

What happens when you combine English Language Arts (ELA), philosophy, and a hands-on motorcycle engine conversion in one high school class? Student engagement and learning soar! That's exactly the outcome for students in Pathways High's "Zen and the Art of Motorcycle Maintenance," a seminar inspired by Robert Pirsig's 1974 best selling book by the same name.

In an 11-week seminar designed by Pathways High teacher Sean Campbell to offer standards in the content areas of English Language Arts and STEM, 9th - 12th grade students are engaging their head, hands, and heart. Some specific standards students have the opportunity to earn include: Point of View Analysis, Exploring Perspectives of a Specific Industry, Technical Writing, and Engineering a Solution. One day students are budding philosophers, reading and interpreting Pirsig's philosophy of quality and writing their own definition to discuss with the group. The next day they are aspiring engineers learning about electrical circuits and rewiring a motorcycle, converting its internal combustion engine to an EV. When describing the development of the seminar, Mr. Campbell said, "I started by thinking about my interests and passions and then connected these with the standards I needed to teach. Having the freedom to combine these elements in unique ways as well as incorporate multiple IMPACT experiences with our business partners truly brings a seminar to life. Single subject, rote learning that is not connected to the real world is boring for anyone, but especially teenagers. I am thrilled when I see students' ah-ha moments during a lively philosophical discussion or tackling a difficult re-wiring job!"

This interdisciplinary approach to learning not only mirrors the real world, but is highly engaging as it requires students to think deeply, physically explore a complex machine, and problem solve together. Furthermore, students are encouraged to tap their personal interests and passions which contributes to high engagement.

During interviews with students about the motorcycle seminar, junior Tate Goetsch commented, "This seminar is a reading class but with the twist that we get to apply our reading to building a motorcycle. I took it because I wanted the experience of building a motorcycle and also needed the ELA standards."

Freshman Mariel Vang shared, "I already knew some things about bikes. However, the seminar was way more complicated than I thought it would be. I thought it would be simple wiring but it was much more intricate and time-consuming. Also, I thought the IMPACT experiences were really fun because we got to see motorcycles being built up close when we toured the Harley-Davidson factory."

Real-world learning, called IMPACT experiences, are integral to every Pathways High seminar as they provide opportunities for students to expand their networks and see first-hand careers they may never have known otherwise. Sophomore Mahdy Alsalman commented, "I didn't expect the factories to have so many Fanuc robot arms! I asked a lot of questions to help me understand more about how manufacturing is changing."

The business and community leaders that Pathways High students meet during [IMPACT experiences](#), [Junior Defense](#), and [Community Exhibition](#), are equally excited about the opportunity to engage with the students. Tim Evers, General Manager of Harley-Davidson Powertrain Operations said, “Too many classrooms are focused on only learning through lectures and/or reading and writing in front of a computer screen. To get students engaged with hands-on work at this age will be priceless for them, no matter what secondary education, skilled trades, or careers they pursue. In my roles in engineering/manufacturing, if I am recruiting to hire an entry-level engineer, I always look for candidates with practical experience who can also clearly communicate their actions. This class will set them up for success. I look forward to working with these students in the future.”

The fascinating zen motorcycle seminar is not an anomaly at Pathways High, a public charter high school located at 30th and Wisconsin Ave. and authorized by UW-Milwaukee. Their [seminar catalog](#) brims with over one hundred interdisciplinary seminars developed by Pathways High teachers that will excite the continuous learner of any age.

At a time when schools locally and nationally are struggling with many issues – [chronic absenteeism](#), [missing students](#), [learning loss](#), [mental health challenges](#) – it’s vital that we illuminate and support promising school models and practices. Public charter schools, like Pathways High, were explicitly developed over 30 years ago to seed innovation in district schools. They are intended to be learning laboratories. However, charter school’s ability to lead this innovation is severely hamstrung by inadequate per pupil funding that is on average **\$7,000 less than** funding for students in district schools. Furthermore, the Wisconsin government’s 30% reimbursement for special education is the lowest in the country and, contrary to the popular myth, charter schools often serve a larger percentage of students with disabilities than district schools. At Pathways High, 22% of the student population are students with disabilities and yet these same students outperform 94% of other students with disabilities in the state in English Language Arts and 60% of students with disabilities in the state in math.

As the need for educational options for families and their children is at an all-time high, it’s imperative that funding parity be achieved for these schools and reimbursement for special education expenses increase substantially. All Wisconsin children should have the option to attend a school that works best for them.

According to David Brooks in his recent New York Times op ed, *America Should be in the Middle of a Schools Revolution*, “The pandemic reminded us how much we lose when teachers can’t do their jobs in the way they want to do them. But there now has to be political leadership to shake up a calcified system, and hurry the reinvention that has to happen.” That reinvention is alive and well at Pathways High. We all must call on Wisconsin’s political leadership to bring funding parity for independent public charter schools so more students’ engagement and learning can soar.