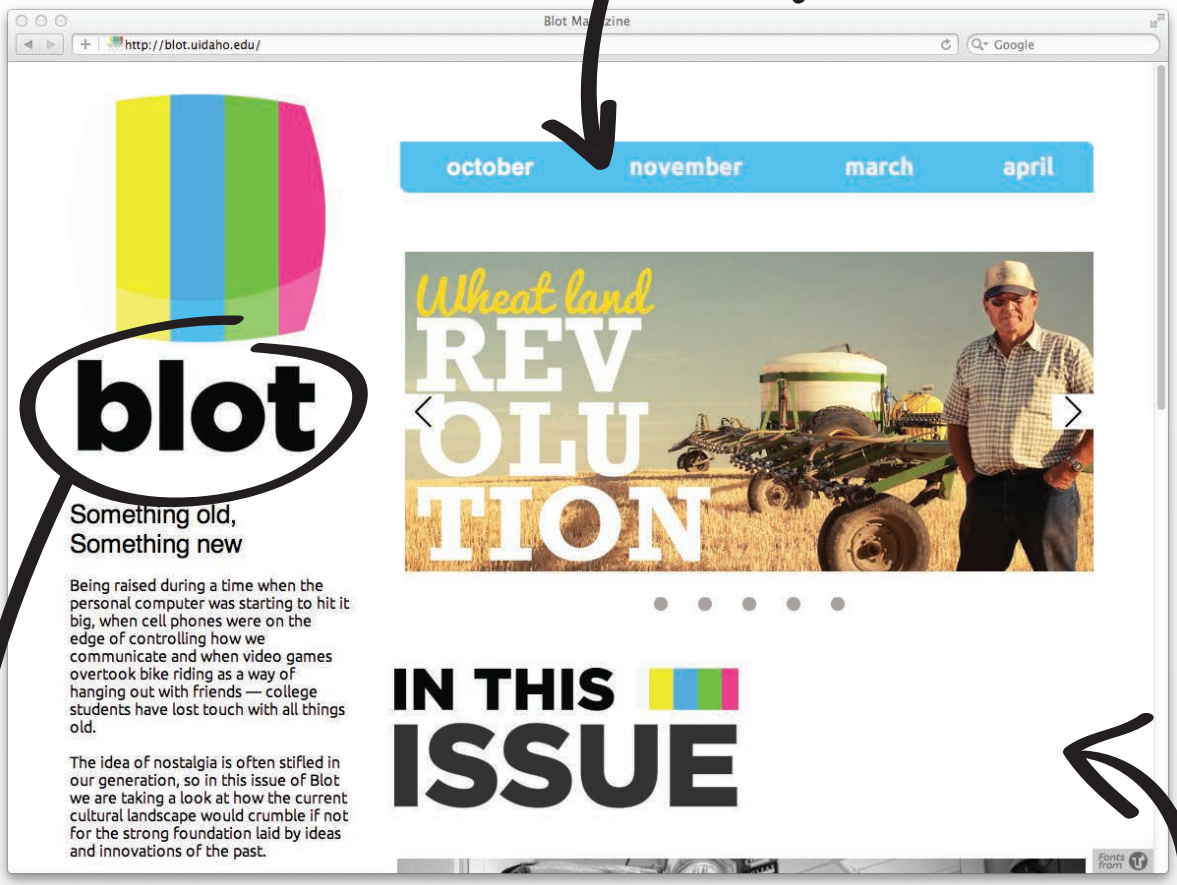
blot

GO

Every issue, past and present



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IN THIS ISSUE

Go

From the moment we wake up to when we go to sleep, one thought runs through our minds — go.

Everything we do is based on going somewhere and doing something. It can be as simple as the churning of our minds as we focus on a quiz, or as complex as figuring the aerodynamics involved in propelling a piece of metal into the sky.

In this issue of Blot, we look at how and why we go, both physically and mentally. Go is about taking a day trip, reacting to penalty kicks and evolving modes of travel. Go is about floating on concrete and shooting across space and time. Go is about you and me. It is what makes the world go 'round.

Enjoy this issue of Blot magazine. We hope it inspires you to go and find a new adventure.

— MM

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GET OUT & GET GOING

Story by Tanya Bingham, Photography by Amrah Canul

Idaho is a breathtaking place.

There is something about gassing up the car to hit the open road with the perfect mix of music and easy conversation to lighten the anxieties of a student's often-chaotic life. November is just as good a month as any to get away, so here are some locations and opportunities to get out there when it's dreary.

Hit the slopes

Snowboarding is a great way to escape, according to president of VandalSNOW Brendan Baughn.

"You are kind of disconnected from things and you have a great excuse for not answering the phone — or taking care of responsibilities, maybe," Baughn said.

He said snowboarding allows people to do things they normally couldn't, like cruising at 50 miles per hour or soaring 50 feet in the air.

"(Snowboarding is) a great thrill ride, it is like a rollercoaster all day long. You have the slow parts when you are going up the hill but then you hit the slope and (throw your) hands in the air," Baughn said.

Baughn said he enjoys snowboarding alone, but prefers to go with friends.

He said when alone, snowboarding is a time for meditation where snowboarders can be quiet, without a plan for the future.

"I definitely got better but you kind of hit a plateau — maybe you stop pushing yourself or you are happy with how much you have succeeded, but when you ride with other people, it definitely inspires you to do more. Whether you are just inspired by what they did or you are trying to impress them, it definitely pushes you a little bit more," he said.

Baughn said getting out in the snow is worth it because Moscow is a small town and students are often stuck in it during school months. He said even the drive is worth it and relaxing because the scenery is so beautiful.

"(Snowboarding is) a good workout, but still so refreshing. It is a great way to relieve all of that work you have done all week … maybe it is not physical but just mental … but to take that and put it into a physical form and release it is awesome," he said.

Natural beauty, natural wine

The drive to Colter's Creek Winery directs visitors through a deep canyon along the Potlatch River where the final destination is a beautiful view of both water and grape vines.

The vineyards rest across the river from Idaho highway 3 about six miles from Juliaetta, Idaho and appear deceivingly small from a distance.

Melissa Sanborn and her husband Mike Pearson purchased the winery in 2007 after it had been untouched for five years. The vineyard was originally planted in 1986.

"(The vineyard) went through several owners and it was pretty much just dilapidated. So, when we bought it we basically cleared the whole vineyard and started from the beginning. The vines were still alive, so once you clear the ground you can train them and grow them up," Sanborn said.

