one iPad program, which was an increase of more than 20 percent.

Two years later, they purchased an additional 240 new iPad devices to become a complete one-to-one school. Based on the success of the program, the Düsseldorf Council expanded to 10 more schools in the district and now have more than 80 schools participating in a one-to-one iPad program.

"Since the introduction of iPad, the school has experienced a marked increase in student motivation and engagement. The device is essentially a physical manifestation of the society's investment in their learning."

Uwe Schorscher, Principal

# 100%

graduation rate





## Lynn University

*Boca Raton, Florida, United States*

Since the launch of their iPad program, Lynn continues to see increases on student satisfaction surveys each year—and now as a result, Lynn is receiving accolades by *U.S. News & World Report*. In spring 2015, Lynn was ranked #21 in *U.S. News & World Report*'s Best College rankings as Most Innovative School for innovative updates in curriculum, faculty, students, campus life, technology, or facilities. In the most recent student satisfaction survey:

- 72 percent of students thought Multi-Touch books were more effective than traditional paper books (up from 65 percent in 2013).
- 90 percent of students felt iPad would allow them to be better able to connect with classmates (up from 79 percent in 2013).
- 96 percent of students felt comfortable using iPad technology.
- 99 percent of students anticipated iPad would contribute to their learning experience.
- 73 percent of students felt the iPad program influenced their decision to attend Lynn University.

[Read more about Lynn University in their Multi-Touch book >](#)

# Ranked #21

in *U.S. News & World Report* as  
Most Innovative School





## VUC Syd

*Denmark*

VUC Syd, an institution that serves 8000 adult students between the ages of 16 and 60, launched their one-to-one iPad program in 2010. Many of the students transferred from a traditional education system to VUC Syd to experience an approach to learning that supported their unique learning challenges.

This approach was reinforced by VUC Syd's belief in the importance of digital literacy and its crucial role in students' onward success. They introduced the one-to-one iPad program as a way of developing curiosity, building self-confidence, and increasing the engagement of their students.

After six years of implementation, the number of students pursuing higher education increased by 139 percent and student enrolment increased 74 percent above the national average.

"VUC Syd provides more than just an education—it's a community and a home for all our students. iPad supports this special environment and helps the curriculum come to life."

Vinnie Lerche Freudendal, Head of Development

# 74%

increase in student enrolment

# 139%

increase in students seeking  
higher education after graduation





## Encinitas Union School District

*Encinitas, California, United States*

For the past two years of Encinitas' one-to-one iPad program implementation, data reflects an increase in attendance rates at all nine schools. While this data could be attributed to a variety of factors, one possible reason (combined with survey data) is that students are more engaged in learning and have a desire to attend school.

[Read more about Encinitas Union School District in their Multi-Touch book >](#)

# 96%

overall attendance rate



## Cedar Valley Catholic Schools

*Waterloo, Iowa, United States*

In 2012, this school's one-to-one iPad program was built around a clear vision for success, student engagement, and ongoing professional development, resulting in gradual improvements across a variety of measures. Cedar Valley reports a 97 percent attendance rate, 100 percent graduation rate, and 70 percent of all grade levels exceeding national scores on state assessments.

# 96%

of students report being more engaged in the classroom



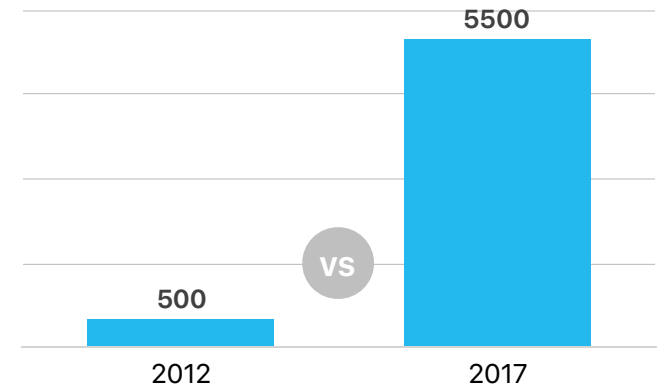
## IUBH—International University of Applied Sciences

*Bad Honnef, Germany*

In 2013, the introduction of the one-to-one iPad program at IUBH Distance Learning enabled students to learn in a more flexible and independent way without dependency on their desktop computer or smartphone.

