Taking Human Error out of K12 Attendance Equation Could Mean Millions in State Funding for Education

Many schools districts across America are discovering that by taking human error out of taking attendance and automating the process, they can simply and easily increase their Average Daily Attendance (ADA), and with even incremental improvements, a district cancreate a financial windfall, *even by almost a million dollars a year,* depending on the state and the school.

 The U.S. Department of Education defines ADA as the aggregate number of days of attendance of all students during a school year, divided by the number of days school is in session during that year. ADA is the lifeblood for every school budget, yet each state uses different methods to determine how many students are in their building at any given time.

Aggregate Number of Days of Attendance of all Students

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Number of Days in Session

Some states rely on the number of registered students at the start of the school year, and some on attendance taken every day and averaged monthly or quarterly. Either way, ADA is essential for state funding.

The Currency of Computerization

When districts rely on ADA for a large part of their operating budget, like those in Texas and others in the south and west, a Smart Card ID System can often pay for itself within the first year.

Automating the attendance process with Smart ID Card technology also means increased school security; safer visitor management with authorized student pickup; quicker student attendance issue intervention; and improved cafeteria and school lunch program accountability, to name only a few additional benefits.

What Happens in Texas Stays in Texas

 In the manual *School Finance 101: Funding of Texas Public Schools, January 2013*, the Texas Education Agency Office of School Finance says, “The basic allotment amount and the number of students in average daily attendance are used to calculate a district's [funding].” ADA is the key that drives financial support in their schools.

 Published in July, 2014, the *Student Attendance Accounting Handbook* was written by the Texas Education Agency and contains 298 pages of procedures, rules, and regulations. Just imagine the difficulties that can arise when school districts take and report attendance using this huge document as a guide. Teachers have to learn absentee codes, know which pen colors to use, and remember other complex protocols. And using handwritten forms that are faxed can be easily misread, which adds to the problem.

 In fact, human error rates are areas of academic study by industrial engineers and universities, with findings determined by groups such as NASA, the Atomic Energy Commission, the Federal Aviation Agency, and others. It is accepted practice that humans make mistakes.

Granted, teachers are not launching a rocket, running a nuclear power plant, or flying a plane. But they are tasked with a clerical function that is a vital part of school funding and operations.

It is no surprise that human error is the largest contributing source of inaccurate information in determining ADA.

Marking Present

 Most Texas school districts take official attendance between 9:00 a.m. and 10:00 a.m. Roll is called and all students in the classroom are marked present. But what happens if a student is scheduled to be late that day? What if they are in a work-study program, or at the Nurse’s Office? That student could be easily marked absent mistakenly, and the district loses funds for that day.

 Imagine an average Texas-sized school district of 28,000 students, with 1,600 teachers in 34 schools. It’s possible to assume that when those teachers count that many students by hand, there is a reasonable chance for mistakes to be made. Now multiply that by 180 teaching days, and the potential for inaccuracy can be exceedingly high.

Marking Absent

 Some districts roll the dice and start with all students present, and then mark as absent those who are not in the classroom. It seems like a minor change in procedure, but it’s not. Again, there could be many valid reasons that students are not in the classroom during the attendance window, but the problem here is that over time, tallies can be artificially inflated. If a district is audited, they might suffer fines, penalties, or worse.

Automated Attendance

When students aren’t counted as being in school, funding can really add up, so accuracy is vital, and using technology to automate attendance takes human error out of the equation. It provides accurate, critical, and timely reporting, thereby improving overall ADA, and increasing state funding. If that same 28,000-student school district adjusted their ADA by only one percent, it could mean almost a million dollars in additional funding for that year. In other words, human error can cost a school district a lot of money.

Get Out Your Calculator

 On March 18, 2015, *The Dallas Morning News* reported that, “Texas schools are spending an average $9,559 per student in the current school year.” The National Education Association of Texas says these funds are received from a number of sources, including local property taxes, and the State and Federal government. The State of Texas provides 40% of that expenditure.

$9,559 \* 40% = $3,824 per student received from the State of Texas

 Let’s do the math for that 28,000-student school district. First, we’ll assume that there is a range of students that are absent every day, say 5% on a regular day, and up to 18% during flu season. On average, that means approximately 11.5% students are out of school.

28,000 \* 11.5 percent = 3,220 students 28,000 – 3,220 = 24,780

Now for those 24,780 students that are in school (again, on average), let’s say that teachers consistently mark one percent of students absent by mistake.

24,780 \* 1 percent = 247.8 247.8 \* $3824 per average student = $947,587 lost

 Doing the math shows that if a school district increases ADA accuracy by only one percent, it means almost one million dollars in extra revenue for that year that could be spent on computers, software, art supplies, musical instruments, day trips, salaries, new classrooms, overhead, or any other expense that any district or school might have. A small increase in ADA accuracy means a huge increase in funds.

Smart ID Cards

Even the 298-page *Student Attendance Accounting Handbook* refers to Automated Attendance Systems, but as written, the onus is still on teachers to enter data into a computer and keep track of his or her students. A Smart-Card ID system takes care of all that more simply, putting responsibility on the student, and freeing up the teacher so they can focus on what they are hired to do: teach.

Smart ID Cards let students tap their Cards onto a reader and they are automatically logged in, quickly and easily. Readers can be installed at the school entrance, in the classroom, in the Cafeteria, in the Gym, or in the Nurse’s Office, so it makes tracking attendance extremely efficient. And they’re fast, too; in fact, some configurations can process a thousand students in just minutes.

These Smart ID Cards are coded with a unique number that is assigned to one individual; it’s the back-end computer that maintains all the information on that student, and keeps track of when they are in school. Teachers don’t have to worry about making sure who is approved to be off site for a school function; who is tardy and who isn’t; no one has to fax anything; and the whole process conforms to Texas Attendance mandates.

Here are just a few of the benefits of a Smart ID Card System:

* Attendance is captured at multiple locations such as the school entrance and each classroom as well as irregular places such as the Nurse’s Office, Library, Cafeteria, etc. Every student is counted when they are in the building. Unplanned late arrivals are captured immediately upon entrance to the school and can be updated in real time.
* Student schedules are automatically incorporated so if they have a planned late arrival or have an arranged non-school day activity, they are subtracted from the overall base of attendance. This increases the numerator in the ADA equation, which leads to better ADA.
* Regular reporting tools allow administrators to target habitually late or absent students quickly, intervene and improve their attendance.
* Attendance is accurate and obtained in real time; administrators know where every student is during the school day, which is vital for school security.
* Data analysis tools help districts plan more effectively.
* Teachers don’t take attendance: they have more time to teach and spend less time on administrative duties. And substitute teachers will always have an accurate count.

Adding and Subtracting Equals Financial Success

By adding an automated, Smart ID Card System, school districts can subtract time spent on administrative and clerical tasks; get better, more accurate data; and receive more funds slated for education. And when extra benefits like better security and visitor management are added in, then success is multiplied!

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Dr. Atiya is ScholarChip’s founder and principal partner, responsible for managing system and application development with an eye towards emerging technologies. He founded the company in 2000 to provide school districts with fast and powerful computing in order to centralize security and operations into a single low maintenance system. He was twice been elected to a New York Public School Board.