

COVERAGE MASTER

BY: MIRIAM FEDAY, NEIV SINHA, & VIHAAN SINHA

03. DESIGN

- We created a prototype that addresses the pain points identified in the previous phase.
- **Real-Time Schedule Integration:** The app syncs with school district data to automatically display teacher schedules and substitute availability.
 - **Matching Algorithm:** The app uses a smart algorithm to match teachers with open class periods based on availability and subject expertise.
 - **User-Friendly Interface:** The design makes it easy for teachers and administrators to use even in high-stress situations.

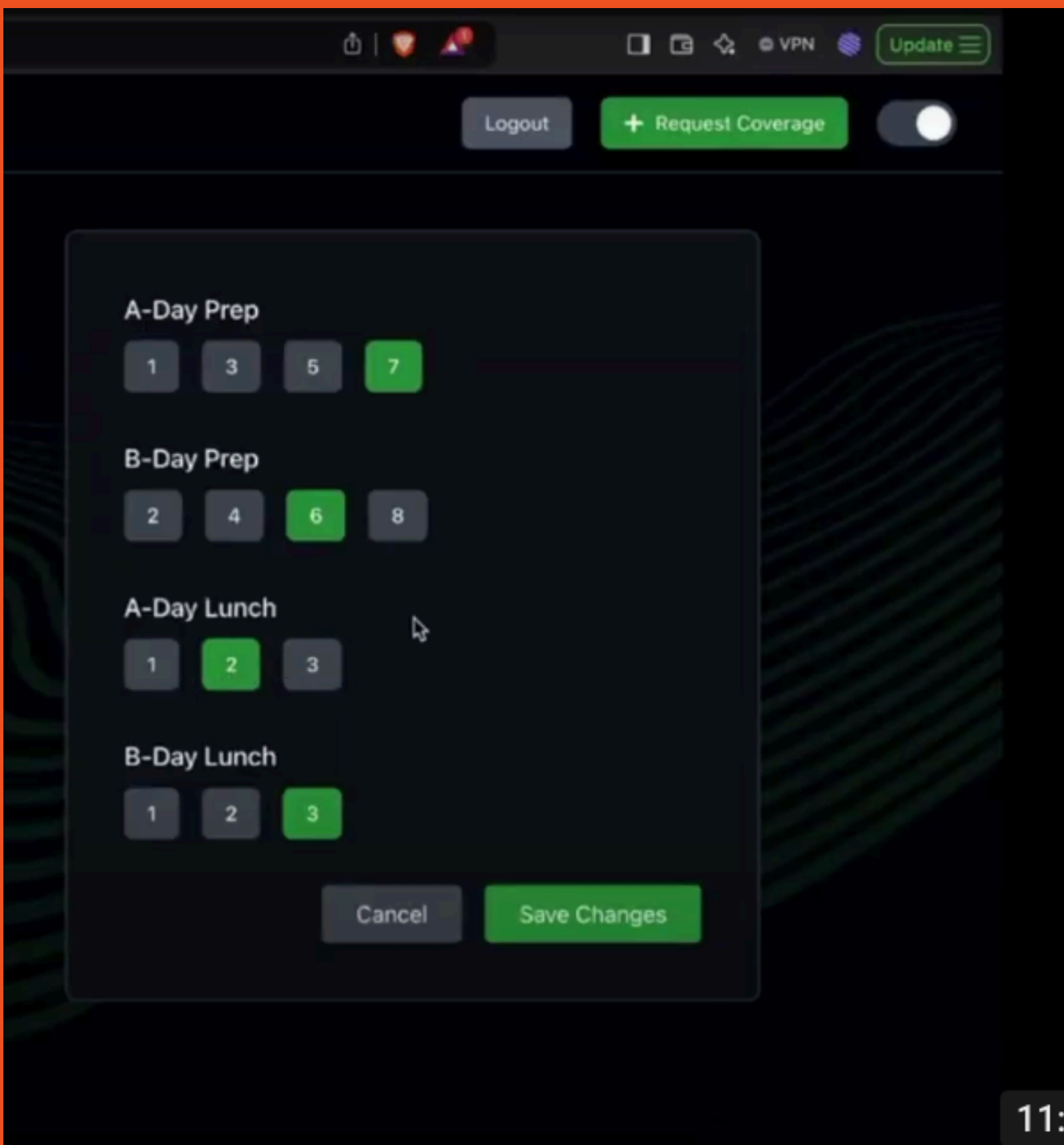
02. BRAINSTORMING

- Existing systems are largely manual, relying on staff to reach out to teachers and substitutes, which is inefficient and time-consuming.