Since 2007, the vintners have planted several strains of grapes and now boast strains of cabernet sauvignon, cabernet franc, merlot, chardonnay and riesling. They have also successfully grown strains of tempranillo, grenache and viognier. The couple also purchases grapes that are not grown from their vines locally including the syrah grape, which has been used as a blending grape this year. Sanborn said they plan to plant and grow their own syrah grapes in the future.

Sanborn said the best part about visiting a winery is the opportunity to taste wines before they purchase them.

"You get to learn about where the grapes came from and how it is made. You will probably get to meet the winemaker if you go to a small winery. Right now, it's nice that the tasting room is here because you get to see the winery," Sanborn said.

Nature's hot tub

Hot springs enthusiast Mike Gleixner said the best part about a hot spring is sitting in it at night.

"You don't have to worry about streetlights washing out the stars, you can see all the craziness of the night sky with no interruption," Gleixner said. "All you hear is the creek and the rustling of trees and it's relaxing. Especially when you are just sitting up there in the hot spring and you don't have a care in the world except getting out."

Gleixner visited Weir hot springs on the Clearwater River last spring with his girlfriend. He said the hard part of the visit was the hike to the hot springs, which is about one mile long. Gleixner said the best camping spots are directly across the creek from the hot springs, where the trail opens up into a clearing.

Weir hot springs is a natural rock pool reinforced with mortar. The pool is big enough to fit 8 to 10 people and a soaking plank provides extra raised seating for legs to dangle. A PVC pipe extends out of the pool, creating a hot shower on the mountain of rocks below the pool.

When it comes to day trips with friends, Gleixner said it best — the traveler is free from "modern inconveniences," like a cell phone.

"There is so much to see and look at out there and with the right company, you just have a blast out in the woods, in the middle of nowhere," he said. "If you are in the right company, anybody you want to talk to is already there." •

Romance in Falling Stars

Story by Elizabeth Rudd, Photography by Zach Edwards

The romance of a shooting star doesn't end when the bright flash in the night sky fades. For some, it extends to the little piece of debris that falls to the Earth's surface after the "star" has vaporized.

Shooting stars — meteors — are pieces of interplanetary matter that cross into the upper portion of Earth's atmosphere and burn up from friction, said Guy Worthey, a professor in the physics department at Washington State University. When pieces of the meteor do not completely disappear, the residual debris falls to the Earth's surface.

"In terms of touching one, that's romantic by itself, because you're touching something which was created about the same time Earth was, about 4.5 billion years ago, so you're touching something really ancient," Worthey said. "... When you realize that, that's just very romantic."

Worthey said he looks for micrometeorites — shiny, metallic spheres that form when meteors re-condense before falling to the ground. He said he initially started to look for micrometeorites after hearing a rumor about them.

"I heard this other professor that did it up in Wisconsin … and yeah, that led me to try it myself, and by gosh you find these perfectly spherical, shiny metal balls in the parking lot. It's amazing," Worthey said.

He said the space residue falls all over the world and it takes some patience, but with a magnet and a parking lot, they can be found.

"Parking lots are best because the material will fall over the surface of the whole parking lot, and then the weather will tend to wash micrometeorites into the natural drainage of the parking lot," Worthey said. "So you can look at the dirt there and run your magnet through that. It's a pretty rich supply."

Jason Barnes, an assistant professor of physics

at the University of Idaho, said most meteorites hit the ground and just look like rocks. He said because of the Earth's unique chemical compound, the meteorites can be identified, but scientists frequently search the barren ice of Antarctica for space rocks.

"I have friends that go on (National Science Foundation) funded expeditions, and NASA funded, to Antarctica and they're on snowmobiles and they sort of systematically search the ice for meteorites, and they've found a lot of amazing stuff there," Barnes said.

He said the origin of some meteorites has been determined by information gathered from places like Mars, Earth's moon and the second largest asteroid, Vesta, but for most meteorites it is difficult to tell.

Before a meteorite can be formed, the meteor must break through the upper portion of Earth's atmosphere and discarnate. Worthey said there are two main ways for a meteor to occur: Debris from an asteroid or dust from a comet tail.

"They come in all sizes," Worthey said. "The most common ones are the smaller ones, the dust-sized particles, but when they get too faint … you don't see them. When they get too small you don't see them anymore and when they get too big they get rare, so you see them very seldom."

Worthey said many of the bits of matter are about the size of a pea — usually the result of broken asteroids — and they orbit like tiny planets.

"If that orbit happens to cross Earth's orbit, and there's a chance every year that Earth's orbit and this orbit will match close enough so that there will be a collision, so the particle comes down through the atmosphere of the Earth — kaboom," Worthey said.

Barnes said regardless of the size of a meteor, it still hits the Earth's upper atmosphere — about 100 to 150 kilometers in altitude — at about 20 miles per second, causing the bright light of what is known as a shooting star. Barnes said the size of the meteor determines the length of its visible streak across a night sky.

"Real stars are much, much further away, so they're called shooting stars, but they have nothing to do with stars." Barnes said. "These shooting stars are of comparable brightness just because they're really tiny, but they're really close and they're only bright for a second and a half as they quickly fly through the atmosphere."

