

Real-Time Visual Verification and Total Situational Awareness on Campus

Intelligent, data-enabled video surveillance provides 24/7 threat detection and safe, secure learning environments

Securing college and K-12 school campuses poses many unique challenges. Security teams must strategically plan video surveillance, access control, and visitor management systems to keep an eye on the diverse variety of facilities comprising a typical campus community.

From dorms and libraries to sports centers and expansive student grounds, there is a lot to watch over and secure. A platform of properly installed campus security solutions can provide real-time visual verification and total situational awareness. Intelligent, data-enabled video surveillance offers 24/7 threat detection and secure learning environments, guaranteeing the safety of students, faculty, and facilities on campus.

Security Threats to Schools and Universities

According to a [poll](#), more than 50% of parents with children in grades K-12 and 75% of secondary school students believe a school shooting could occur in their community.

Incidents of deadly violence on school and university campuses have plagued the United States during the past few decades. Some of the the most tragic headlines include:

- **April 20, 1999:** Two students, Eric Harris and Dylan Klebold, armed with guns and bombs, launched an attack on teachers and fellow students at Columbine High School in Jefferson County, Colorado. They killed 12 students and one teacher, and wounded 23 others before committing suicide.
- **April 16, 2007:** Virginia Tech student Seung-Hui Cho carried out the most deadly shooting spree on a U.S. campus when he shot 32 people to death on the Blacksburg campus and then took his own life.
- **April 2, 2012:** L. Goh, a former student seemingly resentful about his experience at Oikos University in Oakland, California, returned to the campus. He allegedly began shooting and killed a secretary and six students while wounding three others.

Outbreaks of violence at educational institutions typically do not rise to the horrific levels of Virginia Tech, Columbine, or Oikos. However, incidents threatening school security like bullying, hazing, and online harassment occur every month of the year and can happen in any classroom or campus from coast to coast.

Schools and universities are taking several steps to create safer learning environments, prevent violence, and identify troublesome behavior before it becomes life-threatening. Moreover, they are putting plans in place to respond to emergencies.



The efforts will not eliminate violence and criminal behavior from schools, but every incident occurring in an educational institution provides administrators with another opportunity to see what lessons can be learned to make the learning environment safer for students, staff members, and visitors.

Facts About School Violence

School violence is not confined to urban schools. It is also prevalent on suburban campuses. Violence is most common in larger institutions, and middle school students are the most likely targets of violent behavior.

According to a [joint report](#) of the Departments of Education and Justice, violent crime overall has dropped since the early and mid-1990s. However, this decline is relatively small. For example, the percentage of students who reported being victims of crime at school decreased from 10% in 1995 to 8% in 1999. Even though the chances of serious violence, such as shootings, are very low, violence continues to take place in schools.

The latest data available on criminal incidents reveals about half of public middle and high schools reported at least one incident of physical attacks, fights (without a weapon), theft, larceny, or vandalism.

Even in light of the 5% decrease in weapon carrying, 7 to 8% of students in 9th to 12th grade continue to report being threatened or injured with a weapon on school property. More concerning, official statistics are often lower than actual rates of violent behavior because of biases in reporting. Violence remains a significant problem in U.S. schools.

According to the latest [NCES report](#), several crime and safety issues have become less prevalent at school throughout the last decade. Compared with 2009, in 2019 lower percentages of students ages 12-18 reported:

- Any criminal victimization (including theft and nonfatal violent victimization) during the previous 6 months (2% in 2019 vs. 4% in 2009)
- Being bullied during the school year (22 vs. 28%)
- Being called hate-related words (7 vs. 9%)
- Seeing hate-related graffiti (23 vs. 29%)
- Observing a gang presence at school (9 vs. 20%)

Similarly, students in grades 9–12 reported lower percentages in 2019 than in 2009:

- Having been in a physical fight on school property in the previous 12 months (8 vs. 11%)
- Carrying a weapon on school property during the previous 30 days (3 vs. 6%)

In 2018, about 28,500 criminal incidents against individuals and property on campuses of postsecondary institutions were reported to police and security agencies. This translates to 19.5 on-campus crimes reported per 10,000 full-time-equivalent students.