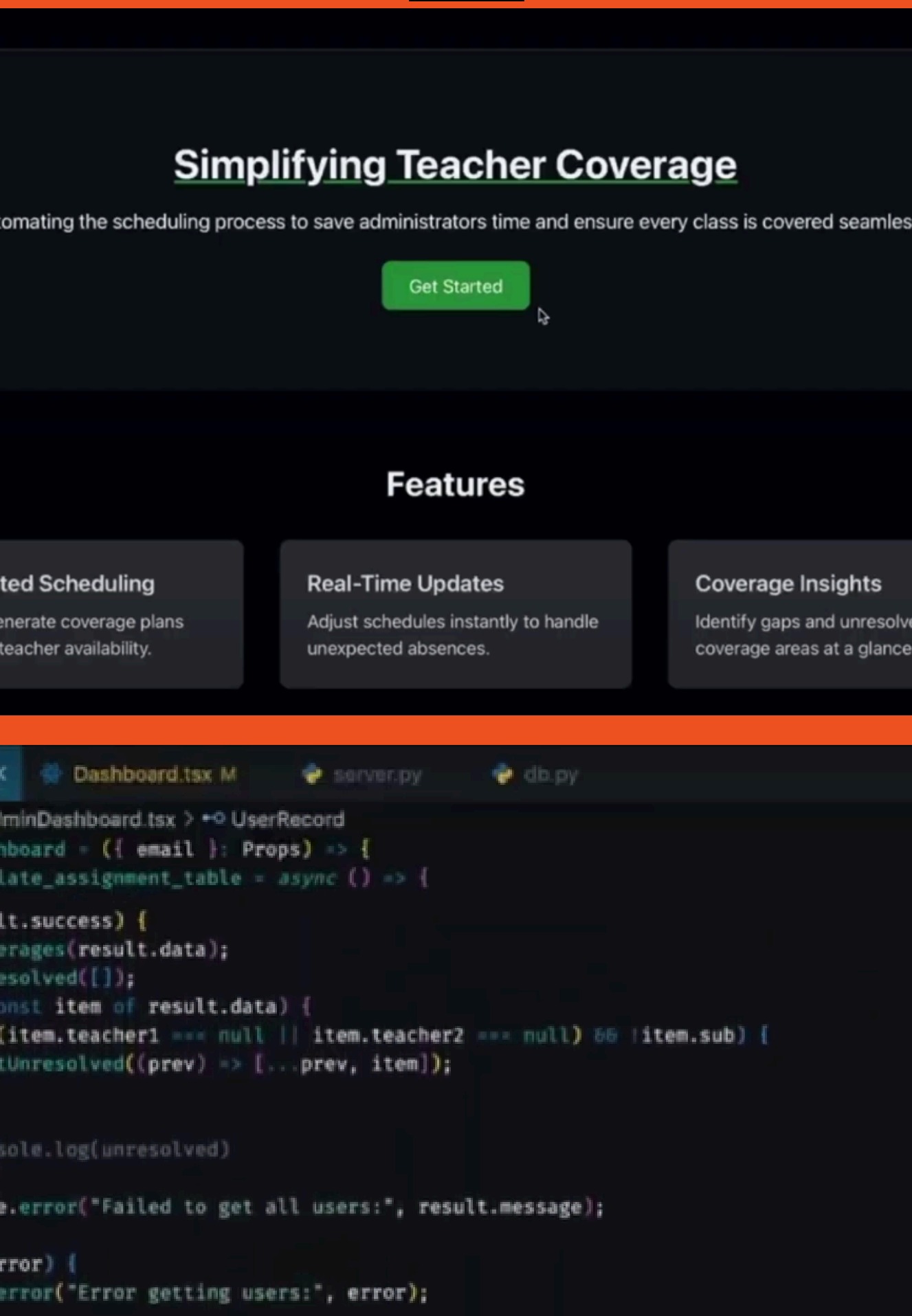
STAFFING CHALLENGES IN PA A PENN STATE STUDY EXACERBATING THE SHORTAGE OF TEACHERS: RISING TEACHER ATTRITION IN

04. DEVELOPMENT

[LINK TO DEMO VIDEO](#)



