

lementary and high schools from Burlington, Massachusetts, to Coachella Valley in California are moving headlong into digital technology in the classroom. While most are public schools and many are in wealthier school districts, private schools like Notre Dame Preparatory School and Marist Academy also are jumping into plans that eventually will lead to computer tablets for all students, or "one-to-one" (1:1).

Apple Computer said recently that more than 600 school districts in the U.S. have bought its iPads for their students. In a recent article in Macworld magazine about digital education, Burlington (Mass.) High School principal Patrick Larkin justified the cost by how it will dramatically transform the way students are educated.

"One of the big things was that we decided we'd stop doing any textbook adop-

Please see I'M A TABLET, page 3



I'm a (40 lb.) backpack.



I'm a tablet.

Notre Dame Preparatory School and Marist Academy provides its diverse student body a Catholic and internationally recognized college-preparatory experience of lasting value.

# IB prepped U-M junior well for college

Two thousand eleven grad Alex Rink says Notre Dame Prep and International Baccalaureate helped with college courses and with writing. And his high school gave him a head start with singing, too.



otre Dame graduate Alex Rink ('11) is in his third year at the University of Michigan, studying mechanical engineering. He's got his sights set on a career in the automotive industry, planning for an eventual manufacturing position with Ford Motor Co.

It goes without saying that engineering at U-M is a pretty intense and time-consuming major. But for Rink, while challenging at times, his studies at Michigan would have been a lot tougher had it not been for his Notre Dame Prep education and especially NDP's International Baccalaureate program.

"The high-school classes that most prepared me for my college-level studies are definitely the IB courses I took," Rink says. "The challenge of those courses, in addition to the research and technical writing I experienced with the extended essay aspect of IB, set me up very well to succeed in my college education."

Rink's Notre Dame education and a connection with a fellow alum also led him to some interesting intern work over the past two summers. He met 2000 NDP graduate and Takata Corp. engineer Trent Thiry at one of Notre Dame Alumni Association's "Traveling Irish Dinners" a couple of years ago in Ann Arbor. Rink says the two of them started to talk "shop" and about their mutual interest in the auto industry. Takata is an automotive supplier with an office in Auburn Hills.

"We spent a while chatting and I ended up interviewing with him for a Takata intern position a few weeks later," he says. "During my internship at Takata, I worked on the development and testing of automotive safety devices, including airbags and seat belts. I learned quite a bit about the automotive industry as a whole, and I was able to contribute to the designs of products, some of which are now in cars on the road today. It was an invaluable opportunity, and the experience I gained has helped me tremendously in my development as an engineer."

The Takata experience no doubt helped Rink in landing his next internship, which will be in manufacturing engineering at Ford next summer. "In this position, I expect to work on the development of various manufacturing and assembly processes," he says. "I plan on learning a lot about manufacturing and the automotive industry—this time from the standpoint of an OEM."

It hasn't been all math, science and engineering for Rink since matriculating to Michigan. He's been a member of the U-M Men's Glee Club since his freshman year, and he again credits his high school for giving him a head start.

"Some of my favorite memories from NDP are the experiences I had in the Notre Dame Prep Men's Glee Club with Mr. [David] Fazzini. Although I miss the tradition and camaraderie of that group, I have been able to take those experiences and expand them further with the U-M club."

### I'M A TABLET, from page 1

tions," Larkin said. "If we were going to buy a new ninth-grade English textbook that's a lot of money to spend on a textbook. Teachers weren't using every aspect of the [paper] textbook anyway. Instead of spending that money on textbooks, we could spend it to help teachers curate and sometimes even create their own content."

Notre Dame's own aggressive push into digital technology took its own big step forward last month as administration officials signed the dotted line on an agreement to access tablets for a pilot program scheduled to begin early this semester in the school's middle and upper divisions.

Joanne Widmaier, Notre Dame's registrar and academic technology coordinator, said everything is on track for full one-to-one digital access by August. "In December, we set in motion the access of Microsoft Surface Pro 2 tablets for students in grades six through 12," she said.

"Technology enables students to learn in ways not previously possible," Widmaier said. "Effective integration of technology is achieved when students are able to select technology tools to help them obtain information in a timely manner, analyze and synthesize the information, and present it professionally. The technology should [and will] become an integral part of how the classroom functions. It will be as accessible as all other classroom tools."