Although the total number of reported on-campus crimes was lower in 2018 than in 2009 (28,500 vs. 34,100 incidents), the number of reported forcible sex offenses on campus increased from 2,500 in 2009 to 12,300 in 2018 (a 383% increase). Forcible sex offenses constituted 43% of all criminal incidents reported on campus in 2018.

In 2018, around 814 hate crimes were reported on the campuses of postsecondary institutions. The three most common types of hate crimes reported by institutions were:

- Destruction, damage, and vandalism (345 incidents)
- Intimidation (337 incidents)
- Simple assault (75 incidents)

In 2019–20, there were a total of 75 school shootings with casualties, including 27 school shootings with deaths and 48 school shootings with injuries only. Additionally, there were 37 reported school shootings with no casualties in 2019–20. The majority of school shootings (including those with and without casualties) occurred at high schools.

Current Situation of Security in Schools and Universities

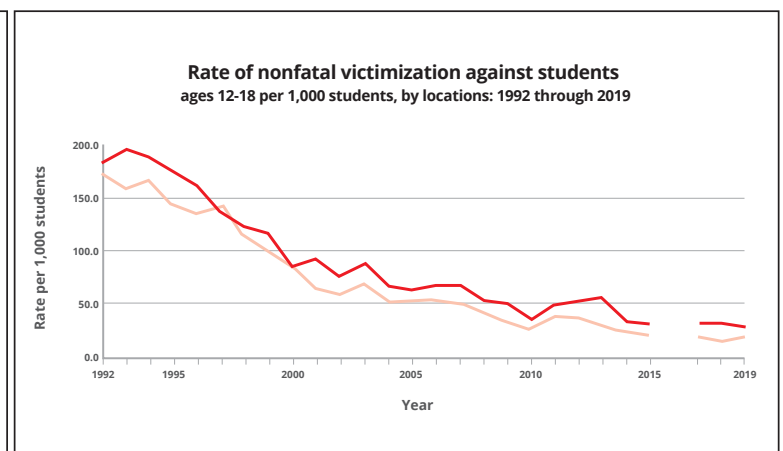
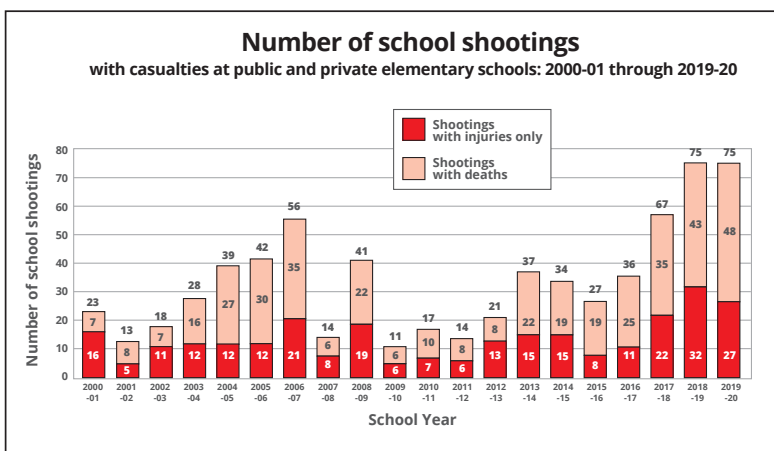
While schools are striving to meet the educational needs of the learners and the community as a whole, they – as open systems – are exposed to every kind of security threat coming from inside and outside of the school environment.

Due to current social, economic, and cultural conditions, several individual or group threats may be deliberately or unintentionally exerted on schools. Schools may also be exposed to pandemic diseases, fires, and natural disasters including earthquakes, floods, landslides, etc. School management, together with the school community, must be prepared for all types of threats and develop strategies to adequately deal with them.