WESTERN PA. EDUCATION LEADERS SEEK SOLUTIONS TO STATEWIDE TEACHER SHORTAGE CRISIS



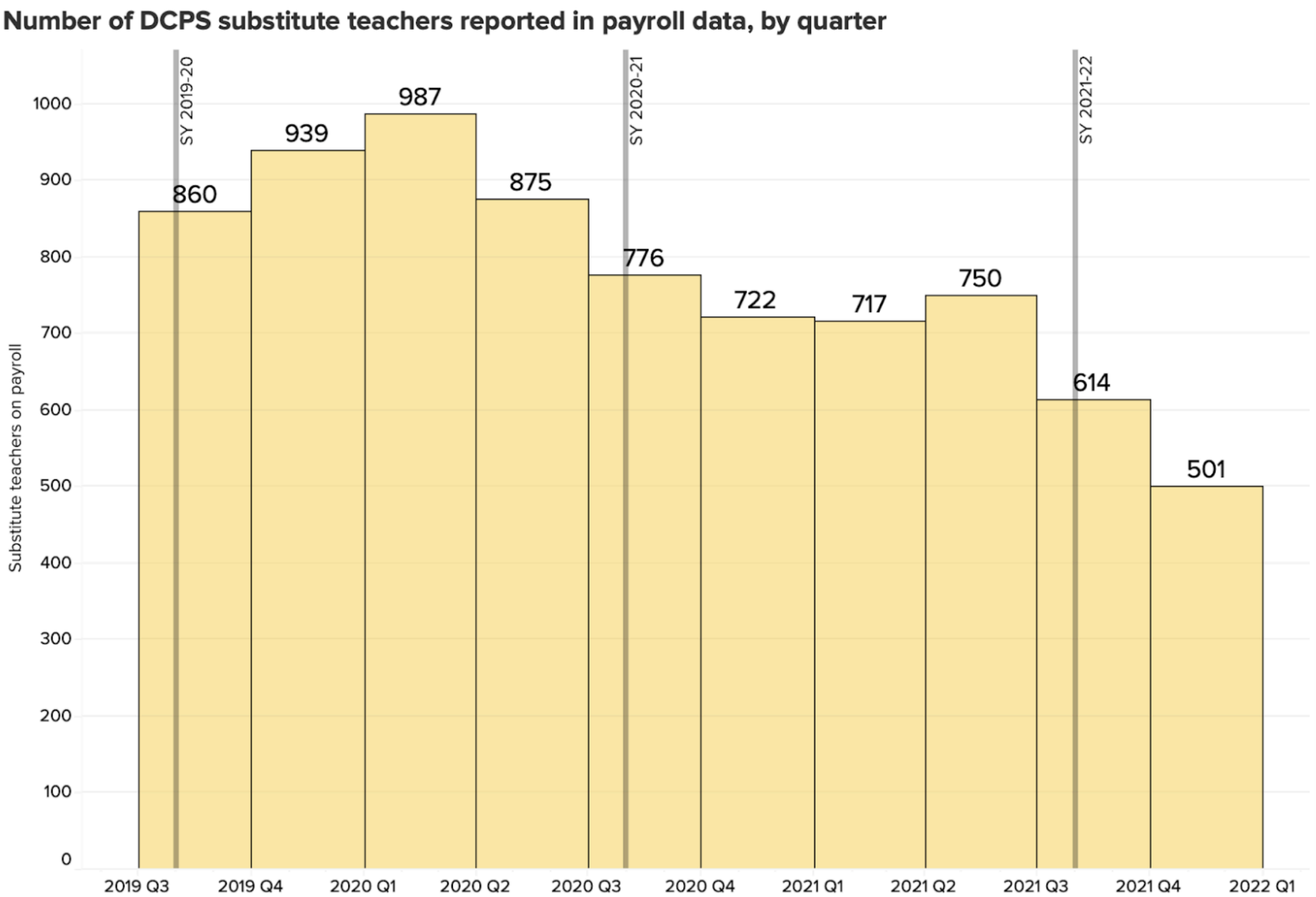
05. COLLABORATION AND MENTORSHIP

Vice Principals' Input:
Highlighted the inefficiencies in the current manual substitute scheduling system.
Shared insights into challenges, such as managing last-minute absences and ensuring fair workload distribution.
Recommended prioritizing a user-friendly interface to reduce training time for administrators.