All students in Notre Dame's second through fifth grades already are using tablets—Apple iPads—which are fully integrated into the daily curriculum, Widmaier noted, and she says the first graders in particular are well engaged, especially with A parents meeting to discuss the cost and the schedule for rollout of all of the middle and upper division tablets is planned for this semester. The school also plans to schedule "boot camp" training sessions during the summer break.

the mathematics apps. However, after an exhaustive evaluation of available tablets, including the iPad, school administrators decided the other two divisions will get a different device.

"We chose the Surface tablets for the pilot program in the middle and upper divisions," Widmaier said, "and it includes Windows 8.1, plus the full Microsoft Office Suite 2013 as well as other software. The iPad is great, but the Surface tablet just worked out better for grades six through 12."

The pilot program is expected to begin this semester with six teachers in the upper school and two in the middle. Students in those classrooms will receive their devices, and Microsoft will be providing pilot training on the tablet itself and with the Windows



Apple iPads were deployed at Notre Dame Marist Academy's lower division in September.

8.1 software. A final decision on the kind of tablets for the rest of the students next school year will be based on this pilot program. Widmaier notes that the digital infrastructure to support the school's move into tablets is being upgraded as well.

A parents meeting to discuss the cost and the schedule for rollout of all of the middle and upper division tablets is planned for this semester. The school also plans to schedule "boot camp" training sessions during the next summer break.

Melissa York, a teacher in Notre Dame's middle division who has master's degree in Educational Technology from Michigan State University and a B.S degree in elementary education from Oakland University, is NDPMA's new technology integration specialist and will assist all teachers and students throughout the transition to digital.

So given this rush to technology, are traditional paper textbooks and notebooks and the heavy backpacks to carry them all heading permanently to the recycle bin? Not totally, at least for a while, according to Widmaier. "In general, textbook publishers have been slow in responding to the digital age," she said. "And we have some existing contracts with publishers for hard-cover textbooks, so I see 'e-books' transitioning within our curriculum over a several-year period rather than all at once."

In the future, as Notre Dame moves more fully into one-to-one, Widmaier says the big backpacks eventually will be a memory. "If anything, students might be carrying a much smaller backpack, much like a messenger bag, with the largest item inside likely a hybrid tablet/PC weighing only about two to three pounds."

### Flipped learning comes to Notre Dame

Watching TV or a video on a computer screen during what should be homework time usually is verboten in most households with school-age kids. But today, your son or daughter may actually be doing their homework. That's because many teachers and many high schools are adopting the "flipped-learning" model of classroom instruction.

According to Flipped Learning Network, an education advocacy group headquartered in Arlington, Virginia, in a flippedlearning setting, teachers make lessons available to students to be accessed—usually by recorded video—whenever and wherever it is convenient for the student: at home, in class, during study hall, "on the bus to a game, or even from a hospital bed." Teachers usually prerecord a video of their own lecture or provide access to a trusted third-party lecture. Students then can watch the videos or podcasts as many times as they need to, which according to FLN enables them to be more productive learners in the classroom. Because a lecture or direct instruction is delivered outside the classroom, teachers can use in-class time to actively engage students in the learning process and provide them with more individualized support.

Many schools across the country are embracing this concept in part or in total. In the Detroit area, Clintondale High School in Clinton Township has totally jumped on board with flipped learning. According to principal Greg Green in a story published in December by PBS NewsHour, failure rates for students at Clintondale have declined dramatically since they adopted the innovative process in 2010, and test scores also have improved.

"We feel we've perhaps figured out the structure of the way

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### Student ambassadors make Notre Dame shine

n a program started almost two years ago by the Notre Dame admissions department, 38 young men and women from the school's upper division have been tasked with helping to bring the message and mission of NDPMA to prospective students and families.

Nominated as student "ambassadors" by teachers and administrators, and ultimately chosen by the admissions department, these 38 sophomores, juniors and seniors are "responsible for projecting and fostering a warm and welcoming atmosphere for anyone interested in Notre Dame, which could be both on or off campus," according to the program application.

### THE A-TEAM

Emily Giacona, an associate dean of admissions who administers the program, formally known as the Student Ambassador Program, says these students are chosen through a highly competitive selection process and have a hugely important job in assisting with recruiting efforts.

"We look for students who are friendly, articulate, outgoing and have a good grasp of what our school is about," Giacona says. "They love Notre Dame, embrace the mission and live it!"