Since the threats to school security may stem from various sources in society, school safety issues should comprise a wide range of bodies like educators, students, managers, parents, law enforcement agencies, health institutions, and businesses.

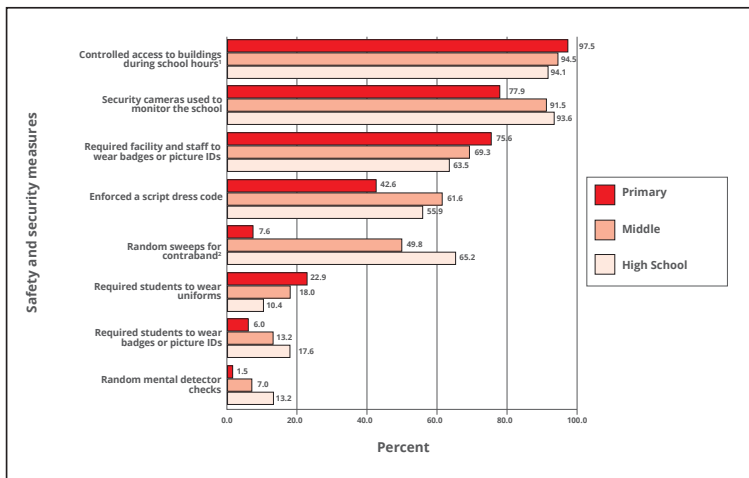
Schools can ensure a safe environment by focusing on pre-

According to the same report, in 2019, students aged 12–18 experienced 764,600 victimizations at school and 509,300 victimizations away from school. This translates to a rate of 30 victimizations per 1,000 students at school, which was higher than the rate of 20 victimizations per 1,000 students away from school. Both the at-school rate and the away-from-school rate represent a decrease of more than 80% from 1992.



vention, intervention, and response phases in their safety efforts. To deal effectively with antisocial and criminal behavior, schools should promote a positive school environment and school-wide effective prevention and intervention strategies.

According to a [survey](#), more than 90% of public schools use controlled access to buildings during school hours as a security measure to protect their institute against threats.



¹ For example, locked or monitored doors or loading docks.

² Examples of random sweeps include locker checks and dog sniffs. Examples of contraband include drugs and weapons.

Between [2009 and 2019](#), the percentage of students aged 12–18 who reported observing the use of one or more security cameras to monitor the school increased (from 70 to 86%). The percentage of students who reported observing the presence of security guards or assigned police officers also increased (from 68 to 75%). In 2017–18, about 46% of public elementary and secondary schools also reported they had a written plan for procedures to be performed in the event of a pandemic disease.

Video Surveillance for On-Campus Security

The probability of being caught is a factor prospective troublemakers consider before engaging in out-of-bounds behavior. On a spacious campus, school security staff may find it difficult to monitor all the potential trouble zones or those planning to create problems.

The extensive availability of low-cost, powerful video technology enables schools to redefine campus safety. People who know their actions are recorded on a surveillance system may cut back their inapt instincts, and many schools

and universities cover the inside and outside of their facilities with cameras, leaving few areas beyond the reach of the vigilant eyes of security officers.

Transmitting video images over a school’s computer network and recording images digitally instead of on unwieldy, space-consuming tapes makes it possible for institutes to monitor more locations in real-time, getting access to images from remote locations, and capturing archived video more quickly.

While the extent of video surveillance on some school campuses makes some privacy supporters anxious, education administrators placing a higher priority on campus safety understand surveillance enhances the environment for learning in schools.

In Chicago, the school district started using security cameras in 1999 and now has more than 7,000 cameras in 268 of its schools. In 2010-11, officials decided to step up security at one of its more affected high schools. After several high-definition cameras were installed at Fenger High School, administrators testified misbehavior cases declined 59% compared with the previous year, and the number of arrests declined by 69%. As a result, the dropout rate at Fenger decreased from 19 to 5%.

