EDUCATION

College Training in High School

The rigorous International Baccalaureate program offers motivated students an advanced education and a broad world view. Their success speaks for itself.

By Larry Nagengast

John Mester helps Trish Maloney, 11, put the final touches on a guitar she built using a briefcase as the basic material.

TOM NUTTER

With understated eloquence, 18-year-old Taylor Waller concisely describes what her school days are like: "They pick different pieces of your mind to open up and expand your knowledge."

"It's more critical thinking and less memorizing information," adds Amanda Korwek, Waller's senior classmate at John Dickinson High School.

Both are participants in the International Baccalaureate Programme, a challenging and rigorous curriculum model that has established at least a toehold, if not a foothold, in Delaware education circles.

The name, coupled with the French spelling for program, gives a hint of IB's origins and initial purpose. It was established in Geneva, Switzerland, in 1968 to provide an internationally recognized model for college-bound students attending schools outside their home country.

With its emphasis on research, writing and critical thinking, as well as opportunities for students to probe deeply into topics that interest them most, IB has grown steadily. Currently, more than half of its participants are enrolled in state or national school systems rather than international schools.

Wilmington Friends School launched the state's first IB program in 2002, followed three years later by Mount Pleasant High School, which now has the largest IB enrollment in the state.

Though the IB diploma program involves two years of study—the junior and senior years of high school—IB also has a "middle years" curriculum, which covers grades 6-10. The Brandywine School District offers the middle years program at Talley Middle School for grades 6-8 and at Mount Pleasant for grades 9-10. Dickinson, which began offering the diploma program to a small group of juniors in fall 2012, has dedicated a wing of its sprawling building to a middle years program, which is now wrapping up its second year with 195 students in grades 6-8.

In the past three years, IB has expanded its reach into Sussex County at Sussex Academy, a charter school, and at Sussex Central and Seaford high schools.

"It's a more intensive academic experience," says Brice Reed, the Sussex Central principal.

"It's a very heavy workload," says John Melidosian, ninth-grade IB coordinator at Dickinson. "It's like taking six Advanced Placement classes in your junior and senior years."

"We've regarded ourselves as a global school, a world-class school," says IB coordinator Michael Benner, explaining how Wilmington Friends adopted the program. "We started looking at world-class standards, and the more we looked at IB, the more we realized it really fit with our Quaker values and beliefs."

At IB's core is its "learner profile," a list of 10 attributes students are expected to develop through participation in the program. The attributes are: inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced and reflective.

IB students take classes that satisfy the state's requirements for graduation: English/language arts, science, math,

social studies and world languages. To qualify for the IB diploma, they must also take an IB class in art or another elective, plus a yearlong course called Theory of Knowledge, which IB teachers and coordinators like to describe as "how we know what we know." In addition, students must write a 4,000-word essay that digs deeply into a topic related to one of their courses and complete a creativity-activity-service (CAS) requirement that chronicles their personal growth through community service, a special project or participation in an extracurricular activity. Many classes are offered at both "standard level" and "higher level." The content is the same, but there are differences in the intensity of the assignments and the scope of the final exam—so students can focus more on their best or favorite subjects. Students must earn a minimum of 24 of a possible 45 points in the IB grading system to earn the diploma.

As that learner profile suggests, IB aims to create holistic learners, which it does through an interdisciplinary approach that integrates subject matter with global issues. "In chemistry, they're talking about environmental impacts. In history, they consider relationships with other nations," says Curi Lawrence, assistant principal and IB administrator at Mount Pleasant. "They come to realize there are perspectives other than mine, and that I don't have to agree with them."

> "We're allowing students to be the center of the learning rather than using a lecture-style format."

Not only is the learning global and interdisciplinary, but there's also a heavy dose of writing involved. Every diploma program class, even those in math and science, requires an essay of at least 1,000 words that counts for 20 percent of the final grade in the class. Students can pick their own topics.

Since there is a statistics component to the math class, one Dickinson student last year wrote a paper on the correlation between grade-point average and participation in athletics, combining school-level data and online research, says Madeleine Reitemeyer, Dickinson's IB counselor. "The point is to learn how to think, how to write and how to analyze. It's the process of learning," she says.

Teachers of IB classes must take special training so they become familiar not only with the syllabus for the class they're teaching, but also with the standards they and their students are expected to meet, like working on group projects, making oral reports and crossing over into other classes in order to provide an interdisciplinary approach to learning.

The big difference, says Leslie Carlson, IB coordinator at Mount Pleasant, is that "we're allowing students to be the center of the learning rather than using a lecture-style format."

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But the real beauty of IB is the flexibility it offers participants. Students need not work for the full diploma. They may become "course students," taking less than a full load of IB offerings to earn a certificate rather than the program's diploma.

"Even if a student doesn't go for the full diploma, no one can take away your experiences," says Lawrence. "You tried, you grew, you pushed beyond what you thought you could do."