In 2017, four years into the one-to-one iPad program, IUBH's iTunes U channel had 135,000 subscriptions and more than 650,000 downloads, making it the dominant tool for sharing IUBH's learning materials with the public.

Use of iPad and iTunes U allowed students to adapt their learning process to their personal and professional daily routines, providing the best possible learning experience. IUBH believes this has resulted in a significant increase in student enrolment from 500 in 2012 to 5500 in 2017.



number of students enrolling  
in IUBH Distance Learning Programs



## Kindai High School

*Osaka, Japan*

Kindai High School, a private school serving grades 10–12, began their one-to-one iPad program in 2012. School leaders observed that students were more engaged, took an active role in their learning experiences, and expressed an eagerness to learn. Students were empowered to control their own learning and develop a sense of belonging at school.

During the first two years of implementation, they experienced a steady decrease in new students dropping out of school in the first year. By 2014, Kindai reported an impressive 84 percent decrease in their dropout rate of new students—going from 37 students down to 16 students in the first year.

# 84%

decrease in new students dropping  
out of school in the first year



## Bluffton-Harrison MSD

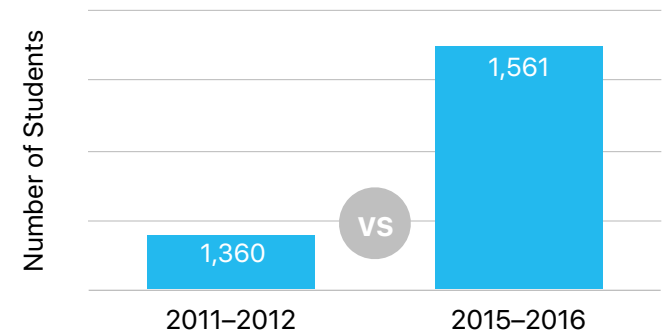
*Bluffton, Indiana, United States*

For the last five years, Bluffton has implemented a one-to-one iPad initiative across all grades in the district. To increase the level of engagement students had with iPad, Bluffton expanded its initiative during the 2015–2016 academic year to allow all students to take their devices home rather than only students in grades 5 through 12. During this expansion year, Bluffton reports that many factors, including increased engagement with iPad, contributed to the 15 percent increase in district enrolment—a rise of 200 students.



# 15%

growth in enrolment due to  
many factors, including increased  
engagement with iPad



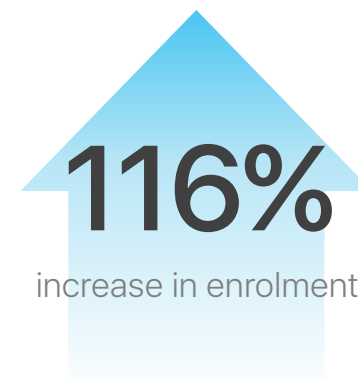


## Oberschule Gehrden

*Gehrden, Germany*

In 2011, Oberschule Gehrden, a secondary public school serving grades 5–10, implemented a one-to-one iPad program that expanded across all grades over the course of six years. iPad became an important tool for students and teachers in their learning and teaching process, enabling students to be more engaged during lessons. The school developed digital STEM curricula that allowed students to explore and discover real-world problems in an intuitive and personal way.

Using iPad in the classroom helped spark curiosity in students and enable much deeper understanding. As a result, Oberschule Gehrden reported a 116 percent growth in enrolment between 2014 and 2017. This also led to recognition as an Apple Distinguished School in 2017.