Those numbers encouraged officials to install the high-definition system at 14 more high schools they believed had higher numbers of misbehavior, arrests, or reports of crime. The system includes between 50 and 80 high-definition security cameras at these 14 schools.

According to Chicago Schools CEO Jean-Claude Brizard: “We need to provide instructional support to help teachers and principals drive student growth in the classroom, and building a safer learning climate goes hand in hand with those efforts”.

Brizard adds: “We hope that (the) high schools benefiting from these security cameras will experience similar results to those that helped move Fenger in the right direction.”

Benefits of Video Surveillance for Campus Security

Should you invest in a video surveillance and access control platform for your school or college? Here are a few benefits to consider:

- **Maintain secure facilities:** College campuses feature a variety of buildings, each with its own security needs. Campus security cameras help to secure these

facilities, watching for suspicious behavior and unauthorized access.

- **Protect students:** Students have to cover a lot of ground when navigating their way through campus. This often involves traveling by foot, and sometimes the journey takes place late at night. Video surveillance is an invaluable tool, allowing students to walk under the safe watch of campus security cameras.
- **Prevent crime:** Campus security cameras can serve as a visual deterrent to crime such as theft and break-ins.
- **Prevent vandalism:** Proper campus security cameras reduce the threat of vandalism to school property.
- **Monitor parking lots:** Security cameras can prevent and deter criminal activity and theft in parking lots throughout a campus community.
- **Help in investigations:** You can use archived surveillance footage to identify individuals who have committed crimes or breached school policies.
- **Assist in the application of university policies:** Campus security cameras can monitor campus activity, working to ensure that everyone properly follows school policies.
- **Easy installation:** Surveillance cameras are easy to install and set up. Unlike analog CCTV cameras, all you need to do is mount your cameras and hook up your recorder. No coaxial cable or power tools are necessary.
- **Remote access:** A video surveillance system operating with IP network technology enables video streams to be sent over the internet for remote monitoring. You can view footage from cameras throughout the campus online from any computer with an internet connection and access to the network.

Risks and Potential Problems for Video Surveillance Systems

When implementing campus security cameras, be careful of the potential risks and problems associated with a school or college surveillance system:

- **Vandalism:** Visible security cameras can be targets for vandalism and tampering. Damaged cameras can cause lapses in your recording.
- **Privacy:** Cameras should only record in public areas throughout the campus grounds and facilities. Private areas such as bathrooms, faculty break rooms, and dorm rooms are considered unsuitable for video surveillance installation.
- **False sense of security:** While video surveillance is effective in increasing campus safety, it is significant to also have the necessary security staff and law enforcement patrolling the grounds.

Configuration Considerations for Campus Surveillance Cameras

Providing proper video surveillance over an entire campus community is similar to monitoring a small city. Many different types of facilities and settings need incessant monitoring, with the security of students, faculty, and school property at stake. Consider the following factors when setting up a campus video surveillance system:

- Has violence on campus occurred in the past?
- Is vandalism a strong concern?
- Is there a history of damage to school property?
- Is the campus properly lit at night?
- Are there trouble zones on campus needing special attention?
- What is the frequency of break-ins on campus?
- How often has crime and theft occurred in campus parking lots?
- What types of security systems are in place at present?
- Is the campus well-staffed with security personnel?
- What kind of security is used when school is out of session?

Best Practices for Video Surveillance on Campuses

To make the best use of video surveillance systems, consider the following best practices:

- Place cameras near entrances and exits to school buildings.
- Install surveillance for campus parking lots.
- Mount cameras in at-risk areas such as poorly lit walking paths and locations where students and faculty might find themselves alone and unprotected.
- Position cameras in campus stores, cashier offices, and other areas where money is exchanged.
- Maintain proper video surveillance for sports facilities.
- Monitor common areas such as stairways and lobbies.
- Install cameras for enhanced security at residence halls.

