

# RAPSA JOURNAL



## LEVERAGING DATA EQUITY TO EMPOWER AT-PROMISE STUDENTS

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### SUMMARY

In this article, we examine the significant role that data equity and artificial intelligence (AI) can play in supporting at-promise students—those who face challenges such as socioeconomic disadvantages, learning disabilities, or behavioral issues. We argue that data equity, which ensures the fair and comprehensive collection of information across all student demographics, is essential for identifying and addressing the unique needs of these students. By expanding data collection beyond traditional metrics like standardized testing to include socio-emotional learning (SEL) surveys and behavioral patterns, educators can better understand their students.

We highlight the importance of early intervention, facilitated by real-time dashboards that track various performance indicators such as attendance, behavior, and coursework. These tools allow educators to act swiftly to prevent students from falling behind. Additionally, AI enhances these efforts by analyzing vast amounts of data, offering personalized learning experiences and predictive insights to identify at-risk students.

However, we recognize that integrating AI into education presents challenges. If biases exist in the data used to train AI systems, there is a risk of perpetuating existing inequalities. Therefore, it is crucial that schools and technology providers ensure transparency and fairness in the development and use of AI.

We believe that combining data equity and AI offers a powerful approach to creating more inclusive and effective learning environments. By addressing academic performance and social, emotional, and behavioral factors, educators can better support at-promise students, close achievement gaps, and help all students reach their full potential.

### KEYWORDS

- Data equity
- Eduvero
- At-promise students
- AI (artificial intelligence)
- Student performance
- Personalized learning

## CATALYSTS FOR CHANGE IN EDUCATION:

### Empowering At-Promise Students Through Data Equity

By prioritizing data equity, we can ensure that all student demographics are represented, allowing educators to identify and address the unique challenges faced by at-promise students. This holistic approach transforms traditional metrics into a comprehensive understanding of each student's needs!

### Harnessing Real-Time Interventions with AI

Imagine educators equipped with real-time dashboards that monitor attendance, behavior, and coursework! This technology empowers swift action to support students before they fall behind, making early intervention not just possible, but excitingly proactive!

### Creating Inclusive Learning Environments

The combination of data equity and AI isn't just a strategy—it's a game-changer! By addressing both academic and social-emotional factors, we can bridge achievement gaps and unlock the full potential of every student, fostering truly inclusive and dynamic learning experiences!



## LEVERAGING DATA EQUITY TO EMPOWER AT-PROMISE STUDENTS

The educational landscape has long grappled with the challenge of ensuring that all students, regardless of their background, have access to the support and resources they need to succeed. This challenge is particularly pronounced for at-promise students—those who face obstacles such as socioeconomic disadvantages, learning disabilities, or behavioral issues that put them at risk of falling behind.

As schools and educators work to close achievement gaps, the concept of data equity is emerging as a key factor in driving change. Data equity ensures that every student's needs are identified and addressed, providing a pathway to more personalized and effective learning interventions.



## THE POWER OF DATA EQUITY

At the heart of improving educational outcomes is the ability to collect, interpret, and act on data to benefit all students. Traditionally, education systems have relied on standardized testing scores and attendance records to measure student performance. However, this narrow view often overlooks critical factors that can influence a student's ability to succeed.

By broadening the scope of data collection to include non-traditional sources—such as behavioral patterns, socio-emotional learning (SEL) surveys, and credit accrual rates—schools can better understand the diverse needs of at-promise students.

Data equity, in this context, refers to the fair and comprehensive collection and use of data across all student demographics. It enables educators to disaggregate information by race, socioeconomic status, language proficiency, and other key factors to identify specific disparities and target interventions accordingly.

For example, an at-promise student might have low attendance, but further investigation into behavioral reports or SEL surveys could reveal deeper issues related to mental health or family instability. Without equitable access to this data, these students are often overlooked, and their unique needs remain unmet.

## EARLY INTERVENTION: A CRUCIAL TOOL FOR SUCCESS

strategy that involves identifying academic or behavioral issues before they escalate into larger problems. This requires real-time access to data and the ability to track a student's progress across multiple domains.

Early intervention dashboards are designed to offer educators a comprehensive view of student performance beyond test scores. By integrating attendance, behavior, coursework, and other metrics, these dashboards give teachers and administrators the tools they need to act quickly and prevent students from slipping through the cracks.

