

# How schools use Biometric machines

## TECHNOLOGY

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BY SHABIBAH NAKIRIGYA

**A**t a time when schools are grappling with indiscipline, absenteeism and communication gaps with parents, institutions are turning to technology to restore order and accountability.

In a growing trend, schools have embraced a biometric attendance management system to monitor students' movements and strengthen engagement with parents.

Ms Sania Nagaddya, the director of Studies at St Janan School Kabalagala, explains that managing both day and boarding students had become increasingly challenging, particularly at the school gate, where attendance records were sometimes disputed.

"We have both day scholars and boarders. At times, it becomes difficult to clearly account for every student's movement, especially when parents question whether a child reported to school or not," she said.

According to Ms Nagaddya, irregularities are inevitable in any school setting, but technology can help reduce them. The biometric system, which captures students' thumbprints upon entry and exit, was introduced as a practical solution to bridge accountability gaps.

### How the system operates

Ms Nagaddya adds that under the system, every student is registered at admission. The process includes capturing the learner's biometric details and recording the parent or guardian's official contact information. Once a student checks in or out of the school premises, an automated notification is sent directly to the registered parent.

"We ensure that from the very first day of admission, the student is registered into the machine. At the same time, we carefully capture the parent's contact. This is very important because some students, especially older ones, may give their own phone contacts instead of their parents," she notes.

She emphasises that verifying the correct guardian's contact remains one of the biggest challenges. In some cases, different individuals are involved in a child's upbringing one parent may handle admission, another may pay fees, while yet another stays with the child at home.

"You may find that one parent brings the child for admission, another is responsible for fees, and a different guardian stays with the child. So deciding which contact should receive the alerts can be complicated," he explains.

Ms Nagaddya says that the digital records have helped resolve numerous disputes between students and parents over attendance.

"There is no room for guesswork anymore. The system produces a statement showing the exact date and time the student entered or exited the school. It protects both the school and the parents," she said.

Ms Nagaddya describes the initiative as part of a broader effort to strengthen discipline and student welfare. Previously, following up on an absentee student required manual phone calls and physical verification, a process that was time-consuming and sometimes inconclusive.

"Now, when a student does not check in, we immediately know. We follow up early enough before the issue escalates. It helps us understand how the learner is doing and whether there is a problem at home," she says.

The biometric system operates through a contracted service provider. The school pays a subscription fee, usually calculated per student per term or per month, depending on the agreement.

"You look for companies that provide such services. They come and register the school, install the equipment, and guide you on the charges. Whether the student reports or not, the school pays according to the agreed terms," she explained.

While the cost may appear significant, Ms Nagaddya believes the benefits outweigh the financial investment. Beyond attendance tracking, the system contrib-

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A biometric access control machine is used at the Chilean congress in Valparaiso, Chile on May 30, 2018. A similar technology has been embraced in schools to monitor absenteeism and communication gaps. PHOTO/ REUTERS

utes to revenue protection by curbing cases of students sneaking out or falsely reporting presence.

### Since installation

Four years into its use, Ms Nagaddya says the impact is visible. Cases of unexplained absenteeism have reduced, communication with parents has improved, and students are more aware that their movements are being tracked.

"When learners know they cannot manipulate the system, they become more disciplined. It helps them take responsibility," she said.

She adds that technology alone cannot solve all school management challenges, but it can provide reliable data that informs decision-making.

"As educators, our responsibility goes beyond academics. We must ensure the safety and welfare of our learners. If a system helps us know where a child is at a particular time, then it becomes a tool for protection," she said.

Ms Dorothy Kiggundu, the Deputy Headteacher of Public Relations at Mengo Secondary School, says that the school has embraced technology to strengthen student safety, accountability and communication with parents through a biometric attendance management system.

"Every learner is required to clock in upon arrival at school. Some students report as early as 6am, and immediately they enter the school premises, they

register their presence using the biometric machine.

"Once they clock in, an automatic notification is instantly sent to the parent or guardian. This allows parents to track their child's movement in real time, when they enter school and when they leave at the end of the day" she says

She adds that this system has greatly improved transparency and peace of mind for parents. In the past, we relied on manual class registers to monitor attendance. While effective at the time, the process was disposed to delays and occasional inaccuracies.

"Through this data, we are able to identify students who have missed lessons, how many times they were absent, and whether there is a pattern that requires intervention. This information is reflected in the end-of-term reports for accountability purposes," he says

### Operating Day section

Ms Kiggundu says that where there are consistent absenteeism parents are invited to engage with the school administration to explain the circumstances and work with them to support the learner.

"As a day school, Mengo SS does not operate its own boarding section. However, a number of our students reside in privately owned hostels located near the school. To ensure continuity in monitoring and safeguarding our learners, we have signed memoranda of understanding with these hostels," she says.

She adds that under these agreements, the hostels have been encouraged to install biometric machines to register students as they enter and leave the premises. This means that a student's movement can be tracked from the hostel to school and back.

"The biometric system is not intended to police students, but rather to create a culture of responsibility and punctuality. Learners understand that time management is essential to their academic success. At the same time, parents are empowered with timely information that enables them to take prompt action where necessary" adds.

Charles Abugo Head Prefect from Janan School says that the technology has improved discipline, security and communication with parents.

"Under the new system, learners clock in and out using fingerprint scanners installed at school gates. The machines automatically record attendance and send instant notifications to parents, confirming when their children arrive at or leave school" he said.

He adds that the system has reduced cases of impersonation and absenteeism.

"Before, some learners would sign for their friends in the register but now, everyone is accountable because fingerprints cannot be duplicated," he said. "The biometric attendance systems save time during morning roll call, allowing teachers to focus more on lessons."

He also noted that the machines promote punctuality since late arrival is immediately recorded. For many, the technology represents a modern step forward in education, helping schools embrace innovation while strengthening trust between parents and learners.

Several schools have installed these machines for the purpose of managing irregularities. Those that have installed these systems now include Ntare School and Nabisunsa Girls' Schools. And from the performance in these schools, it appears that the students and parents appear to have welcomed the innovation.



### Contacts.

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### Register.

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