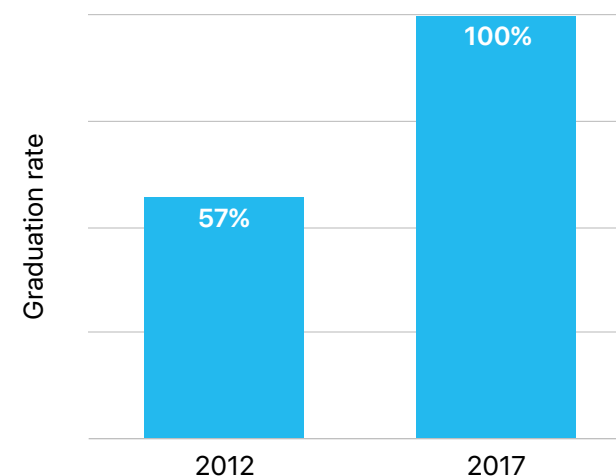


## CFER de Bellechasse

*Saint-Raphael, Quebec, Canada*

CFER de Bellechasse educates students between the ages of 15 and 18 who find regular secondary studies challenging. The school has committed themselves to using technology that meets the requirements of today's students. iPad integrates beautifully to assist CFER students who have difficulties in school and prefer to study outside the traditional classroom.

As a result of their one-to-one iPad program, learning at CFER has become an innovative learning environment that's customized for each student—enabling 100 percent to obtain a high school diploma in 2017, as compared with 57 percent in 2012.







## Einaudi Chiodo

*La Spezia, Italy*

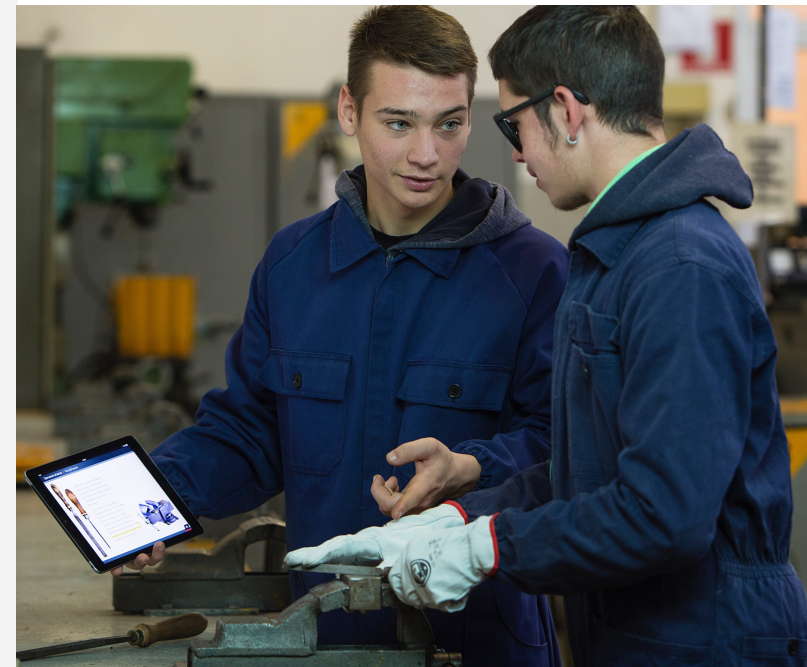
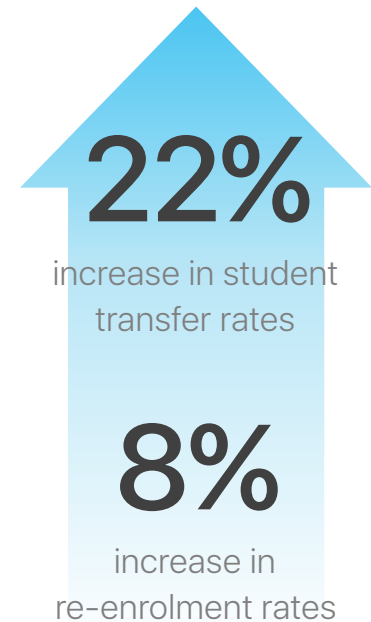
In 2011, Einaudi Chiodo launched a one-to-one iPad program to address a decrease in new and existing student enrolment. With iPad, they felt they could improve student communication and create a learning experience that brought the real world into the classroom.

By 2014, three years after implementation, Einaudi experienced an increase in the student population attributed to an 8 percent increase in student re-enrolment, a 22 percent increase in student transfers from other schools, and a 2 percent decrease in dropout rates.

Leaders at Einaudi saw a 6 percent increase in student passing rates on exams, which they believe was a result of increased engagement with students using iPad. This also led to more students pursuing postsecondary studies after graduation.

“We needed to improve our educational program and student performance, and we felt iPad and the Apple ecosystem were the way to close the gap between students and education.”