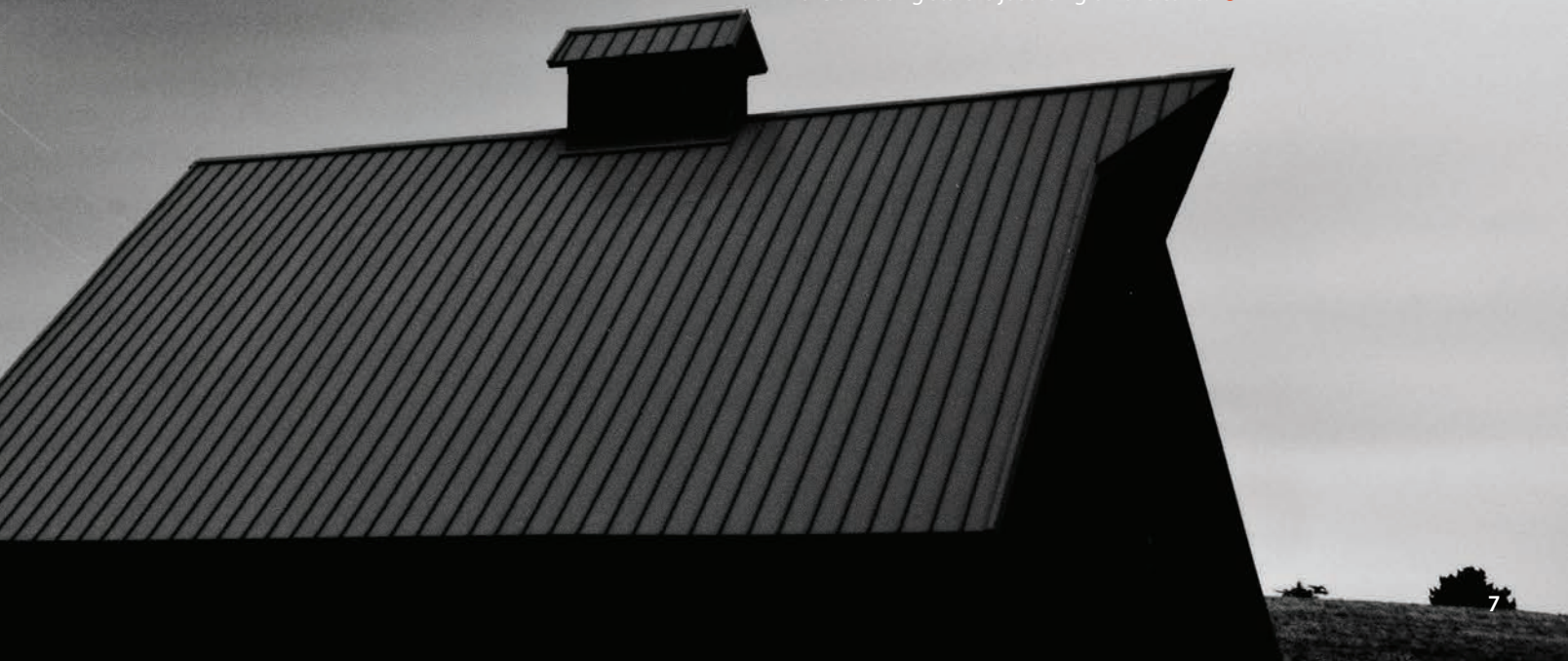
In other instances though, he said the streak could be so quick that it's pointless to tell someone else to look, because it will be gone. Most streaks last less than a second.

Meteor showers, on the other hand, make it possible to more easily see several shooting stars, and typically coincide with dust left by a comet's tail, which is often the cause of shooting stars, Worthey said.

"The Earth passes through a patch of interplanetary landscape that's got a lot of these little particles in it, and those particles were left by the break up of a comet — so they're left over from a comet that is sometimes still orbiting and other times has completely evaporated and turned itself into little grit particles," he said.

Barnes said meteor showers can happen once every couple months, and the action of a shooting star is taking place at all times.

"In terms of seeing the flashes in the sky, we all like to be connected to the universe better, so we like to experience the natural phenomenon," Worthey said. "And then the added romance of the shooting stars is just icing on the cake."



Floats like a rock

UI club builds, races canoe made out of concrete

Story by Anja Sundali, Photography by Zach Edwards

Come springtime, four University of Idaho engineering students will paddle over Lake Sammamish in Seattle with less than an inch of concrete between themselves and the water.

Hundreds of civil engineering students from around the country gather each year to test their practical mastery of the field by racing self-constructed concrete canoes.

The Concrete Canoe Competition is a popular staple in the American Society of Civil Engineers' learning programs, and the UI chapter takes part in the Pacific Northwest regional competition every year.

DeAnn Brown, a senior in civil engineering, has been a member of the team for three years and served as co-captain last year.

"ASCE focuses on networking between students and professional engineers, and they set up this competition as a great way to do that," Brown said.

Although the regional concrete canoe competition doesn't take place until the end of April, the UI ASCE chapter has already started planning, designing and building a canoe that must eventually float on water while holding four people.

Planning

Designing the canoe is the most arduous part of the team's job. Choosing materials, calculating specific gravities and testing cores takes months, and every decision made in planning is vital to the canoe's outcome.

The UI team uses Portland cement as a base, and adds aggregates such as crushed glass, Poraver, shredded plastic, cork, pumice, and even parts of an old canoe to create a concrete that must float.

"We're given certain standards about what can be used in the canoe, but we get to play around with our mix design, which tests our ability as engineers," Brown said.

Multiple concrete cylinders — called cores — are made from different proportions of these substances and tested for floatation in troughs of water and in a compression testing machine for tensile strength, defined as the greatest longitudinal stress a substance can bear without tearing apart.

In addition to its materials, the canoe's design must adhere to ASCE standards – it cannot be longer than 22 feet or wider than 36 inches. Other dimensions, such as thickness and depth, are at the individual team's discretion, although ASCE does provide a hull design that teams may copy or modify. Based on these requirements, the team designs a 3-D rendering of the canoe's hull and builds a mold based on that design.

> **"I think we're just all fascinated by the strangeness of it all."**
>
> **DeAnn Brown**

Building

All the effort and planning leads up to the highly anticipated "pour day," when section by section, the final concrete mix is poured into a mold and layered with reinforcement such as carbon fiber scrim and steel wires.

"Last year we did three layers of concrete and two layers of reinforcement. Each concrete layer is about one-quarter inch thick, because we aim for a three-quarter inch thick canoe," Brown said.

Team members see the building process as a practical application of their schooling. Wendy Banzhof, team captain, said the project allows her to gain experience as a project manager, something that will be vital to her career.

Paddling

Once the finished product has been set, painted and loaded into a van, the team will travel to Seattle for the competition. There are five separate race divisions that UI and the canoe must compete in — men and women's sprint division, men and women's endurance division and a coed race. Before the canoe can compete, however, it must pass several safety, floatation and structural tests.

Racing the canoe is everyone's favorite part of the competition, Brown said, and the UI team usually dresses for the part in Vandal viking horns and black and gold garb.

Just as in any race the team spends time practicing paddling wooden canoes beforehand, an activity Banzhof said brings the team together.

"I think we're just all fascinated by the strangeness of it all," Brown said.

"It's a good way to get to know your engineering peers. And to go outside, which is nice," she said.

In addition, the team must give a technical presentation, submit an academic paper and create a technical poster. They are scored based on these requirements, the results from the races and the aesthetics of the canoe. In 2011, the UI team came in third overall.

In the end though, it's about being innovative and having fun for the UI team.