The beauty of these dashboards lies in their customization and ease of use. Schools can tailor their data collection to focus on the areas most relevant to their student population. For at-promise students, this often means capturing data points related to engagement, such as participation in class activities or responses to SEL surveys. With this level of insight, educators can intervene at the right time—whether it's offering tutoring, adjusting classroom strategies, or connecting students with social services.



## THE ROLE OF AI IN PERSONALIZED LEARNING

While early intervention tools provide a foundation for data equity, artificial intelligence (AI) takes this concept further by offering personalized learning experiences tailored to each student's unique needs. AI can analyze vast amounts of data from multiple sources in real-time, allowing educators to make informed decisions without the need for extensive manual analysis. This is particularly valuable for at-promise students, who often require individualized support to thrive academically.

For example, AI can help predict which students are at risk of falling behind by identifying patterns in their academic performance, behavior, and engagement levels. These predictive insights enable educators to intervene proactively, offering targeted interventions before issues become more significant.

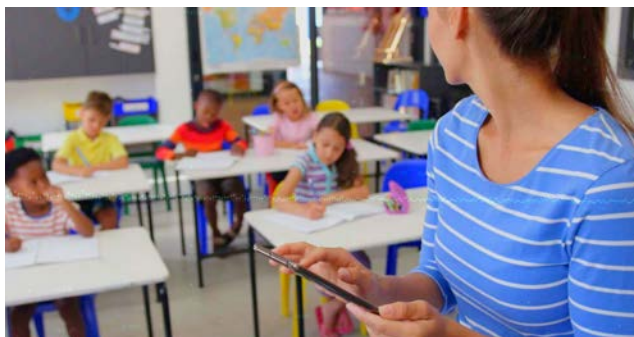
AI also provides real-time feedback, helping teachers adjust their instructional strategies based on immediate data, such as student comprehension or participation during class. This dynamic approach ensures that each student receives the support they need, regardless of their learning style or personal challenges.

## ADDRESSING THE CHALLENGES OF AI AND EQUITY

acknowledge the potential challenges related to equity. AI systems are only as effective as the data they are trained on, and if biases exist within the data, these biases can be perpetuated in the AI's recommendations. For at-promise students, who may already face systemic inequalities, there is a risk that AI could inappropriately exacerbate these disparities if not implemented carefully.



To mitigate this risk, it is crucial for schools and technology providers to ensure that AI algorithms are transparent and regularly audited for fairness. This includes diversifying the data used to train AI systems and involving educators in the development process to ensure that the tools are aligned with the needs of at-promise students. By taking these steps, educators can harness the power of AI while safeguarding against potential biases that could undermine equity efforts.



## INTEGRATING DATA EQUITY AND AI AS A HOLISTIC APPROACH

promise students. When used together, these technologies enable schools to take a holistic approach to education that addresses academic performance and considers the social, emotional, and behavioral factors that impact a student's success. Case studies from schools implementing these technologies demonstrate the potential for AI and data equity to transform educational outcomes.

For instance, schools using [Eduvero's AI-driven platform](#) can easily aggregate data from multiple sources, visualize it in real-time, and receive personalized recommendations for improving student outcomes. By focusing on the whole student, these tools allow educators to identify learning gaps, implement targeted interventions, and monitor progress over time—all while ensuring that every student has equitable access to the support they need.

## REAL-WORLD SCENARIOS: FROM DATA TO ACTION

The [combination of AI and data equity](#) has proven invaluable in education settings where students face unique challenges. For instance, in schools where credit accrual rates are critical for graduation, the Eduvero platform allows administrators to track not just academic scores but also the progress of individual credit recovery programs.

By monitoring a student's credit accumulation in real-time, educators can intervene early when a student is falling behind, allowing for personalized plans that increase the likelihood of timely graduation.

In another example, attendance patterns are a key factor in student success. Using AI-driven data visualization, administrators can identify micro-patterns in absenteeism. Let's say students in a particular demographic or neighborhood show consistent absenteeism on specific days of the week. With this insight, the school might launch a targeted attendance intervention, perhaps by collaborating with community organizations to address transportation or home-life challenges affecting attendance. This level of detail ensures that interventions are culturally relevant and address the root cause of absenteeism.