01. THE PROBLEM

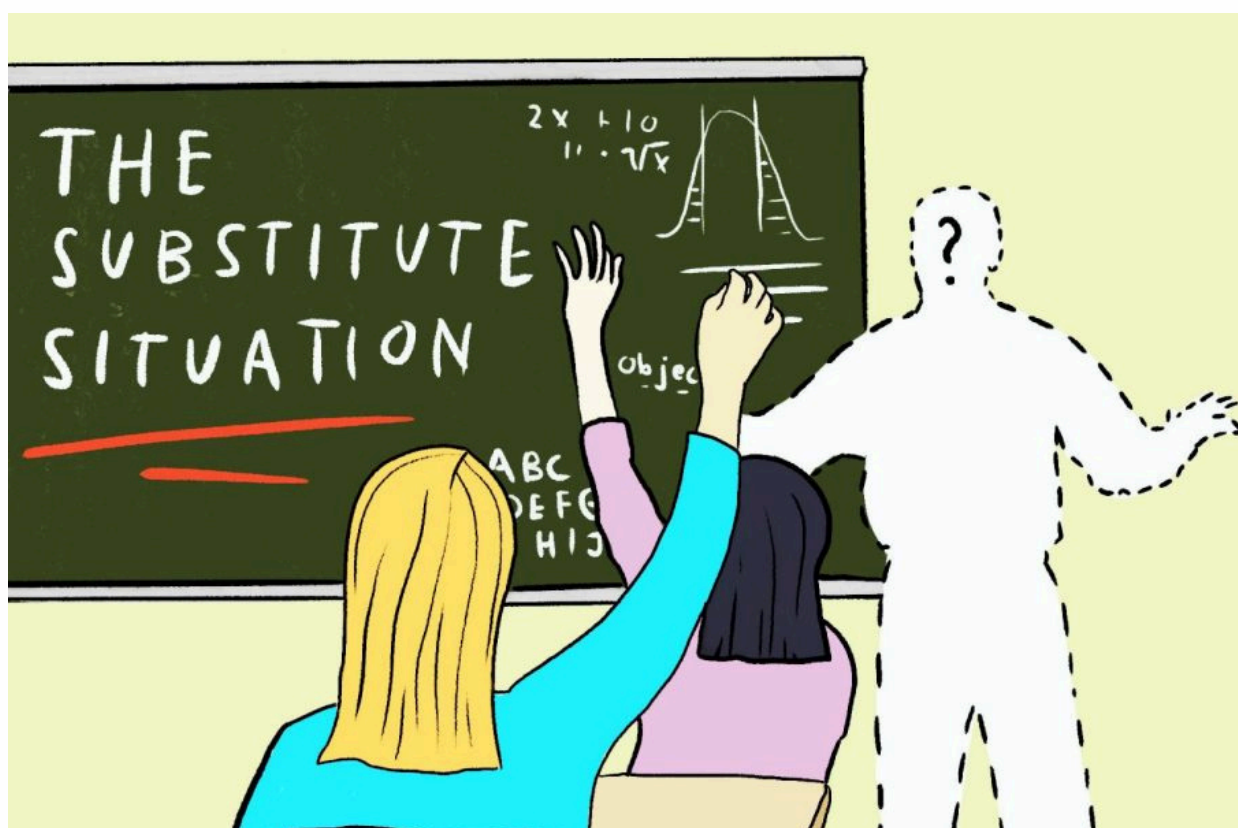
Teacher Shortage:
As of 2023, there were 2,000 teacher vacancies statewide

Overworked Teachers:
Teachers are regularly asked to cover additional classes during their planning periods. A survey of local educators revealed that over 50% report losing critical prep time due to substitute shortages

