

Leveraging AI to Streamline Teacher Evaluations and Empower Educators

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Abstract

This article describes the development of an AI-powered tool designed to streamline and enhance the teacher evaluation process for school leaders. The tool evolved from a basic email interface utilizing large language models to a comprehensive platform that provides personalized feedback, tracks teacher growth, and identifies areas for professional development. This innovative solution not only saves educators time but also improves the quality and consistency of teacher evaluations, ultimately leading to better teaching and learning outcomes for students.

Introduction

Teacher evaluations are a cornerstone of any effective education system. They provide valuable feedback to educators, inform professional development, and contribute to overall school improvement. However, the traditional process of conducting and analyzing teacher observations can be time-consuming and burdensome for school leaders. This often leads to inconsistencies in evaluations, delays in feedback, and a lack of actionable insights for teachers. Recognizing this challenge, I sought to leverage the power of artificial intelligence (AI) to streamline and enhance the teacher evaluation process.

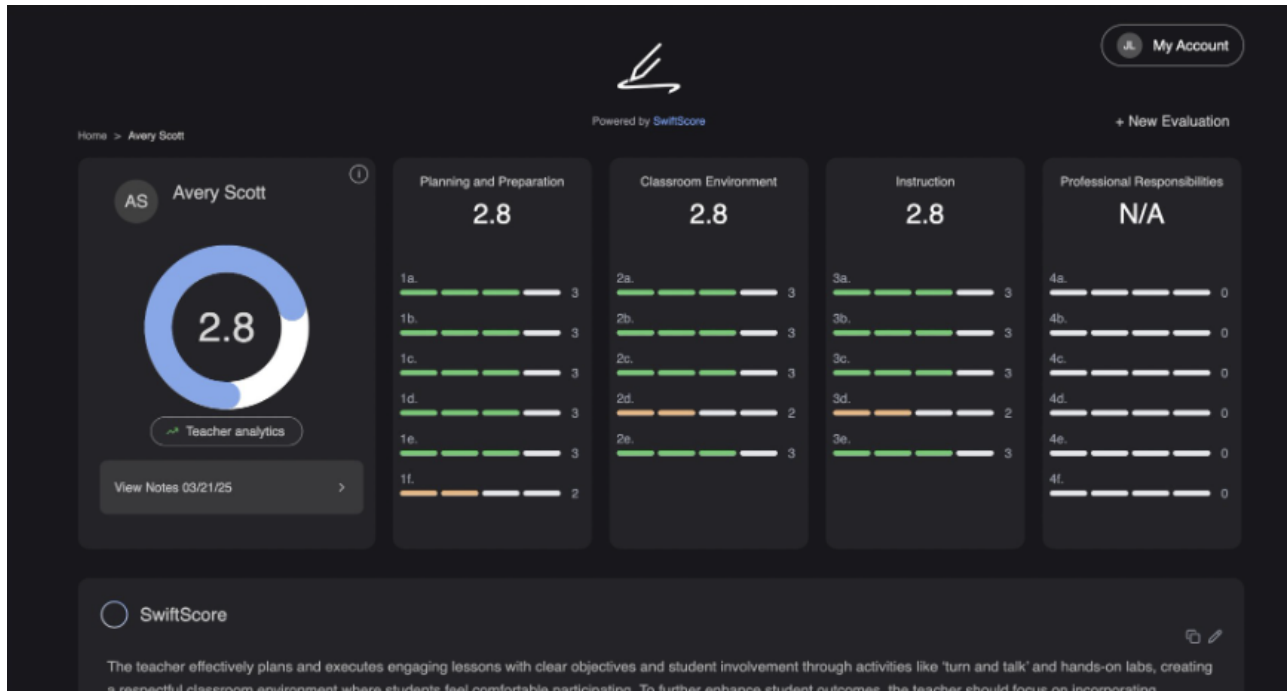
Solution/Idea

After playing with ChatGPT enough to know that AI can save educators significant amounts of time, I simply asked a principal what technical task took up most of her time. She instantly replied—the post-observation process. This work involved reviewing notes, applying the Danielson Framework, assigning ratings, finding supporting evidence, and writing detailed rationales for each rating. This manual process was not only time-consuming but also prone to inconsistencies across evaluators. To address this, I collaborated with an engineer to develop an email interface that utilizes a large language model (LLM) and a tailored prompt. School leaders could simply forward their observation notes to the email address, and the prompted LLM would automatically generate:

- **Danielson ratings.** Aligned with the specific criteria of the framework, such as planning and preparation, classroom environment, instruction, and professional responsibilities. Below in Figure 1.