Alessandro Gabelloni, iPad Project Manager and Teacher





## Hilliard State School

*Brisbane, Australia*

Hilliard State School began their journey in 2011 when they launched a shared iPad program with a small number of teachers. Their implementation was so successful that by 2016, they moved to a one-to-one iPad program, expanding the program to every student in every class, Kindergarten to Grade 6.

Results from two school surveys\* showed that 90 percent of students reported having a better learning environment using iPad, while 100 percent of parents also reported overall confidence in the students' classroom learning experience using iPad. In math, 82 percent of parents also observed improved engagement.

\*2014 School Opinion Survey and Research Project Survey

# 82%

of parents report increase in  
student math engagement

# 100%

of parents report confidence in  
students' learning experience

# 90%

of students report having a  
better learning environment



## Marymount School of New York

*New York, New York, United States*

Marymount prefers alternative assessment methods to measure students' academic curiosity, creativity, and achievement. In the spirit of the Maker Movement, Marymount embraces the importance of the process over the product and encourages all students to experiment, tinker, and innovate. In the last few years, the school has also seen a marked increase in the number of students applying to colleges and universities across the country—many of them choosing STEM-related majors.

[Read more about Marymount School of New York in their Multi-Touch book >](#)

# 100%

of Marymount seniors graduate  
on time and go on to college

## La Miranda

*Barcelona, Spain*

"We want this learning experience to shape and help our students—that's why we believe iPad is necessary to develop vital digital skills for the rest of their lives."

Dr. Anna Mary Sureda, Director



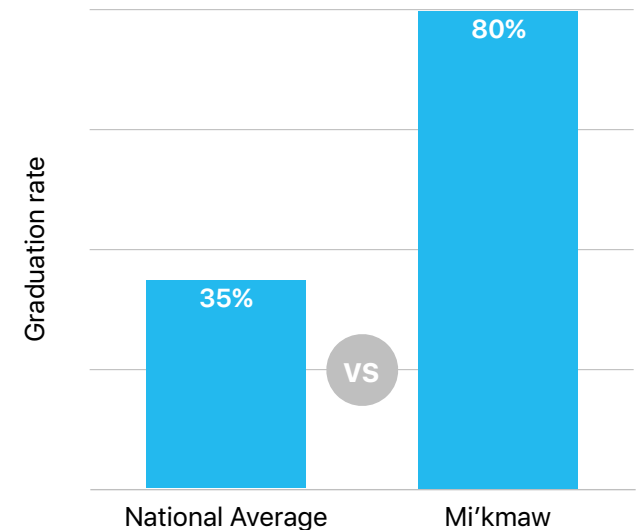


## Mi'kmaw Kina'matnewey (Atlantic First Nations)

*Nova Scotia, Canada*

"Mi'kmaw Kina'matnewey" means "teaching and learning" in the language of the Mi'kmaw First Nation people. Made up of 12 First Nations and 21 schools in Nova Scotia, Mi'kmaw Kina'matnewey was formed in 1997 by an Act of Canada's Parliament, which provides Native self-governance over education. Efforts to implement the one-to-one iPad program began in 2012 with three schools, increased to seven, and grew to fifteen schools with one-to-one or shared classrooms.

A strong focus on language and culture can be seen in the organization's content development. More than 20 apps and a growing library of iBooks textbooks and iTunes U courses are being developed. They created a language assessment tool called "Antle the moose"—a puppet that interviews students, then uses his nose as a pointer to enter the responses on iPad. By 2014, two years into the implementation, their new language revitalization apps and culturally appropriate materials helped increase graduation rates among Mi'kmaw communities to 80 percent, compared with the 35 percent national average for aboriginal communities.








## Ajman Academy

*Ajman, United Arab Emirates*

Ajman Academy opened its doors in 2012 with a one-to-one iPad program for all students.

With iPad, Arabic language lessons were more fun and motivated students to develop their skills collaboratively. The learning environment was accessible and allowed all students to enhance their thinking and communication skills, making iPad an essential tool for learning.

In 2017, five years into the implementation, Ajman reported a 600 percent increase in student enrolment, going from just under 100 students to 840 students. They believe this result is due to the students' experience in the one-to-one iPad program.



