Alamosa School District decided that they needed to increase security in their schools by better managing the inflow and outflow of staff and guests. The key solution the district was using was not only insufficient but also resulted in extra costs from lost keys which cut into their administrative budget. When two new elementary schools in the district began construction they decided it was the perfect time to switch to biometrics. Biometrics provided the ability to add and delete users while minimizing key losses.

The district needed to verify that only those on the school staff that were authorized to access certain doors at certain times could enter. For example, if a teacher was outside with a key, it would have been easier for a threat to take the key from the teacher and gain access to the school. By removing keys, that threat and additional key management issues were eliminated.

Statistics
- **Industry**: K-12 school
- **Application**: Access control
- **Biometric**: HandKey II
- **Geography**: Colorado
Today, the two elementary schools use the Schlage HandKey II as part of their access control system which is networked through the District’s IT Department. The hand geometry readers are installed on all exterior doors including the main set of doors. The HandReaders are used only after hours on the main doors but are used all day as teachers and school personnel access the additional exterior doors. The readers also operate the locks on all partition doors. The HandKey II readers are housed in a Schlage outdoor enclosure to safeguard from excessive wind and dust. Another HandKey II is kept for enrollment purposes in the main office.

Whether cook, teacher, principal or other staff member of the District, all start by enrolling their hand geometry on the HandKey II in the main office. Everyone uses the keypad to enter their ID number and then place their right hand on the HandKey II platen. The HandKey II creates a mathematical template of their hand’s geometry.

Then, when they use the HandKey II to enter the school, they repeat this process. The 3-dimensional – 90 points of width, length and thickness – image of their hand is compared to the template stored in the system’s memory. If the current image matches the template, the employee’s identity is verified. Total time required for verification is 1 second. Because every person’s hand is unique, the HandKey II provides a quick, accurate and reliable way to verify each employee.

Most importantly, the employee’s 3D hand geometry image itself is not stored but instead only a 9-byte mathematical template. This mathematical equation is developed from measured points on the hand. When an employee scans their hand each time for authentication, only this algorithm is checked.

That was very important for the district’s teacher’s union leaders to understand. Initially, they were very concerned that authorities would have the teachers’ handprints on file. When it was explained that these units had nothing to do with handprints and only looked at the mathematical template, the teacher’s union was no longer reticent and agreed with the necessity to move to this secure biometric.

This additional security becomes especially important in case of a lockdown. If needed, the HandKey II readers can be shut down with a push of a button from the main office. Even if the threat took a teacher and attempted to force them to use the HandKey II, the door would remain locked. In no way could a teacher or other staff member be forced to do something that would cause a security breach. The biometrics units assist in better securing the facilities.

The district is pleased with the increased security from the HandKey II readers. “This is the only system where we can know exactly who is entering. We now can assure that those authorized to be in the school are there only when they are supposed to be on site. For example, the kitchen staff has access to certain doors only at certain times. The same goes for teachers and everyone else. No card or code can be passed on to another person to gain entry to the schools. In fact, we hope to introduce HandKey II readers to our middle school and high school as soon as funding becomes available.” said Charlie Jackson, Director of Maintenance.
Being a small school district means budgets are extremely tight. With the old key system, the district had to rekey the high school twice and the middle school four times. The cost was approximately $8,000 each time. That $48,000 could have been used in many other important areas. The high school and middle school's experience with keys simply highlights the problem with keys – expensive to rekey and easy to violate. Biometrics eliminates those problems.

The Alamosa School District also uses Schlage mechanical locks, exit devices from Von Duprin, and door closers from LCN, all sister brands, throughout their schools. “I already knew that I would be getting the same good support on the biometric units as I did with their other products,” said Jackson.