In his first semester at Randolph Macon College, Jeff Peters, a 2016 Mount Pleasant graduate who earned an IB certificate last year, said he was "way more prepared" than his peers. "I'd see people freaking out all the time when they had a week to finish a five-paragraph essay. I got a good night's sleep every night."

"It's great to do partial," says Adrianna Brown, who now attends Delaware State University. "It was stressful and hard work, but you get the benefits of IB, learning the work techniques and all that."

Other Mount Pleasant grads who returned in December to collect their diplomas and certificates (they're not presented in June because their IB exams are still being graded by teachers who are based out of state or overseas) expressed similar thoughts.

Although comparative data is not available, staff members at all schools contacted say graduates who have reported back consistently say they are better prepared for their first semester in college, especially in writing and organizational skills, than students coming out of traditional high school programs.

When college admissions officers see a string of IB classes on a student's transcript, it makes a positive impression. "We look at IB very favorably," says W. Douglas Zander, director of admissions at the University of Delaware. "It's recognized for being very rigorous. It indicates that this is a serious student whose curriculum has been well established."

Like students who take Advanced Placement courses, IB students can receive college credits for their high school work or be permitted to skip certain introductory courses, Zander says.

Though UD doesn't consider IB classes any more favorably than AP, IB proponents at Delaware high schools note one important distinction: AP exams are, for the most part, multiple-choice, while IB exams require essay answers. Thus, they say, AP benefits students whose strength is remembering what they have learned, while the ideal IB exam takers are students who think critically and write clearly.

In IB exams, says Dickinson senior Korwek, "it's how much information you show and how you analyze it."

Students in the middle years program get an early start in developing those skills.

(The Brandywine School District had an IB "early years" program for several years at Harlan Elementary School, but eliminated it when a district-wide realignment changed the school's grade levels. School leaders decided to concentrate resources on other needs, Brandywine superintendent Mark Holodick says.)

In a sixth-grade design class at Dickinson, teacher John Mester is guiding his students through their current project—using recyclable materials to create their own acoustic musical instrument.

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Their selections are varied—viola, ukulele, banjo, even a cigar box guitar—but the process is the same. There is a lot of class discussion, and a lot of research on the Internet, to learn the history of the instrument, the names of its parts, the size and other specifications.

"Along the way, they pick up information on manufacturing, on tooling, how to make the guitar look attractive, what you have to do so it has an appealing sound," Mester says. In addition, the sixth-graders have to create a portfolio on the project, a narrative that chronicles what they've learned during each step of the process.

Mester's seventh- and eighth-grade students have been working on a different project: creating assistive technology devices that individuals with disabilities might use. "They're making pet feeders, modified walkers, an umbrella that covers a wheelchair," he says. "And we're teaching empathy"—part of the caring piece of the IB learner profile.

As they progress through the program, students face tougher challenges.

In a 10th-grade math class at Mount Pleasant, students are examining sequences, looking at a series of numbers and determining which ones come next. And they're digging even deeper. Not only are they finding the answer, they're also discovering how to write the formula that explains how the sequences are created.

As juniors, they're diving into the Theory of Knowledge class. One day they're looking at how mathematicians discover and organize knowledge—formulas, axioms and the like. The next day they're looking at natural sciences, things like the classification of plant and animal groupings. But there's more to the class than learning how knowledge frameworks are constructed within different subject areas, teacher Jeri Magliulo says. They are also strengthening their own thought processes so they can better see what is logical and what is not, she says.

As the course extends into their senior year, students will demonstrate their own knowledge by making an oral presentation and writing a 1,600-word essay on one of six topics.

To get an idea of the challenge, here's one of this year's essay choices: "Given access to the same facts, how is it possible that there can be disagreement between experts in a discipline?

Develop your answer with reference to two areas of knowledge."

Preparing students to write essays on such topics presents fresh challenges for teachers, says Dickinson's Geoffrey Ott. "There's teaching, but there's also a fair amount of facilitating," or guiding of students along the way, he says.

And that has its rewards. "Teaching IB has revitalized me," Ott says. "It has given me back my enthusiasm as a teacher. I'm teaching students who really want to learn."

Statements like that might suggest that IB is designed only for the academic crème de la crème, but that's not necessarily so.

In schools with newer programs, like Sussex Central, participants "are usually the top of the class," says IB coordinator Kelly DeLeon.

But Lawrence, at Mount Pleasant, says, "IB is promoting inclusion." The school encourages students with physical and learning disabilities to apply to participate.

"IB is for everyone," says April Higgins, a middle years social studies teacher at Dickinson. "In my classes I see a wide range of learning styles as well as academic abilities."

Over the past 12 years at Wilmington Friends, 91 percent of the student body has taken one or more IB classes in their junior and senior years, Benner says. Last year, 46 percent of the graduating class earned the IB diploma.

If IB is such a solid academic program, it seems fair to ask why more schools aren't using it and why schools aren't employing the IB curriculum with all their students.