"We get to paddle a canoe made out of concrete, where else in your life are you going to get the opportunity to do that?" Banzhof said.

DeAnn Brown tests a concrete core's merit under tons of pressure. Sample cores are broken and analyzed as the team develops stronger, lighter concrete.

The canoe undergoes a series of tweaks before competition, and civil engineering senior Wendy Banzhof takes the lead in tuning the craft for its debut as two new members of the concrete canoe club look on.

FORWARD

TIME MACHINE 1909

TRAVEL DIARIES OF LUCILLE SAYRE ALLEN

BACKWARD

Born the seventh of nine children, Lucille Sayre Allen survived both World Wars, the Great Depression and political scandals. Throughout her life, Allen recorded the world in a series of closely kept diaries. In 1993, she compiled them into a 21-page album for posterity. One of Allen's great-grandchildren, University of Idaho student Rebecca Leavitt, shared the document with Blot and we found this segment about how transportation has changed since Allen's birth in 1909.

"In 1909, the method of transportation was mainly the horse and buggy. My father carried mail with that vehicle. That was our family's first transportation until 1922 or 1923 when we got our first automobile, a model T Ford.

I've seen the coming of the airplane — the first airport in Boise was where BSU is now located — from the single engine plane to the huge 747 commercial planes.

The demise of the great passenger ocean liners, which took 7 to 10 days to cross the Atlantic to Europe, to the Concord which flies from New York to Paris in three hours. Then came the 'Space Age,' where I saw on television Neil Armstrong and Buzz Aldrin land on the moon on July 20, 1969, left the vehicle, walked out and planted the U.S. flag on the moon.

Later, Voyager II left the solar system and moved out toward the stars, that mission began in 1977. The data from Voyager II spaceship will take some 25 years to reach the earth — what a rapid change from 1901. I believe it, but can't understand it.

The old steam engine locomotive was replaced by the 'Streamliner,' powered by diesel, in 1936. The 'Streamliner' was replaced in 1970 with Amtrak, which is operating at the time of this writing." •

A PULLMAN MAN'S JOURNEY TO RESTORE A LOCAL SYMBOL

STORY BY BRITT KISER, PHOTOGRAPHY BY PHILIP VUKELICH

The "Coldwell Banker" sign suspended from the main entrance may be deceiving.

With its original ticket counter, oak-trimmed windows, brick and porcelain walls and pull-chain toilets, the Pufferbelly Depot in Pullman still has the soul of a major 1917 train hub, thanks to Dan Antoni.

Antoni, owner of the Pufferbelly and a Pullman real estate broker, bought the depot in 1988 in an effort to keep its spirit alive.

"I noticed that this depot . . . was more or less moth-balled," he said. "There was a barricade up, and the building was not being occupied. So I did some research into it."

Antoni said he knew the depot was owned by Burlington Northern Railroad.

Despite his real estate background, Antoni did not know how much an authentic train station was worth.

At the time, Antoni owned Barley and Hops, and had a subscription to a publication titled "The Liquor Reporter."

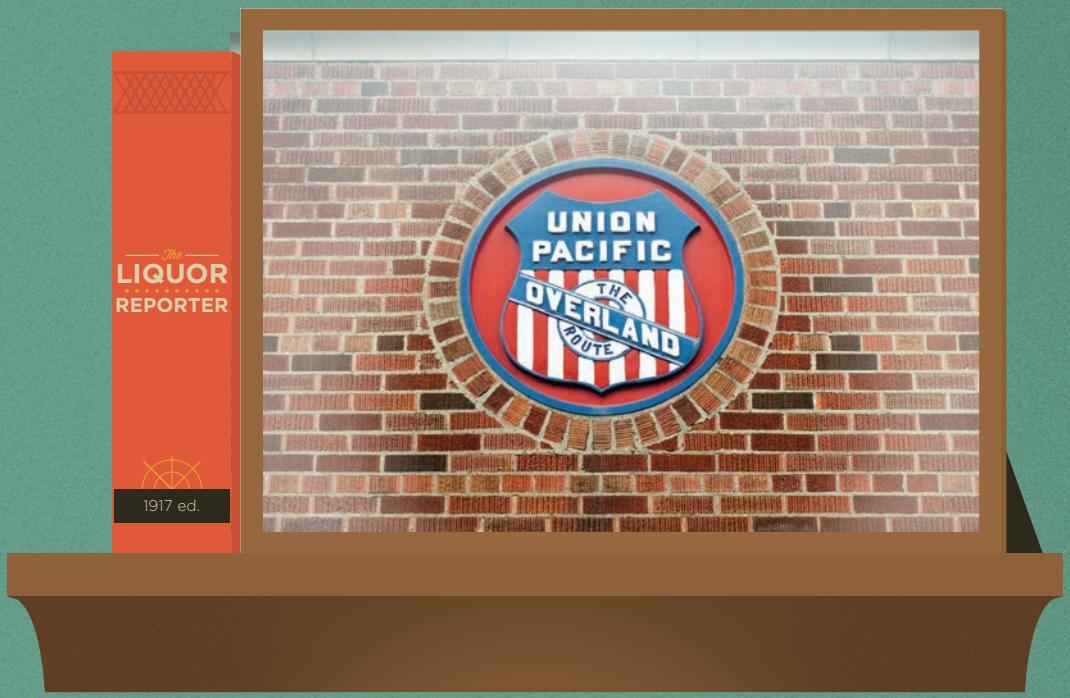
"And in there, I saw that Burlington Northern had sold its depot in Ellensburg, Washington to an individual," Antoni said. "So I called him up and asked him how much the depot was worth. He said, '$20,000 but you don't get the land – you've gotta lease the land.'"

Antoni then made an offer of $20,000 to Burlington Northern, who retaliated with a counter offer of $27,500 and a 99 year lease with first option to buy. So he bought it.

Buying the depot was only the first step in Antoni's journey. The next was to obtain the original Pullman train cars, which currently stand parallel to the depot. He said the entire process happened in three stages, causing Antoni to "fall" into becoming a train enthusiast.

"Actually, I kind of fell into it," he said. "As a kid, I had model trains, but I wasn't ever infatuated with them."