- **Supporting evidence:** Extracted directly from the observation notes, providing concrete examples of teacher practices from the observed lesson.
- **Detailed rationales:** Explained the reasoning behind each rating in a clear and concise manner, enhanced the transparency and objectivity of the evaluation process, and made suggestions for how to improve teacher practice.

Figure 1. Danielson ratings

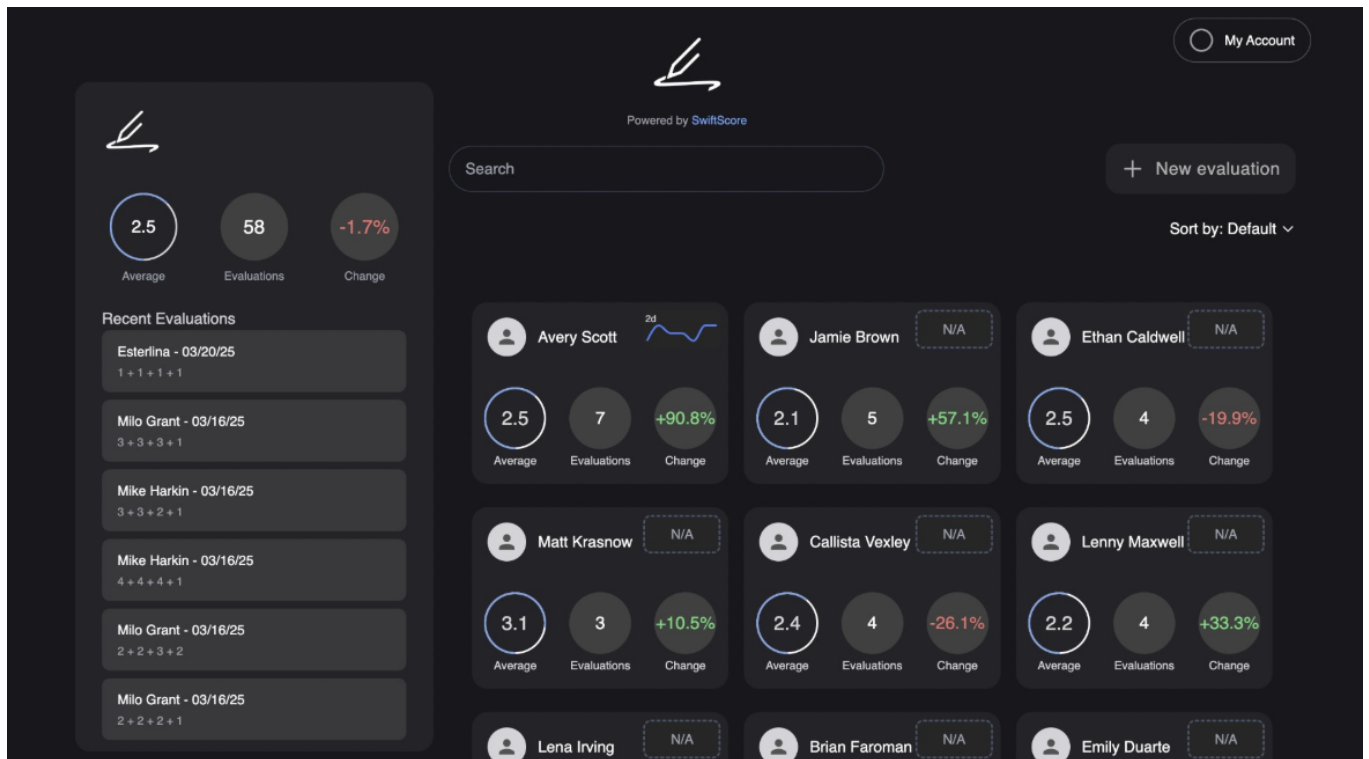


This initial prototype proved to be a valuable time-saver for school leaders, allowing them to spend more time on other critical tasks, such as providing personalized coaching and supporting teacher growth. Within two months, the email interface was being used twenty times a day on average, and in the end-of-year evaluation crunch, the usage rate soared and hit over fifty uses in one day. However, I quickly realized that the potential of AI extended far beyond simply automating the post-observation process and saving time.

