

FINDING AND CHOOSING THE DATA ANALYST WHO'S RIGHT FOR YOUR SCHOOL DISTRICT



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These days, teachers, principals, superintendents, and central office staff all need quick and easy access to data to do their jobs. Most districts have realized that it isn't reasonable to expect educators and leaders to have the time and skills required to wrangle data into one place and do the analysis. Districts have created the role of "data analyst" to fulfill this need, with the hope that educators and leaders will be able to spend more of their time on action planning.

At Schoolzilla, we often get asked for advice on what type of data analyst role to create—and how to find the right person to fill it. So we've gathered together our collective experience hiring more than fifty data analysts in our own past roles, as well as our experience working with hundreds of data analysts in our partner districts.

Defining Success: Writing the Job Description and Selection Criteria

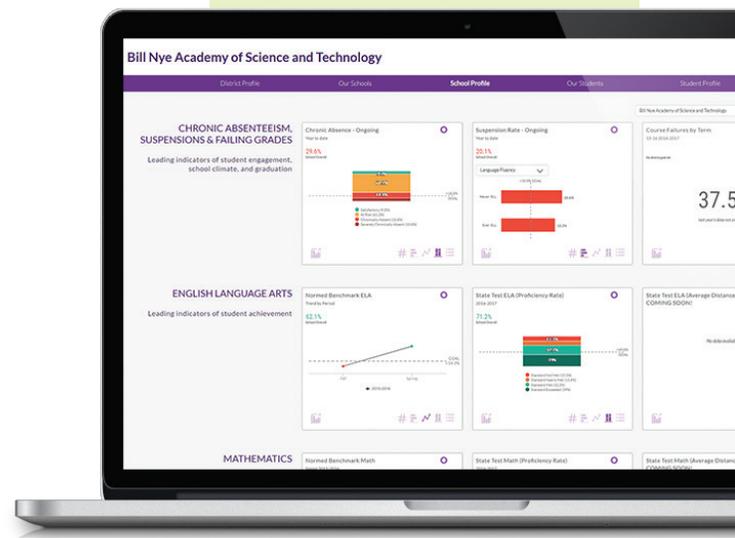
Start with the end in mind. Before you even sit down to write the job description, figure out the core competencies of the ideal data analyst, keeping in mind your district's size, technology team, data culture, and existing software tools.

- ▶ **Which stakeholder group** is your highest priority initially? Is it the board or cabinet? Principals? Teachers? Students?
- ▶ **What data tools are already used** in your district that the analyst will need to be willing and able to use?
- ▶ **What type of data needs are highest priority?** Are you looking for quick access to daily information? Fulfilling basic accountability requirements more efficiently? Supporting improvement initiatives? Making data visually appealing and user-friendly? Doing statistical analysis?
- ▶ **What type of communication skills** does your analyst need? Do they need to be able to write clearly? Create slides? How important is data visualization and design? What about hard-core statistical expertise?

We've put together a profile of three different types of successful data analysts that the Schoolzilla team has seen in different types of organizations, including those with a tool like ours in use.

What is Mosaic District Progress Monitoring?

Mosaic is a multiple measures dashboard that gives everyone in your district an intuitive, explorable display of all your key metrics and answers their questions in three clicks or fewer. With simple interfaces and automatic data refreshes, tools like Mosaic take the technical lift off your team's shoulders so it can focus on supporting data-driven conversations that better serve your students. As such, the skills your data team needs will differ widely, depending on whether you have a head start with a system like Mosaic.



	Without a Tool Like Mosaic District Progress Monitoring		With a Tool Like Mosaic District Progress Monitoring
	Small district: only one “data person” serving all stakeholders	Medium or large district: tech team and home-grown data integration and reporting	Any size district using this tool to integrate data from various platforms based on key goals
Key attitudes	I’m up for anything! I’ll make it work! I love learning! I just want to be helpful!	I can work effectively with both education leadership and the technology team!	I want to help people use data and best practices to make decisions that are good for kids. I care about making everyone’s job easier, and I know that’s happening when they are using the tool.
Getting the data	I’m great with Excel and can teach myself anything, including SQL. I care about accuracy, but know that perfect data shouldn’t be the enemy of good insight. I have figured out how to make data entry easier and prevent a lot of data quality errors.	I understand SQL and basic database design. I know or am eager to teach myself SQL Server Integration Services or use the district’s chosen data ingestion/manipulation tool. I have figured out how to work with system owners to improve data quality and spend most of my time getting the data into a format that is appropriate for analysis.	Because the tool already gets the data into one place, my time is spent making data entry more efficient for staff and more accurate for analysis. I have figured out how to vet potential new data sources and tools, and make sure they will provide us with the data we need.
Doing analysis/creating reports	I have a good sense of design, and I know how much detail is enough for educators and how much is too much. I may not have all the answers but I can do research to make up for any gaps in my knowledge. I probably love data and complexity more than the typical user, so I make a habit of asking end users how I can make my reports more useful.	I already know how to use the district’s analysis and visualization tools (Power BI, Tableau, etc.). I have a good sense of design. I think about how to do analysis and reporting in a way that can be followed, continued, and built upon by others.	Because the tool has analysis and reporting built in, I create protocols and lead trainings that empower staff to use the reports in the tool to do their jobs better. I do analysis to fill the gaps in the tool or to answer specific questions.
Sharing reports	I spend a lot of time creating and refreshing reports as well as manually updating complex permissions to make sure we are FERPA-compliant.	I am familiar with data security practices. I spend time figuring out practical and FERPA-compliant ways to manage complex permissions.	I leverage the tool’s built-in single sign-on, roles, and permissions that facilitate ensuring we are FERPA-compliant easily. I also spend time supporting conversations about data culture, data sharing, and data security for our staff.