Behavioral incidents are another important metric often overlooked in traditional educational systems. An AI-driven dashboard can flag early warning signs in a school where behavioral issues might have previously gone unnoticed until they escalated. For example, if a student's behavioral reports show a sudden spike in incidents during math class, cross-referencing this with their academic performance might reveal that frustration with the material is manifesting as disruptive behavior. With this knowledge, educators can implement tailored support, such as small group tutoring or mentoring programs, to address the root of the problem.



At the school district level, Eduvero's platform has provided district leaders with a holistic view of school-wide performance, including teacher professional development needs. If a district observes a trend in declining student performance in a particular subject, Eduvero can help uncover academic deficiencies and gaps in instructional strategies. Based on the data gathered from student performance, the system might recommend targeted professional development workshops for teachers, leading to more effective and focused interventions that directly impact classroom success.

Special education is another area where granular data can make a significant difference. Eduvero can pull data from IEP goals, behavioral reports, and assessments, highlighting discrepancies in goal achievement. If, for instance, a special education student isn't meeting certain speech therapy goals, the system will cross-analyze these with attendance or session frequency, enabling coordinators to see where gaps exist—whether it's due to missed sessions, lack of resources, or ineffective strategies.

In schools with large English as a Second Language (ESL) populations, Eduvero can assist educators in disaggregating language proficiency scores, academic performance, and attendance data. Teachers can use this detailed view to pinpoint students struggling with language acquisition, and subsequently adjust instruction by incorporating bilingual resources or individualized tutoring, ensuring ESL students get the support they need.

Rural schools, often isolated and lacking resources, face distinct challenges in supporting student success. With Eduvero's data equity platform, these schools can bridge gaps by identifying trends in student performance, absenteeism, and engagement, which may otherwise go unnoticed due to limited staff and infrastructure. Eduvero's comprehensive analytics allow educators in rural areas to proactively address issues, such as transportation barriers or resource limitations, by providing actionable insights tailored to their specific context. This helps create equitable learning opportunities for students, ensuring that no matter their location, they receive the support they need to succeed.



## GOING BEYOND TEST SCORES

Importantly, AI and data equity help educators move beyond traditional metrics like test scores and focus on the holistic development of students. For example, SEL surveys integrated into the platform provide a snapshot of students' emotional well-being. This data allows schools to identify students experiencing social or emotional challenges and offer appropriate counseling or mentorship programs. Schools can assess whether students' emotional struggles correlate with academic performance and use that data to take a more nuanced approach to student success.

As schools continue to navigate the complexities of supporting at-promise students, it is clear that data equity and AI must play a central role in their strategies. These tools provide the insights necessary to understand each student's unique challenges and offer personalized, timely interventions that can close achievement gaps. However, successful implementation requires collaboration between educators, policymakers, and technology providers to ensure that these innovations are accessible, transparent, and designed with equity in mind.

By embracing data equity and AI, schools can create more inclusive and effective learning environments—ones where at-promise students have the opportunity to thrive and reach their full potential. As we move forward, it is essential for educators to continue exploring these technologies and to advocate for their adoption in a way that promotes fairness, transparency, and the success of all students.



### Jennifer Strawbridge, M.A

Jennifer has nearly 20 years of experience as a researcher, analyst, and accountability guide, working with organizations such as The University of Colorado at Denver, RMC Research Corporation, the Colorado League of Charter Schools, and a school network serving high-risk students. Recognizing the increasing need for analytical and data visualization support in schools, she founded Analytical Discoveries LLC in 2017 and has recently launched her latest endeavor—Eduvero. Her expertise has been instrumental in strategic planning, program evaluation, and developing targeted interventions, all with a focus on improving student outcomes across various sectors.



### Tony Simmons

Tony Simmons has dedicated his career to developing innovative solutions for underserved students nationwide. With extensive experience in K-12 curriculum design, statewide educational initiatives, and improving student outcomes, he is well-positioned to lead Eduvero's education strategy. Tony has also served as a board member for Edvisions, Inc. and the Reaching At-Promise Students Association (RAPSA), and he is a member of the Black Alliance for Educational Options.