600%

increase in student enrolment



## Resource Efficiencies

It has become more important than ever for districts and schools to manage their financial obligations in order to provide great educational experiences on a limited budget. iPad implementation gives schools the opportunity to create efficiencies and explore cost savings, such as reductions in computer lab maintenance, consumables and textbooks, hardware peripherals, print services, and more.





## String Theory Schools

*Philadelphia, Pennsylvania, United States*

This K–12 school built an Apple ecosystem to spark innovation across the curriculum and inspire leaders among students, resulting in significant transformations.

- Replaced all textbooks and school supplies with iTunes U content
- Built the curriculum collaboratively, in real time, and published content on iTunes U

# \$100,000

savings per year on textbooks with  
iTunes U for content and teacher-created  
courses and curriculum



## Emma K. Doub Elementary School

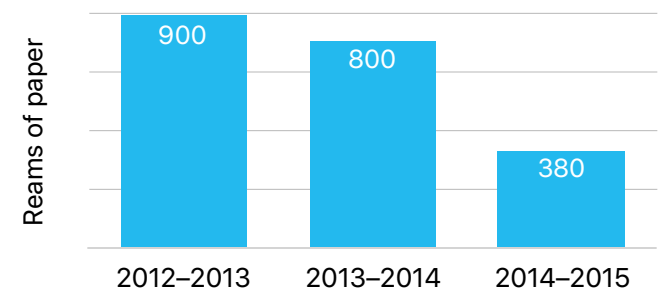
*Hagerstown, Maryland, United States*

At Emma K. Doub, every student in the school uses iPad in a one-to-one environment throughout the instructional day along with a variety of other tools, including digital photography and green screen technology. The goal at this school is to integrate arts and technology into the curriculum to challenge, connect, and create in order to achieve academic success. Emma K. Doub reports that the initiation of this one-to-one environment has reduced paper costs.

[Read more about Emma K. Doub Elementary School in their Multi-Touch book >](#)

# 58%

decrease in paper cost over two years





## ESSA Academy—Bolton

*Bolton, United Kingdom*

Essa Academy's vision was built on the desire to provide a high-quality educational experience that created a strong sense of belonging and community. With a one-to-one iPad program, the access to rich learning materials coupled with the ability for teachers to provide quality feedback enabled a personalized learning approach.

Just two years after implementation, students began creating their own digital textbooks. This resulted in a 70 percent decrease in photocopying costs and a reduction in the number of photocopiers needed from nine to three. But more importantly, students were able to go deeper into the lesson and expand the learning from the classroom.



## Cathedral Catholic High School

*San Diego, California, United States*

Since their school wide iPad program implementation, the Cathedral Catholic community has enjoyed \$38,000 in financial savings through the creation of electronic handouts and handbooks for use on iPad. Parents and faculty also report savings after transitioning to iPad.

[Read more about Cathedral Catholic High School in their Multi-Touch book >](#)

**\$38,000**

in savings through creation of electronic  
learning materials for use on iPad

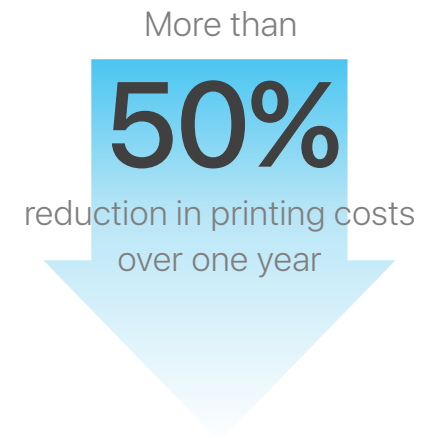


## Søndervangskolen

*Aarhus, Denmark*

Leadership at Søndervangskolen created a culture of continuous professional development that helped teachers show improvement with their students while providing them with tools to keep track of their students' progress. This led to a school environment that facilitated academic success for all students.

The one-to-one iPad program also had a significant impact on Søndervangskolen's financial health by helping the school save more than 50 percent on the printing of course materials.