Enter Will Krasnow. I was brought into a focus group that Will led to hear from actual educators about SwiftScore, his EdTech startup, and realized that Will was fully committed to centering educator needs as a fundamental step in his process. So, we quickly struck up a partnership and embarked on a mission to transform the email interface into a comprehensive and user-friendly platform called SwiftEval. The enhanced platform incorporates several key features:

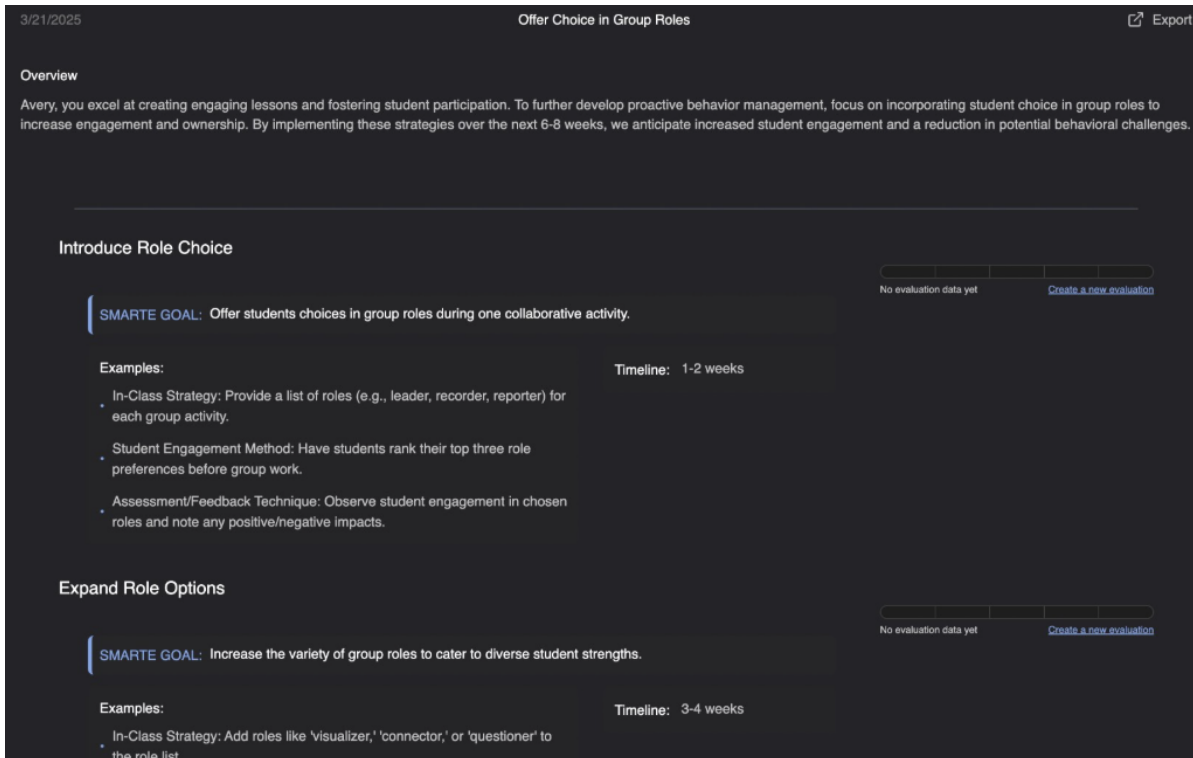
- Automated performance tracking** (Figure 2). SwiftEval continuously tracks teacher performance over time, identifying trends and areas for improvement. For example, the platform can analyze multiple observations to identify patterns in teaching practices, such as consistent strengths in classroom management or areas where further support is needed in differentiating instruction. It can also identify trends for teacher groups such as grade level teams that can then be strategically addressed in professional development sessions. This longitudinal and clustered data provides valuable insights into teacher growth and development.

Figure 2. Automated performance tracking



- Personalized coaching plans** (Figures 3 & 4). Based on the evaluation data and identified areas for improvement, the platform generates tailored coaching plans for each teacher. These plans may include specific recommendations for professional development activities, such as attending workshops, participating in peer observations, or engaging in independent study.

Figures 3 & 4. Personalized coaching plans



- **Collaborative feedback.** SwiftEval also facilitates collaboration between teachers, mentors, and administrators. Teachers can provide feedback on their own performance, and mentors can offer guidance and support. Administrators can also use the platform to share best practices and provide school-wide professional development opportunities.
- **Data-driven insights.** The platform provides aggregated data and insights on teacher performance across the school, allowing administrators to identify areas for school-wide professional development. For example, the platform might reveal that a significant number of teachers are struggling with a particular aspect of the curriculum or that professional development opportunities in a specific area are in high demand. These insights can inform school-wide initiatives to improve teaching and learning.