Antoni's first aquisition came in the 1990s, when he purchased the train's caboose and one Pullman car. Next, he got in touch with a train car broker out of Portland and purchased the last two cars for $13,500. Fate brought Antoni a train locomotive – the engine that pulls the train cars – after the

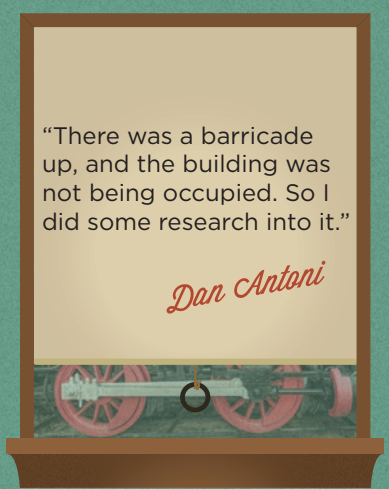


owner of one in Moses Lake, Wash. Monty Holmes, passed away in his early nineties. Holmes' grandson was aware of Antoni's interest in trains, and offered him the locomotive for $8,000, despite another offer he had for $8,500.

"So I bought this locomotive that was manufactured in Davenport, Iowa — a 1920s steam locomotive that was used in a switching yard to move cars around," Antoni said. "And my train project was complete."

This still didn't mark the end of Antoni's journey.

When put together, the cars may look like an authentic train from the outside — adorned with Northern Pacific's forest green and black colors, along with its original red and black ying yang logo. Inside however, Antoni actually resides in the third Pullman car.



He said as a single parent, it made sense to move from his country home on 9 acres of land, into a renovated train car to avoid a mortgage or any extra expenses.

Antoni said benefits of living in the train car include its proximity to work, a decrease in fuel costs and its overall convenience.

"I mean I've got gas, heat, central air and satellite TV," he said. "So it's all beneficial. I enjoy living in it more than a regular house."

Antoni said the renovation process took place over a short 3-month period of time.

"There was an arson that actually torched the last two (train cars) and cut out all the copper piping out of them," he said. "So that made my job a lot easier."

One of his tenants, DRA Realty, occupies the caboose and first two cars as well.

The Burlington Northern Pacific, now Pufferbelly, Depot was once the major transportation hub for Pullman and Washington State University, Antoni said.

"Most of the college students coming here — if they didn't drive — took the train," he said. "So there's a lot more history in the Northern Pacific than the Union Pacific."

Then Union Pacific, now Cougar Depot and Washington State University Visitor's Center, stands just across the street from the Pufferbelly Depot.

"It was a newer depot which was built, I believe, during World War II," Antoni said. "It didn't serve as a major transportation hub like the Pufferbelly did."

Cindy Held, a WSU Visitor Center employee, said the Union Pacific railroad station was built in 1939. The building was remodeled by Washington Mutual Savings Bank in 1973, serving as a branch bank, and was later gifted to WSU in 1988.

Antoni said passenger transportation in the Pullman area by train ceased in the 1960s. The trains that currently run through Pullman are used primarily for freight by a company out of the Midwest named Cooly River Railroad, which sold all of the railroad rightaways to the state of Washington.

There is a recent resurgence of train popularity — for both passenger and freight — because they're more efficient and cause less wear and tear on the roads, Antoni said.

Antoni said his train cars are a historical symbol for the town of Pullman. He said the town derived its current title, originally "Three Forks," from a man by the name of George Pullman, who was a prominent train manufacturer.

Antoni said the "powers to be" approached Pullman and told him they'd name the town after him in exchange for a considerable donation. Pullman agreed to make a $50 donation — back in the 1880s — so the town's name changed from "Three Forks" to "Pullman." Ironically, Antoni said Pullman never actually paid the donation.

"And (my project) was a welcomed addition to the town of Pullman as far as the fact that I essentially kept the depot historically intact," Antoni said. "I acquired the train cars that are more or less a symbol that identifies Pullman, much like the Space Needle identifies Seattle." ★

Story by Elisa Eiguren, Photography by Amrah Canul

Patrick Just flies over the Pullman-Moscow area Oct. 8. Just, a flight instructor at Inter-State Aviation, said flying adds a third dimension to his love of outdoor sports.

FINALLY A BIRD

Learn to fly at Inter-State Aviation

When our feet touch the ground each morning, we tend to think we are the center of the universe. But in the cockpit of an airplane where buildings appear no larger than dollhouses, cars can be cupped in the palm of one's hand and people are reduced to the size of ants — the world looks significantly different.

It's just incredible," private pilot Caitlin Owsley said. "You're finally a bird."

Owsley, a University of Idaho senior, said she always loved airplanes and told her mom she wanted to be a pilot. One day during high school, Owsley was flipping through the classifieds at work when she saw an advertisement that said, "Learn to fly."

"I cut it out, took it home and told my parents, 'I'm going to learn to fly an airplane,'" she said.

Owsley signed up for flight lessons at Inter-State Aviation, located at the Pullman-Moscow Regional Airport, and enrolled in the aerospace studies private pilot ground school course at UI in the spring 2008 semester. Long brown hair and a petite frame make it difficult to envision her in what is undeniably a male-dominated profession, but Owsley said the most challenging aspect of learning to fly as a woman was her higher pitched voice.

"I have a softer voice (than men)," she said. "I had to learn how to talk loud on the radio. If you can go fly the airplane, they will give you the airplane. It's not like, 'No, you're a girl.'"

Sometimes Owsley drove to the airport for her flight lessons just as the sun was rising during her senior year of high school, but she said waking up early is well worth it for flying. Her infatuation with airplanes only increased with flight training, and Owsley said she likes to see people who enjoy flying as much as she does.

"I really think flying is for anyone who wants to get out there — if you have the passion and the desire and the drive to get out and learn," Owsley said. "But not everyone has that passion, so they are going to stay on the ground."

Teaching people how to get off the ground is Patrick Just's job.

Just said working at Inter-State Aviation as a certified flight instructor is a way to pursue his love of flying while making a living. To receive a private pilot's license, students are required to pass a Federal Aviation Administration written, oral and physical exam. Just also teaches the ground school course at UI, which he said is a stepping stone toward passing the FAA written exam.

"The ground school is half the semester and it's pretty intensive, two nights a week for two hours each time," Just said. "If you're interested in flying at all, you can take it because you are going to get exposed to all these different concepts … a little bit of science and weather and navigation."

Besides passing the written exam, the ground school course aims to give students a working knowledge of everything they need to know to fly an airplane. It is more difficult than driving a car and requires accurate judgment and decision making.