She says the ambassadors, nicknamed the "A-Team," are critical to the work her department does. "Especially in the fall, when we are doing lots of school tours as well as many events and visits at the various elementary and parochial schools in the area, these kids provide a much-needed hand with just about everything. There are scholar banquets, freshmen icebreakers, the corn roast, open house and we visit about 30 schools in the area, mostly in September, October and November. It's really a crazy time for us."

A unique logo was designed for the ambassador program, and when "on duty," the students wear special blazers, the style of which they picked out themselves.

James Pillot, a sophomore member of

the A-Team, when asked why he joined, says, "Obviously, the jacket is pretty nice! But seriously, it's an opportunity to help people get acquainted with the school." He also says that being involved with the ambassadors will look good on his resume and that he enjoys bragging about Notre Dame because he likes it a whole lot.

### **NEON FRAMES**

Student ambassadors also assist with some of the marketing materials and giveaways the admissions department uses. "For a few years, we were giving prospective students Notre Dame-branded lanyards," Giacona says. "But our ambassadors told us unequivocally that lanyards are *not* cool anymore. So now we are considering things like neon-framed sunglasses and even frisbees, which they say *are* cool. Lesson learned!"

Giacona said the program has been a rousing success so far. "The prospective

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### RINK, from page 2

And expand them he has—big time! Since signing on with the glee club at Michigan, Rink has traveled and performed throughout the U.S., with a west coast tour coming this spring. "Joining the glee club was one of the best and most important decisions of my college career," says the bass singer, who also serves on the club's executive board. "It has offered me countless opportunities to make friends, grow as a leader, engage the community and see the world. One of the most enjoyable experiences was a tour we went on in May of 2012 to China."

Rink, who rooms on campus with seven other students, including fellow NDP alum Max Gilles ('11), also is a member of The Friars, an a cappella sub-group of the school's glee club.

He loves to sing, but realizes that it likely only will be an avocation, not his ultimate vocation. His true passion is engineering. "I've known that I wanted to be a mechanical engineer since middle school when I found myself consistently interested in how mechanical things work," Rink says. "The University of Michigan

is one of the best universities in the country for engineering, and the fact that I've bled maize and blue my whole life is a real bonus."

Knowing that he probably wouldn't be in such a sweet spot currently in his young life without all that's come before, including a great high school education, Rink says it's vital for him not to forget what got him to that spot. "I feel it's extremely important to support Notre Dame Prep so that the amazing experiences that allowed me and my classmates to grow and find our passion can be passed on



Alex Rink '11 (NDP) is studying engineering at U-M. He also sings on the university's Men's Glee Club.

to future students. Our support is pivotal in taking the things we love most about NDP and making them even better!"

## NDP to collaborate with Harvard on astrophysics program

Notre Dame Prep has been selected to participate in an astrophysics program through Harvard University that will enable students to access sophisticated telescopes and software for the study of planets and stars outside our own solar system.

In a field test for the "Laboratory for the Study of Exoplanets: Fostering Data Literacy" program, students in science teacher Sue



McGinnis' astronomy class will participate in a two-week program sponsored by the Harvard-Smithsonian Center for Astrophysics in the spring of 2014. The program will allow NDP juniors and seniors to access telescopes remotely online and use image-processing software and interactive models to detect and describe other worlds'

orbiting planets beyond the Earth's own planetary system—typically called exoplanets.

Students will choose from a menu of target stars, take images with the telescopes, measure the brightness of the stars, and using the telltale, periodic dip in the brightness of their chosen star, build up a portrait of the transiting planet. Each student will be able to analyze an entire transit or combine a few points of data with others in their class.

According to officials at Harvard, interactive models will help students predict what they might expect to find and interpret what they do find, and once students collect and analyze their own data, they can begin to compare, combine and communicate their findings with other students, other schools and with researchers at the Science Education Department of the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass.

## Award-winning Killer Bees help build award-winning float

The Notre Dame Prep Team 33 Killer Bees robotics team worked with the Rochester Adams/Stoney Creek (Adambots) and

Rochester (F.E.D.S.) high schools again this year to build a float for the Rochester Hometown Christmas parade held December 8. The float finished first in the high school/college division and also won the Grand Marshall's Award.