Velocity Vision: Identiv's Solution for Campus Video Surveillance

[Velocity Vision](#) builds on the 25+ year history of Hirsch Velocity Software, a robust and easy to deploy security platform. It is an enterprise-level, fully integrated open platform video management system (VMS) that scales up to thousands of cameras and integrates with all the tools you already use. The intelligent solution enables you to see, record, and react to your environ-

ment. It makes your security operations scalable, freeing up security teams to act faster, with better data.

Identiv's real-time visual verification platform provides a comfortable, safe, secure educational environment while still protecting individual privacy. It offers real-time video monitoring of common areas, public spaces, and restricted spaces 24/7. Velocity Vision secures all campuses and facilities, increasing situational awareness and the ability to rapidly respond to emerging threats.

Additional benefits of Velocity Vision for the education sector:

- IT departments can more effectively manage security while balancing individual privacy within the constraints of today's limited budgets and increased regulations.
- It improves the ability to control access and comply with regulations while assuring individual privacy.
- It offers a fast response time from campus security while enhancing the feeling of safety and security for students, families, visitors, and staff.
- It protects your people, property, and reputation.

Key Features of Velocity Vision

Velocity Vision allows you to create your own total video intelligence and access control security solution, offering the ability to leverage all types of platforms: on-premises, cloud, hybrid, and mobile. With an open platform API, access an unmatched ecosystem of 100+ integration partners. Velocity Vision makes it possible to build the exact solution to meet any security need.

End-to-End Security Solution

This powerful, open API security platform works with existing investments and provides complete situational awareness. It integrates with renowned Hirsch Velocity for an end-to-end security solution with real-time threat detection and loss mitigation. Velocity Vision enables anywhere operations and remote access control from any location 24/7.

The platform scales up to 1,000s of devices, supports 8,500+ camera models, and combines with 15,000+ ONVIF-compliant solutions. Velocity Vision works with technologies from over 100 ecosystem partners providing the latest in artificial intelligence, GPS, access control, and building management.

Data-Enabled, Open-Platform VMS

Velocity Vision is the future of open-platform VMS. It is a data-enabled, sophisticated decision-making tool. The problem

in surveillance is not security, it is awareness. Visual intelligence allows you to:

- Collect more intelligent security and business data
- Close the gap between siloed systems
- Connect external systems and data for use in dashboards, maps, and investigations without complex integration
- Customize with an optional software development kit (SDK) to address specific organizational or industry requirements

Best-in-Class Cameras and Hardware

As part of the Velocity Vision end-to-end security platform, Identiv partnered with Hanwha Techwin to provide a complete camera line. Hanwha features an extensive security solutions lineup and is committed to cybersecurity and National Defense Authorization Act (NDAA) compliance.

Identiv also offers a best-in-class safety and security hardware portfolio, including client workstations, compute servers, storage, access control servers, analytics/AI servers, video recording servers, and switches.

Deploy Total Situational Awareness on Your Campus

Maintaining tight security in school settings is of utmost importance to ensure the safety of students and faculty. Violence in schools is a real threat and it continues to grow. Real-time visual verification and total situational awareness on campus is critical to the safety of schools, colleges, academies, and other learning institutions.

As experienced providers of campus security solutions, Identiv is equipped with the knowledge and background to protect schools from trespassers, violence, crime, and student misconduct.

Our team of security experts provides full support for your facility and offers in-depth services including project consultation, configuration, campus-wide access control solutions, monitoring and control of entry points at all buildings, VMS integration, heat map analytics, people counters, dashboards, and site security audits.

We work with you to provide the right solution for your school campus, empowering you to:

- Prevent trespassers from entering school property

- Stop student-on-student violence and threats
- Deter illicit acts and crime
- Remotely monitor from your smartphone or tablet
- Ensure the safety of staff, teachers, and school administrators

Ready to get started with our real-time visual intelligence solution? Contact Identiv at +1 888.809.8880 or sales@identiv.com and visit go.identiv.com/vvsim.