"Even though you're just sitting there, your mind is really active and engaging with what's going on in the flight and coaching the student pilot to figure out what they are doing themselves," Just said. "If flying is boring, then your standards are too low for yourself."

Just said his method of teaching is to "build from the unknown to the known," and he starts with the assumption that his students don't have any background in aviation, they just want to learn to fly.

"I ask each one of them if they're nervous and they say 'Yeah,' and I say, 'Good — if you weren't I wouldn't let you solo,'" Just said.

The cramped cockpit of a Cessna 172 is intimidating for first-time pilots. Even though pilots and passengers sit so close to one another their shoulders touch, they must communicate with headsets and microphones because the drone of the engine makes it impossible to hear. Below the windshield is a seemingly endless array of buttons, knobs and dials that control and monitor the electrical system of the airplane.

When Casey Hayward roared down the runway for the first time by himself, his parents were there to watch.

"It's an indescribable experience," he said. "It's honestly like driving a car, but you can go up and down … you're constricted to highways when you're on the ground, but in an airplane you have 360 degrees of sky to go in and that's what's so awesome."

Hayward, a UI senior business major, initially decided he wanted to fly in November of his sophomore year.

> *"It's honestly like driving a car, but you can go up and down…"*
>
> **CASEY HAYWARD**

"I always wanted to fly, but my decision was when I actually went out to the airport and thought it would be a good idea to actually do it and not make it a dream — make it a reality."

One factor that may deter other people from making flying a reality is the idea that it is an elite hobby, Hayward said. A second intimidating aspect is the vast amount of information pilots need to understand.

"When you fly, there's an incredible amount of information that you don't necessarily need to go all the way in depth, but you need to understand the key concepts and theories about a lot of different things in order to be a safe pilot," Hayward said. "It's not any harder than taking a 200 maybe 300 level class at school. It's really not, if you put your mind to it, you can do it."

The tiny two- and four-seater Cessna 152s and 172s parked on the asphalt next to the blue buildings of Inter-State Aviation often go unnoticed by people on their way to commercial flights at the Pullman-Moscow Regional Airport. But Just said every airport has a general aviation side, which is "quite a thriving chunk of the transportation economy," that gets overlooked because the services provided by general aviation have indirect impacts on a community.

Many pilots offer up their planes or services to help other people. Angel Flight is a program in which pilots volunteer to fly for charitable or medical reasons, such as

An aerial view of the University of Idaho residence halls as seen from the cockpit of a Cessna 172.

transporting cancer patients to a city with a hospital to treat their needs, Hayward said.

Hayward said pilots are important in assisting relief programs in Third World countries by flying aid into those countries. Pilots are also a key component in the military in order to transport troops and supplies to the front lines quickly and safely.

Inter-State Aviation is no exception, providing services to the community and state.

"Inter-State does tracking for animals that wear radio collars," Hayward said. "We work with Idaho Fish and Game and other government agencies to track animals, so that's a big biological impact on the environment around us."

Pilots at Inter-State also perform forest service watches to help protect Idaho's forests. Despite the differences in their backgrounds, all pilots are united through their common love for airplanes and flying.

The world of aviation is unique and addicting, Owsley said. As a mechanical engineering major, she hopes to work for a company that designs airplanes and help keep pilots in the air.

> "That feeling of taking off is incredible. All of a sudden you are no longer connected to the ground."
>
> CAITLIN OWSLEY

"If you want to know why we love flying so much, just hop in an airplane," Owsley said. "Go out to Inter-State and ask for an introductory ride. That feeling of taking off is incredible. All of a sudden you are no longer connected to the ground."

Owsley remembers flying with the Cascade Mountains at eye level.

"You're looking out your window and there's Mt. Rainier and all these mountains and there is snow on them even though it's hot outside," she said. "And the sun is shining on the snow and it's breathtaking and it's like, 'I can't believe I am up here.'"

The bird's eye view of an airplane also appeals to Just. The dynamic nature of flying adds a third dimension to outdoor sports like mountain biking and skiing, Just said.

"I really appreciate the beauty of the wing and aerodynamics and I love being on top of mountains," he said.

Inter-State Aviation is the first job that Hayward said he is always happy to show up for. Working at the airport is an opportunity to be engulfed in airplanes, and Hayward said his mind is always on flying.

"I don't think there's a day where I don't think about flying," he said.

But like many pilots, Hayward has difficulty expressing in words why flying is so magical.

Perhaps the thrill and romance of aviation is best described by Leonardo da Vinci, a man who was fascinated with the flight of birds and drew sketches of flying machines, but never left the ground.

"For once you have tasted flight, you will walk the earth with your eyes turned skyward; For there you have been, and there you long to return." •

SPORTS SCIENCE

Story by Theo Lawson

The physics behind a soccer save, tennis serve and volleyball kill

Elevation and accuracy

Volleyball's most lethal weapon, the "kill," can make any player deadly on the court if perfected. Anybody in the Western Athletic Conference who has played against University of Idaho sophomore Allison Walker can attest to that. Though Walker's kill tally ranks second in the WAC, a number of variables go into executing the perfect kill.

Women's NCAA Division I volleyball rules state that a net must be 7 feet, 4 1/8 inches high. At 6 feet, 1 inch tall, Walker towers over most of her teammates, but compared to other outside hitters in the WAC, she's average.

Coach Debbie Buchanan said if an outside hitter can reach 9 feet, 8 inches on her vertical leap, she'll have automatic success at the collegiate level. Walker frequently hits the 10-feet-2-inch mark, part of the reason her kill-to-hit ratio is through the roof.

"That's why she does have some of those big plays where she can swing over people," Buchanan said. "If we can stay in system and she's on the right footwork and she's on her approach, and her elevating that high, she's going to have a lot of great swings."

Elevation is crucial, but the combination of power and accuracy can turn an outside hitter into a blocker's worst nightmare. Following her leap, Walker must anticipate not only the position of the ball after it's set, but the position of blockers and the formation on the other side of the net. From there, she must decide whether to penetrate her opponents with power or use precision to spike the ball into an unoccupied area.

Two blockers tower over the net to stuff kill attempts, while four remaining defenders cover the 59-by-29-foot court.

"The faster the ball's going, the harder it's going to be to get under that ball and the harder it is to control if you're digging it," Walker said. "Accuracy is important, especially if you have two blocks. You have to hit where the block's not and hit where the defense isn't."

Keeping the ball in-bounds and on target are vital to continuing play on a point, Walker said.