To double down on centering educators in the design process, we are now beginning a pilot with twenty principals and assistant principals throughout Philadelphia to test and iterate SwiftEval. Initial feedback has been incredibly positive, with the first six users saying they would use the tool for 100% of their evaluations and coaching plans.

Impact and Future Possibilities

The initial success of the email interface, with over 500 uses in a single month during peak evaluation season, demonstrates the potential of this technology to significantly impact the teacher evaluation process. SwiftEval, now being rolled out to schools across the region, has the potential to:

- **Improve the quality of teacher evaluations.** By providing more consistent and objective feedback, the platform ensures that evaluations are based on clear evidence and aligned with established standards. This leads to more accurate assessments of teacher performance and a more equitable evaluation process.
- **Enhance teacher growth and development.** By generating personalized coaching plans and identifying areas for improvement, SwiftEval empowers teachers to take ownership of their professional development. This can lead to significant improvements in teaching practices and student learning outcomes.
- **Increase teacher satisfaction.** By streamlining the evaluation process and providing more timely and actionable feedback, the platform can increase teacher satisfaction and morale. When teachers feel valued and supported, they are more likely to be engaged and motivated.
- **Support data-driven decision-making.** By giving administrators valuable insights into teacher performance and school-wide trends, SwiftEval enables data-driven decision-making. This can lead to more effective allocation of resources, targeted professional development initiatives, and overall school improvement.

- **Sustain school and instructional leaders.** By saving ample amounts of time in one of the most tedious educator processes, the platform gives educators time back in their lives that they can reallocate to the most essential and “human” aspects of their job or to a greater balance between work and life. With this time back, educators are more likely to stay in their roles longer and make greater impacts on their students.

Looking ahead, we envision a future where AI plays an even more significant role in supporting teacher growth and development. This may include:

- **AI-driven professional development.** Developing AI-powered tools that can personalize professional development experiences for educators, recommending relevant resources, and connecting teachers with mentors who have expertise in specific areas.
- **AI-assisted curriculum development.** Utilizing AI to help educators modify high-quality curricular materials based on student mastery so that teachers can be responsive to the day-to-day progress of their students without losing the rigor of the curriculum, which we know is vital for all students.
- **AI-assisted data analysis and personalized learning.** Leveraging AI to analyze large and disparate data sources can provide deeper insights into student learning and allow teachers to tailor learning experiences for individual students without doing massive amounts of work themselves.

Lessons Learned

This project has been a valuable learning experience. Some key lessons include:

- **The importance of collaboration.** The success of this project was due in large part to the collaborative efforts of educators, technologists, and students. By working together, we were able to develop a solution that met the needs of educators and addressed the challenges they faced.
- **The need for user-centered design.** Involving educators is crucial in the design and development process to ensure that technology meets their needs and addresses their concerns. By actively soliciting feedback from educators throughout the development process, we were able to refine the platform and ensure its usability and effectiveness.
- **The importance of ethical considerations.** As AI plays an increasingly important role in education, it is essential to address ethical concerns such as data privacy, algorithmic bias, and the appropriate use of AI in the classroom. It is crucial to ensure that AI is used to enhance, not replace, human interaction and that it is used in a way that is fair, equitable, and respectful of all learners.

Advice for Aspiring EdTech Entrepreneurs

For those aspiring to develop edtech solutions, I would offer the following advice.

- **Identify a real problem.** Focus on solving a specific and pressing challenge faced by educators or students.
- **Collaborate with educators.** Involve educators in every stage of the development process, from initial concept development to final implementation.
- **Prioritize user experience.** Ensure that the technology is user-friendly, accessible, and easy to use.
- **Address ethical considerations.** Be mindful of the ethical implications of your technology and take steps to mitigate potential risks.
- **Embrace continuous improvement.** Be prepared to iterate and refine your solution based on user feedback and emerging technologies. The educational landscape is constantly evolving, and it is crucial to adapt and innovate to meet the changing needs of educators and learners.

Conclusion

The journey from a simple idea to a basic email interface to a “professional grade” application shows what is possible for EdTech entrepreneurship when sticking to the principles of centering educators in the technology, developing the user experience based on their feedback, and continually testing the products with users to make sure you are always meeting their needs. That is the story of SwiftEval and the approach we will continue to take for this product and others in the future. While the potential power of AI is limitless, the pain points for educators are very defined for those who want to listen. In the end, SwiftEval is more than just an application; it's a commitment to supporting educators in the vital work they do every day.