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Building data practices and culture	No time for this! I partner with others who own this.	No time for this! I partner with others who own this.	I spend a lot of time with the superintendents, cabinet, principals, and coaches to better understand their data needs and make sure they know how to get those needs met so that data informs their actions.

Think about teamwork: Once you have a sense of the core competencies you’ll need from your data analyst(s), pause to consider how many employees it may take to do the job and the level of seniority appropriate for each.

- ▶ **Consider the team.** If your district has more than ten thousand students, you probably need more than one person to meet your data needs. Make sure you are hiring to complement the existing team’s strengths. If you choose a “do-it-yourself” data strategy, you will need a large, highly skilled team to maintain an intricate series of customized data systems (like the school system described in [this article](#)). If you are located in an area where it is difficult to hire, afford, and retain such a team, it probably makes more sense to find a third-party vendor like Schoolzilla.
- ▶ **What level?** The appropriate level of the data analyst will vary dramatically based on the set of competencies you decide on and the skills and influence of the broader team. For example, if you just need someone to create reports on an already-established data infrastructure, the analyst could be very junior (zero–two years of experience). If you need someone to create and maintain an entire data infrastructure, you may need someone as senior as a director (at least ten years of experience).

Fine-tune the job description language: Run your job description through a tool like [Textio](#) to identify where the language might be skewed toward or against specific groups of people. You’ll be amazed at what you learn and how much better the tool will make your job description.

Checking Alignment: Screening Candidates

As job applications roll in, vet candidates against the core competencies you’ve outlined.

- ▶ **Scan the résumé and cover letter.** Look for evidence of quantitative skills in candidates’ work experience and/or college majors. Look for evidence of interest and respect for educators in the cover letter. Given how important accuracy is in this role, their attention to detail should shine through.
- ▶ **Reduce opportunities for bias.** Research shows that hiring managers unknowingly judge candidates differently based on traits [as meaningless as their name](#). Consider tools like [GapJumpers](#) that will obscure markers of gender, race, or socioeconomic status such as first names, last names, and names of colleges.
- ▶ **Conduct a brief phone interview.** Screen promising candidates by phone to get beyond the résumé and find out how well they match up with the job’s core competencies. How does the candidate use data in everyday life? A former teacher might explain how they use data in the classroom or to track their household budget in a spreadsheet. Is the candidate eager to learn? Find out if they have taught themselves anything new outside of work lately.

Assessing Proficiency: Conducting Interviews and Assignments

- ▶ **Assemble and prep the right team.** Interviewers should include the person's future manager and teammates, as well as other stakeholders who will interact regularly with the data analyst. Give interviewers both a standard set of questions as well as a rubric they can use to minimize bias and compare candidates apples-to-apples. For example, [Grovo cofounder Jeff Fernandez](#) suggests asking, "What can data NOT do?" As he explains, "Rather than letting the candidate tout the omniscience of data, see if they can articulate its limitations."
- ▶ **Interview to assess skills and values, not culture.** Trying to determine a candidate's "fit" with the organization's culture can introduce bias, while asking about their values, work habits, and goals will help you envision the ways in which they will meet your needs—and whether the role offers what they need. Former Success Academy Charter Schools' data scientist Shaun Wheeler has [a strong framework for the skills a data scientist needs](#).
- ▶ **Use real examples, not hypotheticals.** Ask specific questions about their real past experiences ("Tell me about a time when..."). Asking in-depth questions about a few experiences will yield better information than a laundry list of questions with brief answers.
- ▶ **Most importantly, give them an assignment.** [Research shows that](#) interviews explain only 14 percent of an employee's performance; they are a more accurate indicator than number of years of work experience (3 percent) but far behind a work sample test (29 percent). Give candidates a data problem with a corresponding data set and ask them to talk you through their work so you can learn about how they approach the problem. Consider including imperfections in the dataset to see how they handle uncertainty. If part of their job will involve presenting data, have them present their findings to a real or pretend stakeholder, such as a manager, teacher, or parent. Airbnb, which has a team of seventy data scientists, [gives candidates a take-home test and then brings them back into the office to solve a business problem alongside existing employees](#), followed by a presentation of their findings.

But Where Are the Candidates?

The surest way to find a superstar data analyst is to build a strong and diverse pool of candidates. Look for people from many different backgrounds; diversity is an advantage in a research and data role, leading to new questions you might not have thought to ask.

In addition to posting to your usual job boards, consider the following potential sources of applicants:

- ▶ **Talk with former educators from your district** who tend to have interesting questions or submit support tickets—they might have what it takes to dig into your data.
- ▶ **Reach out to professional programs specializing in education data** such as [Education Pioneers](#) and Harvard University's [Strategic Data Project](#) fellows.
- ▶ **Post on the [job board](#) at [Data Champion Hub](#)**, Schoolzilla's open community forum for district data professionals.
- ▶ **Diversify your candidate pool.** Reach out to associations or leaders who are well connected in communities that would add diversity to your team, and make sure they know about your opening.
- ▶ **Share with others who already operate in your data ecosystem**, such as student information system administrators, assessment coordinators, and school site staff.
- ▶ **Share with any data-centric networking groups in your area**, even if outside of education—your role might allow them to marry their skills with making a difference.
- ▶ **Look where the data geeks hang out online**, including LinkedIn groups, [Quora](#), and [Cross Validated \(Stack Overflow\)](#).