Buchanan said hitters have less than a second to adjust to the set ball and select a desired kill. With more than 250 kills on the season, Walker certainly makes do.

She's a brick ... wall

The ability to react to a ball approaching at 50-plus miles per hour is the reason why goalkeepers are often considered "crazier" than any other player on the soccer pitch. A position that's heavily based on hand-eye coordination and pure athletic ability, goalkeeping at the Division I level requires an unmatched sense of awareness and reaction time. Welcome to a day in the life of Idaho's Caroline Towles.

A shot taken 18 yards behind the goal line, or just outside of the goal box allows a goalkeeper anywhere from half to one full second to react and make the save. Any shot taken behind the 6-yard line could cross the goal line in 0.3 seconds or less.

In such cases, perfect reaction time may not be enough to foil a driven shot from a few yards in front of the goalkeeper.

Towles, according to goalkeeper coach Grant Williams, is among the best when it comes to reaction saves, partially due to her outstanding athleticism.

"A lot of the time when you're that close in, you're not even thinking about it, it's more of a hand-eye reaction right there. Anything inside that six — it's quarter of a second at most," Williams said. "The thing I like about Caroline is she's very athletic, she's very explosive ... She is fantastic inside the 6-yard box, she has great reflexes."

At 5 feet, 8 inches, Towles' height is average for that of a Division I goalkeeper. However, protecting the 8-by-24-foot goal mouth challenges even the tallest and most agile goalkeepers. This means that above Towles' head, 38 percent of the goal remains unoccupied and on either side of her, approximately 11 feet stand vacant.

In a penalty kick situation, Towles' job becomes one of the most difficult in sports.

The penalty spot is centered 12 yards in front of the goal line. For the majority of goalkeepers, the art of saving penalty kicks becomes a guessing game, as reading a shot then reacting typically consumes too much time.

With virtually no room for error, Towles relies on the opponent's penalty tendencies and body language.

"You have to know what direction they're going to kick it if you have any chance of saving it," Towles said. "If you just stand there and try to react to it, it's impossible to save it ... I would say about 50 percent of it is guessing and 50 percent of it is reading."

> "If you just stand there and try to react to it, it's impossible to save it ... I would say about 50 percent of it is guessing and 50 percent of it is reading."
>
> Caroline Towles

Split second decisions and reaction time rule goalkeeping, but Towles' mastery of the two has helped her tally 43 saves in her first seven games as the Vandals' starter.

Tennis, anyone?

Aroldis Chapman of the Cincinnati Reds holds the record for the fastest pitch thrown in Major League Baseball history, which was clocked at 106 miles-per-hour.

Fast, right? Not when you compare it to the speed of an average first serve from Idaho mens' tennis player Dmitry Perevoschikov.

On average, an NCAA Division I tennis player's serve measures between 115 and 120 miles per hour. Perevoschikov however, is on another level. The Izheusk, Russia, native is capable of reaching 130 miles per hour, a speed rarely achieved at the collegiate level.

While Perevoschikov's power makes it challenging to construct a solid return, the sophomore's accuracy makes service aces routine.

In fact, Perevoschikov ranks accuracy above speed, and said placing a shot can increase the chance of winning the service game.

"You never know, maybe it's easier for him to return the fastest ball than a slower one that's right in the corner," he said. "If you can put it in the right place, I think it's more important to control the serve."

Players have almost 282 square feet to work with when it comes to the service box, and with an opponent standing 80 feet away, executing the ideal serve isn't a simple feat.

Normally, a player will line up parallel to the service line and bounce the ball three or four times before uncoiling to serve. The toss of the ball may be as crucial as the racquet motion, as it can determine whether a player will employ power or precision. An inconsistent toss will lead to an inconsistent serve, inhibiting a player from making the desired contact with a ball.

Perevoschikov tosses the ball 6 feet in the air, allowing time to

bend his legs, prepare the swing and reach the ball at a preferred position.

Following the toss, racquet speed comes into play.

A study by the Department of Physics at the University of Illinois at Urbana-Champaign concluded that if a ball is served at 146 miles per hour, the racquet itself could be moving at 100 miles per hour.

Though Perevoshikov's racquet speed has never been measured, men's tennis coach Jeff Beaman said top players use racquet speed effectively during both their first and second serves.

"A high-level player swings just as fast, just as hard, given the same racquet speed on a first and second serve," Beaman said. "On a second serve, they're swinging just as hard, putting high levels of rotation on the ball, which means you have that same net clearance. Lower level players just dink the ball in, they slow their arm down to get it in, which actually leads to not being as consistent."

Perevoschikov has experienced stints as Russia's top junior player, and undoubtedly, he'll be one of the WAC's deadliest service specialists come spring season.

A goalkeeper has

.5 to 1 second to react and save

Incoming groups of freshmen at universities are always told the same thing, in one way or another: College is vastly different from high school, so you better be prepared.

But how well does the high school experience actually prepare a student, especially one from Idaho?

Across the country, education and education reform have been on the minds of legislators and the center of union battles. In Idaho, Superintendent of Public Instruction Tom Luna's education reform plan was met with ire by most of the population, including school teachers. Whether or not that plan is the right course of action, the numbers show that problems do exist between high school and college in Idaho.

In opening remarks for a Students Come First Technology Task force meeting on June 13, Luna presented charts on the success of Idaho's postsecondary education. About 46 percent of Idaho's high school graduates immediately enter college, compared to 70 percent nationally.

"Once in postsecondary, 40 percent of those students will need remediation when they arrive, and 38 percent of them will not return for their sophomore year," Luna said. "I do not believe it is a coincidence that about 40 percent need remediation in postsecondary education and nearly 40 percent decide not to return for a second year."

For those students who do make it past their first year at University of Idaho the success rate continues to drop. Only 25 percent of UI students graduate in four years.

GRADUATION

About

25%

of University of Idaho students graduate in four years.

In addition, some students come into college already behind on fundamental subjects, specifically English and math. UI offers one remedial English course and three remedial math courses, which all currently have about 200 students enrolled in them. That's not too many courses, but still a large number of students that have fallen behind somewhere along the line.

Kathy Aiken, dean of the College of Letters, Arts and Social Sciences, said SAT and ACT scores are assessed to determine what course a student should start in, along with a writing sample examined by the faculty. Aiken has spent four years as a sitting member of the Professional Standards Commission of Idaho, which is responsible for making recommendations to the State Board of Education on teacher qualifications. She said part of the problem might start long before a student reaches high school.