The Bees finished last season flying high at the FIRST Robotics Competition World Championship in St. Louis in April. Team 33 was crowned Archimedes Division champs and second overall in the entire tournament. That was the Bees' third divisional championship in 18 years of competition at the world championship and tied their best finish ever (2001).

### NDP students and former Detroit Lion help out at St. Vincent de Paul

A number of students from Notre Dame Prep spent part of an intense day of community service at the Matchan Center of the St.



Vincent de Paul Society in Pontiac on October 8 when they handed out homemade blankets to the homeless and disadvantaged.

According to Cathy Zuccaro, Notre Dame's campus ministry director, the blankets were made during the school's Make It Matter Day in October.

NDP senior Megan Neiheisel was one of the students helping out at SVdP. She says the experience was eye-opening and that it "makes her want to do more" in the community.

Former Detroit Lions receiver Herman Moore also was on hand to help out at the Pontiac center, which opened in 1984 and has since served more than 30,000 meals and provided other assistance to Oakland County's needy.

#### AMBASSADORS, from page 4

parents, and especially the seventh- and eighth-grade kids who are considering Notre Dame, really respond to our ambassadors. A-Team members also are encouraged—even during class—to approach visitors we are touring and to ask if they could be of any assistance, etc."

Director of Admissions and Diversity Greg Simon said the ambassador program gives visiting parents a real student's perspective of what the school is all about versus what an adult admissions person might say. "It also shows that our students are in a way risk-takers, and not afraid to articulate what they like about ND," he said. "Nothing is rehearsed. They are just so great at talking about and representing the school—which is why they were chosen in the first place."

#### UNIVERSITIES ARE LOOKING

The ambassador program does not just

benefit the school, though. Those chosen also derive many benefits themselves, especially when many are at a point in school when big decisions need to be made about colleges and careers. Giacona, who also serves as the lower division's International Baccalaureate coordinator, says college recruiters pay keen attention to extracurricular activities like Notre Dame's ambassador program. "It really looks good on a résumé when applying for the next level," she says. "They also gain leadership and communication skills, and because they are working so closely with admissions people, they're always on the inside track of what's new at Notre Dame."

The admissions department typically takes nominations for the program from faculty and staff throughout the school year, but student nominees are required to complete an application and submit it around the first week of June. Simon says he tells applicants it's a big deal to even be nominated. "We tell them that as a

nominee, they should feel very honored and that the nomination reflects the high esteem in which the Notre Dame faculty holds them."

For Ambassador Pillot, he has some pretty firm post-high school plans in place for only a sophomore. He graduates from NDP in 2016, which sounds like a long time from now, but he already has his mind set on what he wants to do after Notre Dame. "My goal is to be an aerospace engineer/software developer and possibly to attend MIT, Stanford, Georgia Tech, or maybe U-M for grad work."

Then he'd like to work at NASA or SpaceX, which is a privately held space transport company headquartered in California. Pillot currently is part of Notre Dame's robotics team, which has further fueled his interest in STEM careers (science, technology, engineering and mathematics).

"I just love math and science," he said.

### NDP volleyball finishes 'dream' season

The outstanding 2013 volleyball campaign for Notre Dame Prep, which included breaking a school record for most wins in a season (62), ended November 23 in spectacular fashion as the Fighting Irish defeated Grand Rapids South Christian three games to one (25-15, 25-19, 19-25, 25-23) in the MHSAA Class B final in Battle Creek.

This is the second state volleyball championship for head coach Betty Wroubel and NDP, and it comes in her 20th year at the helm. Wroubel took the Irish to their first state title in 2007. She said after the championship match that the entire team contributed to the big win and "she's very proud of them!"

Junior Jenna Sassack, who had six kills in the championship match, said winning the state final was the best day of her life. "It

honestly felt like a dream," she said. "Everyone yelling, screaming, hugging, crying. . . I'm still not sure the full gravity of what we accomplished has quite hit me!"

Emma Kowalkowski, who was a big part of the team's stellar defense all year, also can't quite let it sink in yet. "It was so surreal. I just couldn't control my emotions," the sophomore recalled. "I kept crying! Everything seemed like a dream, and just to have done it with some of my best friends made the experience even more awesome. To this day, we continue to shout the occasional 'state champs' in the hallways if we see each other."