One factor is cost. Not only is there the expense of teacher training, but there are also fees for each student enrolled—$164 to register in the program and $116 for each IB exam the students take. Schools have differing policies on covering these costs. For now, Dickinson picks up the tab for its students, Mount Pleasant and Sussex Academy use a sliding scale based on whether students qualify for free or reduced-price lunches. Wilmington Friends asks families to foot the bill for all student-related expenses.

Another, says Holodick, the Brandywine superintendent, is that "our families are accustomed to having choices.

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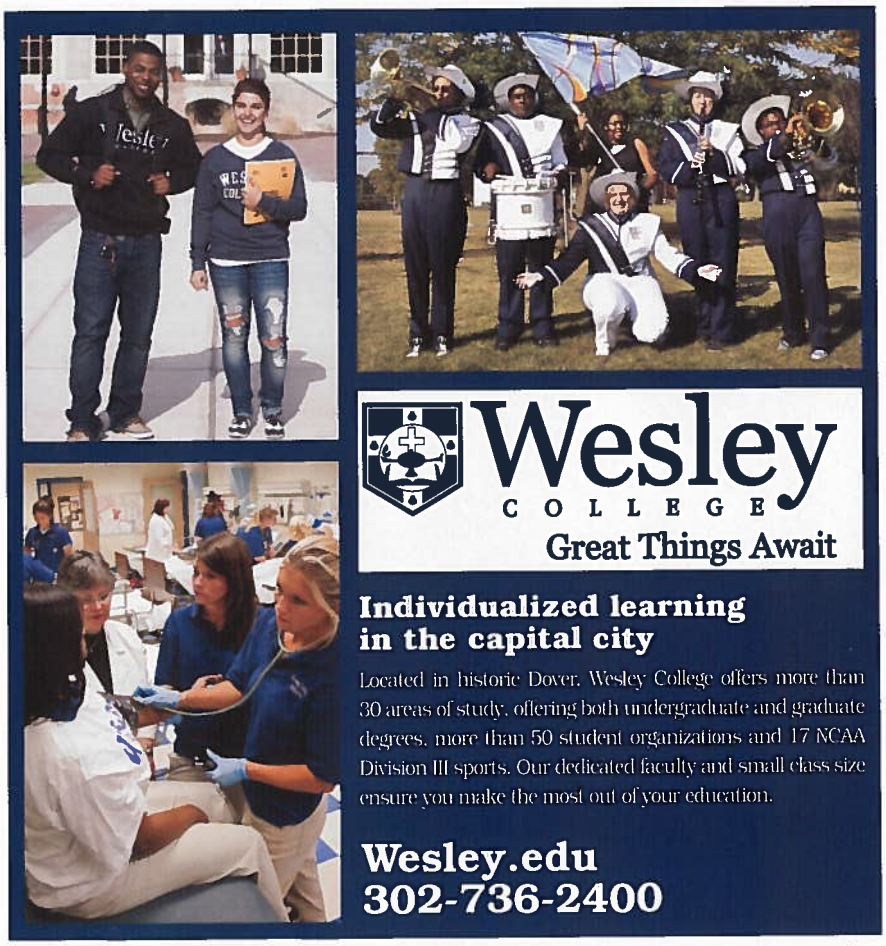

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Not every parent or student would subscribe to the IB philosophy."

At public schools, students apply for IB participation through the choice program. Districts look at applicants' grades and require them to submit teacher recommendations. At Wilmington Friends, there is no application procedure other than asking students to "express interest" in the program, Benner says.

Mount Pleasant has the largest IB program in the state, with 304 students enrolled in grades 9-12 this year. Dickinson has 49 students in grades 9-12, plus the 195 in grades 6-8 in the school wing. About 95 students are taking IB courses at Sussex Academy and about 70 at Sussex Central. Talley Middle School in Wilmington has 225 students, not quite one-third of its enrollment, participating in the IB program.

Holodick says the district might consider making Mount Pleasant and Talley all-IB schools, but notes that district officials are conscious of residents' perceptions concerning the district's three high schools and three middle schools and their desire to provide strong programs in all buildings. "We're cognizant of the potential that one school might be seen as stronger than the other two," he says.

However, the fact that IB programs don't enroll large percentages of the student body means that IB-trained teachers also have one or more classes every day with non-IB students.

"The IB philosophy can be taught to anybody," says Stefanie Feder, Talley's IB coordinator.

"Teachers do a combination of IB and regular classes, so all students might be exposed to IB methods. We try to imbue the IB philosophy throughout the school," says principal Mark Mayer of Talley. For example, Talley dedicates each month to emphasizing one of the IB learner profile attributes.

Dickinson senior Megan Carroll, who plans to study baking and pastry-making after graduation, knows she won't be facing similar academic challenges in her post-high school years, but she's grateful for the opportunities the IB program has given her.

"We get to learn how things are on a grander scale, without memorizing stuff," she says. "Understanding a concept is more enjoyable to me than memorizing things." D