"Idaho is a largely rural state, and that challenges us to have what we call highly qualified teachers," Aiken said. "I also think we fund no pre-K education in this state ... and I think that is an issue for us compared to some other states. I think our whole educational funding system is challenging and that's not the whole answer, but it's part of it."

Aiken said most teachers she has come into contact with over the past 25 years are excellent, and don't often get that recognition because much of the focus is on poor teachers, who are the minority.

She said part of the challenge they face is helping poor teachers improve while also giving recognition to excellent ones. Aiken also said she doesn't think coursework is the reason students might come into college behind.

"It's very rare that a student is in a remedial course because the course content in their high school preparation was not adequate," Aiken said. "I don't think that's very often the issue. Sometimes ... people just aren't paying attention, sometimes people aren't mature enough, sometimes people didn't think college was a place for them and changed their mind and they're trying to catch up."

Idaho State Representative Shirley Ringo, a Democrat who represents Moscow's district, was a teacher in Moscow for 38 years and has been retired for the past 10. She mostly taught math at Moscow High School, and agreed that the problem doesn't necessarily rest with coursework, but in approaches to teaching and what students can actually remember.

"I always felt when I was teaching that the big problem was students didn't retain information," Ringo said. "Most of these students have been exposed to the material they are seeing (in remedial courses)."

Ringo said with the amount of material a teacher is required to cover in a semester, it is difficult to implement the types of learning tools that might help students truly learn rather than memorize the information they are presented. She said projects and other hands-on activities can help students apply the knowledge they receive, but trying to make room for such things in her schedule was difficult.

"It was always frustrating to feel like I didn't have enough time," Ringo said. "And it wouldn't surprise me at all if by the time (students) got to the university level, they didn't test well."

As far as Luna's plan goes, Ringo said she doesn't feel it's taking reform in the right direction, and actually may cut funding for instructional staff, which inevitably takes a toll on students.

"I think it just widens the disparity between opportunities students have in different areas," Ringo said. "... I think he's minimizing the importance of having a good, strong teacher staff."

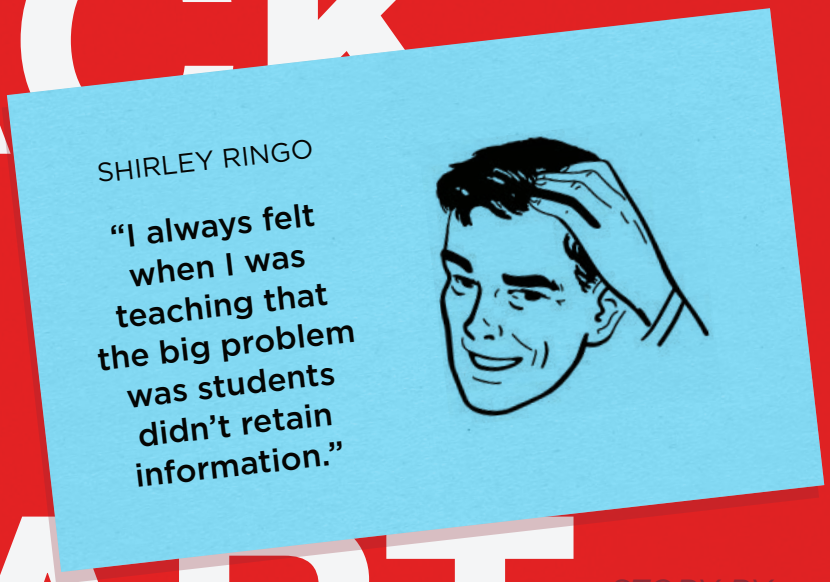
UI takes a personal approach to mathematical courses with the POLYA center, which Aiken said is a highly successful program, in addition to high success with the remedial English course. She said the amount of personal attention students receive with the POLYA lab and the different modes of learning available contribute to that success.

"Frankly, I think all of education should be approached that way," Ringo said. "The thing is, we're constrained by time."

Aiken also stressed the importance of explaining the significance of higher education to a person's growth, both economically and intellectually, and the array of options available to students as a way to create more interest in high school courses and prevent students from letting themselves fall behind.

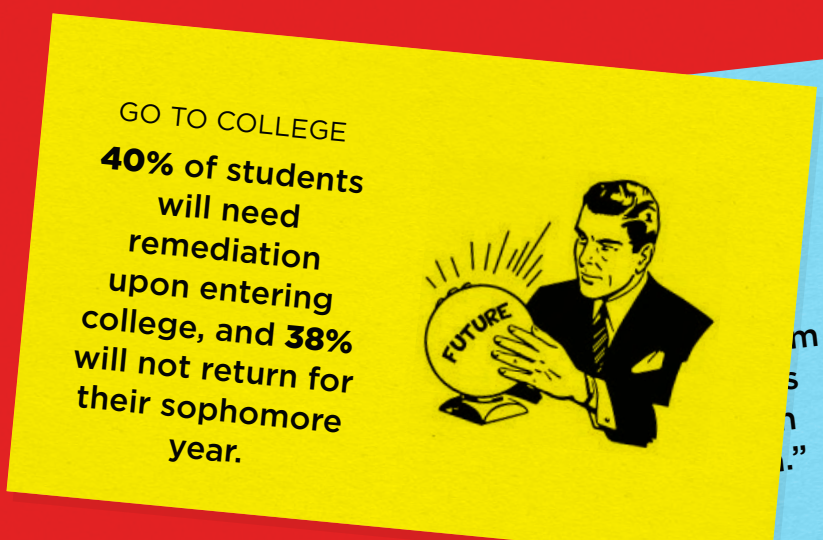
"I don't see the fact that we have students taking some of these courses as a problem," Aiken said. " ... I actually think more discussion about career possibilities and encouraging students to think about higher education, not just college, but some kind of postsecondary training earlier might help to inform students about why they should be paying attention to these things at an earlier stage."

GO BACK TO START



STORY BY KELCIE MOSELEY

The education system's role in a student's success



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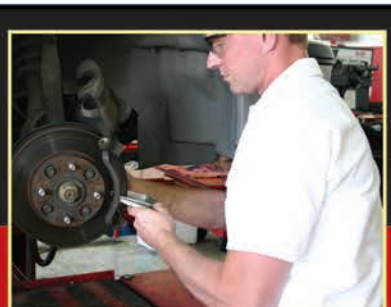

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