The team finished the season 62-2-1, which included a Catholic League A-B title. After

winning the CHSL, Notre Dame then faced some very tough teams during its state run, according to junior setter Ashley Knutson. "We knew we had to take each match one at a time. We knew it wasn't going to be easy and the teams we played were very strong."

In the state semifinal game in Battle Creek, top-ranked NDP faced second-ranked Wayland Union High School in a very close match. The two teams split the first two sets, but Notre Dame took the next two sets to earn their spot in the final.

Now having savored the highs of this past season for more than a month, it's not too early to think about NDP volleyball in 2014. Sassack says next year's team has to remember the incredible feeling of winning the state title and reaching such a high goal, and translate it all into hard work and sacrifice for next season. "There is nothing like it," she said. "And next year's team definitely has the potential to know that feeling a second time!"



### FLIPPED, from page 2

schools should be set up," Green said. "And we're trying to make it an ideal situation for both the learners and the teachers."

Those in favor of flipping say it gives teachers much more time in class to work individually with students and much less time delivering potentially boring lectures. And it allows the students the opportunity to watch and re-watch a lecture as many times as necessary to "get it."

A number of teachers at Notre Dame Prep also are actively engaged in flipped learning.

Daniel Staniszewski, a math teacher in Notre Dame's upper school, says he has seen a strong positive result in his students. He's been "flipping" in his geometry class since January 2013.

"Many of my students are getting higher grades and they've reported increased enjoyment of math," he says. "I'm using it primarily for freshmen and sophomores in geometry class, but I also use it for sub plans in other classes, allowing a lecture and homework component when I am unable to be at school."

He says many of his students enjoy having less work to do for math each night, and also enjoy the time in class to work directly with their teacher and classmates rather than alone in their room at night.

ND Prep science teacher Sue Wylie also has been using the flipped classroom method since last year. She says the results have been mixed. "But I think those students who actually sit down and watch the videos in a quiet area, and back up and re-watch what they do not understand, are seeing better results."

#### FLIPPED MASTERY LEARNING

The "mastery learning" method of teaching has been around for a long time—since the early 20th century, actually. Its basic premise is that each student must master a subject or unit at his or her own pace before moving to the next one—a much different model than having every student advance at the same time regardless of subject mastery.

Mastery learning has been shown to be quite successful when applied in the classroom. But it obviously creates huge problems due to a wide degree of differences in how 15 or 20 students in a classroom handle any given subject.

Now, with the popularity of flipped learning continuing to grow, it's providing the opportunity for teachers to better work individually with students in the classroom, making sure those that need extra help get it.

Melissa Archer, who's been teaching English and other subjects at Notre Dame Prep for more than 15 years, also has been flipping some of her classes. She says the process of shifting the paradigm of what homework is will take time. "But on the positive side, those who have done the flip work at home are ready to use it in practical means. As an example, instead of using class time to instruct and review countless disconnected activities, I have my students identify grammar in context and apply the concept in their own writing. This is much more valuable."

In upper-school teacher Brian Perry's AP Psychology class, he also says the kids have responded positively. "The students like the ability to go back and watch video lectures and pause and rewind so they can hit the notes they may have missed. They also like the fact they can retrieve a document that may have been lost."



Notre Dame Prep math teacher Dan Staniszewski says flipping his classes leads to more time in school helping individual students,

### INTO THE FUTURE

Going forward for Notre Dame, Joanne Widmaier, Notre Dame's registrar and academic technology coordinator, says the school's academic administrators are not mandating a flipped approach to classroom teaching for everybody. "But if students can view lectures at home on any device, and then spend the next day actively working on mastering the concepts as opposed to passively sitting through the lecture, it's probably a good thing for both teacher and student," she said. "The ability to pause, rewind and re-watch videos allows a student to spend more time on concepts they find challenging—both at home without the teacher or in class with. Also, it helps students who miss class due to illness, sports or school trips.

"We think it's a concept that won't work for everybody, but we are flexible enough here to allow it to work for those who may need it."

### NDPMA ELECTS TWO NEW TRUSTEES

Two new members of the Notre Dame Preparatory School and Marist Academy Board of Trustees were appointed last month. **Will Wittig**, dean of the University of Detroit Mercy School of Architecture, and **Jack F. Moores, Jr.**, president of Great Lakes Medical Billing & Consulting, Plymouth, were appointed at the board's December 3 meeting. A complete list of trustees can be found on the NDPMA website.

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