# Content Quality and Design

Quality content for iPad and apps for iPad in education lead to higher achievement. Research shows the importance of developing features that enhance learning and engage young students, while not distracting from the educational content. Several studies have focused on specific content effectiveness of third-party apps, underscoring that designing quality content matters.







### **Solar Walk, *Science***

Researchers explored how two specific interactive features in the app Solar Walk would affect high school students' understanding of the solar system and enhance learning on iPad.<sup>2</sup>

- The Solar Walk app impacted student understanding in 20 minutes.
- Interactive features of iPad enhanced students' understanding of content that is otherwise difficult to demonstrate with traditional instruction methods.

Solar Walk<sup>3</sup> impacted student understanding in

# 20 min.



### **Wuzzit Trouble, *Math***

A recent Stanford University study showed that playing the mobile video game app Wuzzit Trouble led to dramatic learning results in math. When researchers compared the written pre- and post-test results of two classes, the students who spent 120 minutes of class time playing Wuzzit Trouble improved their math problem-solving skills.

[Learn more about these results in the Stanford research study >](#)

increase in math problem-solving skills after 120 minutes of game play with Wuzzit Trouble

# 16.4%



### **Learn with Homer, *Literacy***

The study "Can an App Close the Literacy Gap?" set out to examine the efficacy of the Learn with Homer app on early literacy development in an effort to improve school readiness skills. In seven Head Start classrooms, 82 children were randomly assigned to treatment and control groups. The treatment group used six levels of Learn with Homer's literacy program.

[Learn more about these results in the research study >](#)

\*TOPEL—Test of Preschool Early Literacy

increase in TOPEL\* test scores after using the Learn with Homer app 15 minutes a day over six weeks

# 74%



## **ST Math, *Math***

In 2010–2011, the WestEd “Evaluation of MIND Research Institute’s Spatial-Temporal Math (ST Math) Program in California” study looked at the average grade-level math scores on the California Standards Test (CST) at all schools that used the ST Math app. When comparing the test scores with a matched set of other schools that did not use the app, the findings were impressive.

[Learn more about these results in the research study >](#)

# 16 points

gain on CST test scores after one year of implementing the ST Math app



## **Teachley: Addimal Adventure, *Math***

Teachley: Addimal Adventure teaches single-digit addition to kindergarten through second grade students—the goal is to promote conceptual understanding and fact fluency. A pilot study was conducted to determine the effect of Addimal Adventure on students’ accuracy, speed, and strategy use.

[Learn more about these results in the research study >](#)

# 13%

increase in speed and accuracy of math facts per minute when using the Addimal Adventure app



## **LightSail, *Reading***

LightSail reports students reading 25 minutes a day on LightSail are seeing 2+ years of Lexile growth in a single year. In a recent Columbia University Teachers College study, researchers found that students in grades 5 and 6 who use the LightSail app in their reading practice have improved their Lexile measure between 2.6 and 4.3 times the national average, according to MetaMetrics, the creators of the Lexile Framework.

[Learn more about these results in the LightSail research study >](#)

# 2+ years

of growth in reading ability after one year of reading 25 minutes a day on LightSail



## **eSpark, *Math and Literacy***

Launching their one-to-one iPad implementation in 2013, Elizabeth Forward School District has seen remarkable impact in student engagement and academic achievement using eSpark. Before eSpark, the kindergarten, first, and second grade special education students began the school year significantly behind their peers, averaging in the 48th percentile nationally. That same group grew 25 percentile points in math and English language arts after using the eSpark app, closing the achievement gap.

[Learn more about the Elizabeth Forward case study >](#)

\*NWEA—Northwest Evaluation Association

\*\*MAP—Measures of Academic Progress

# 25%

point gain on NWEA\* MAP\*\* after one semester using the eSpark app



1. The data shown in this document is self-reported by the institution—Apple was not involved in the gathering or analysis of the data reported, nor has any knowledge of the methodology used. This document highlights the results or trends institutions using Apple products have observed, along with studies that demonstrate the positive impact iPad is having on instruction in the classroom.
2. Conceptualizing astronomical scale, *Computers and Education*, January 2014
3. Prior to purchase or download, you should review the terms, representations, policies, and practices of any third-party app to understand whether their treatment of information meets the needs and requirements of your organization, especially as it relates to the treatment of children's data.

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