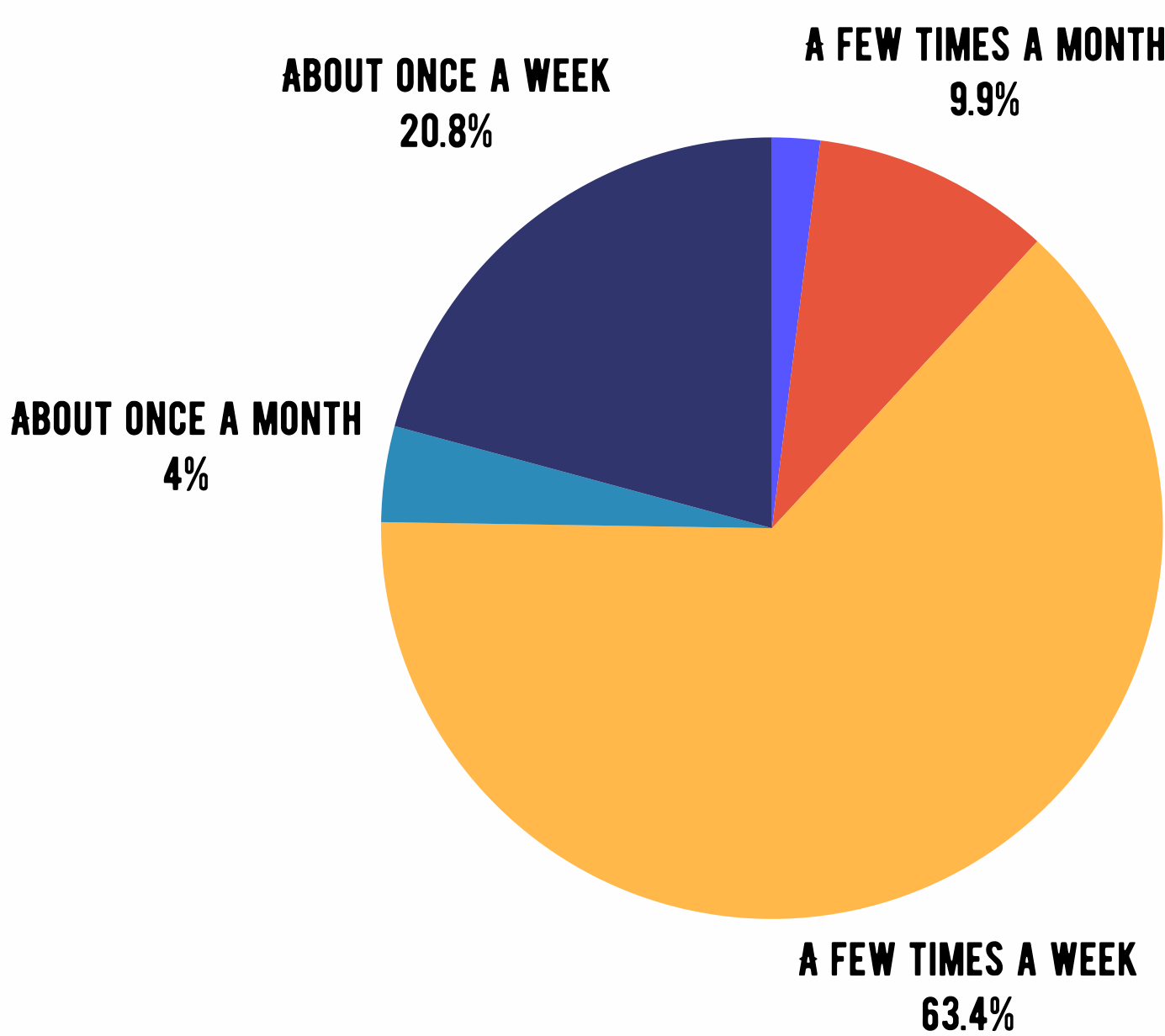


Source: D.C. Department of Human Services, Public Employee Salary Information, available at <https://dchr.dc.gov/public-employee-salary-information>
Note: Quarters refer to calendar year, and not the District's fiscal year which runs from October 1 to September 30. The DHR data reported at source is on the fiscal year basis.

D.C. POLICY CENTER



HOW OFTEN THERE'S A NEED FOR A SUBSTITUTE THAT CAN'T BE FILLED



06. FUTURE APPLICATIONS

The app is designed to handle the specific challenges faced by Pennsylvania schools but it can be adapted for use in other regions facing similar substitute coverage issues. As of 2023, over 200,000 Pennsylvania students were affected by teacher shortages, highlighting the broader need for scalable solutions. That's why we designed the app is to scale easily across school districts.

07. CONCLUSION

This app addresses the critical teacher shortage in Pennsylvania by streamlining substitute scheduling. With its real-time integration, smart matching algorithm, and user-friendly design, it will help schools reduce administrative overhead and ensure that teachers are supported in their roles. Our solution not only helps improve the day-to-day operations of schools but also aims to alleviate some of the stress faced by teachers and administrators during times of high vacancy.

BUDGET

ITEMS	AMOUNT
Web development	0
	\$0