

Case Study

# Paperless Tracking: Counselor in the Cloud



Intervention Management

**Mr. Elmer**

[www.mrelmer.com](http://www.mrelmer.com)

Improving school culture, student  
character, and safety.



## About this Study

In this study, we showcase a Response to Intervention (RTI) program in an upper middle class suburb of St. Louis, Missouri. While the school was currently running an established, effective RTI program, it was not without issue. Challenges included manual paper tracking of behavioral factors, manual data collation and analysis, and distribution of trends involving sending sensitive information over email or hand-delivered printouts.

A few of the major points we tackle in this study:

<b>Customized Factors</b>	Assessment factors are customized. Some behavior factors are shared across all students, others are specific to a single student or group.
<b>Continual Tracking</b>	Student behavior is assessed with simple micro-assessments at a frequent, ongoing schedule.
<b>Automatic Analysis</b>	All assessment values are stored, processed, and re-presented to the users of the system immediately, in real-time.
<b>Targets and Strategies</b>	Each student is optionally assigned a behavior target, facilitating counselor-student conversations. This gives feedback on progress with context and direction.

Mr. Elmer is an education software company with the goal of “Improving school culture, student character, and safety”. We are a team of educators, data scientists, and entrepreneurs delivering simplifications to the modern data driven school. Our web-based software complements a school’s existing student information systems and student behavior programs.

These case studies are our opportunity to showcase best practices and highlight successes in the many ways our software can be applied. We are excited to share this study with you, and grateful for your interest in improving efficacy of behavior management and student character, especially with PBIS, RTI, IEPs, and 504s.

Sincerely,  
Doug Mackay

Founder, Mr. Elmer

## Setting

In this study, our focus is on a Midwestern middle school. This school serves over 500 students with 50 staff.

This school had a successful, established RTI program with paper-driven data collection and manual analysis. "We're doing great, but want to improve even more," is the problem most schools certainly want to have. Together, we saw an opportunity for improvement to push an already effective program to an entirely new level.

Over the course of a school year, we were able to target the 8 students within Tier 3 for extended, continual behavior assessments. We were able to analyze and share the trends with teachers, counselors, and students alike. In collecting and sharing data, we were able to bring a new level of attention to the student's behavior management

## Challenges

Together with the school counseling staff, our goals were:

- simplify behavior data collection,
- make distribution of analysis faster,
- easier conversations with students.

**The common root cause of our challenges: paper.** The pre-existing process of data collection was manual, paper-based, and dependent on the student shuttling forms to teachers and counseling staff. Needless to say, this was time consuming and error prone. We saw gaps in data, delays in data delivery, and risk of complete loss of data sets.

Once paper data arrived, we had a second challenge in the analysis. **Their only way to do analysis was manual data entry, calculation, and trending.** As with data collection, data analysis with a manual component holds risks of manual error.

Finally, distribution of this analysis was through email or printout, leading to slow, unsure information distribution. These issues with distribution made communication of strategies, targets, and trends difficult.

## Approach

Starting with an existing RTI program means our first step was deciding which population to include in the system. Our initial group was the Tier 3 students only. An explainer of the RTI tiers is given below.

RTI Tier	% of Student Population	Description
Tier 1	80% - 90%	All students in Tier 1 receive high-quality, scientifically based instruction, differentiated to meet their needs, and are screened on a periodic basis to identify struggling learners who need additional support.
Tier 2	5% - 10%	In Tier 2, students not making adequate progress in the core curriculum are provided with increasingly intensive instruction matched to their needs on the basis of levels of performance and rates of progress.
Tier 3	1% - 5%	At this level, students receive individualized, intensive interventions that target the students' skill deficits for the remediation of existing problems and the prevention of more severe problems.

**Table 1:** Descriptions of the RTI tiers. Note tiers are cumulative, such that any student in Tier 2 is also in Tier 1 and Tier 3 students are in both Tier 2 and Tier 1. Source: RTI Action Network.

Given each student in Tier 3 is provided one-on-one support, we had to support a unique set of behavioral factors for each. **In this case, we configured 4 factors common across all students as the “school code” as**

Setting up automatic scheduling of assessment requests took the burden of data collection off of the counselor, and introduced a consistency of continual data collection. **This sort of scheduling drove the most important value of data collection – continual assessment through time.** With staggering, we added a failsafe for any missed assessments. We were now able to be sure measurements come in on a regular basis.

Lastly, measuring continually through time means spreading staff time commitments over a long period. This also means we could keep the assessments very simple. **In general, we were able to keep per-assessment time down to three minutes or less; at times measured in only seconds.**

### Using the Data

**We were able to use the data as a communication tool as well as guide for staff and students.** All teachers and counselors could see the incoming data in real time. Students were able to be shown their latest data at any time.

**well as 12 student specific factors.** Students were assigned these factors according to their unique needs. Some ended up being entirely for one student, others for a few. They are given in the table below.

When each sample was captured, the system automatically analyzed and made the new trend available. **Teachers and counselors with rights to the student could see the information immediately.** This availability allowed everyone to stay on the same page with new trends for the student.

Along with this analysis, counselors were able to set behavior targets within the system. These targets clearly showed an attainable goal for the students, and a common strategy amongst teachers. **We were able to get everyone working together and sharing behavior perspectives without sacrificing time for meetings and memos.**

### Results

Over the study period, 24 teachers supplied over 3,000 samples for 8 students. **This translates to roughly 3 full assessments per week per student, over the course of a full, two-semester school year.** Over the course of these semesters, we were able to establish:

- assessment scheduling
- directional trending
- shared student behavioral targets

Common Factors	Student Specific Factors	
Respectful	Classroom Behavior	On Time to Class
Responsible	Classroom Tasks	Physical Behavior
Safe	Classwork Completed	Prepared for Class
Show Self Control	Focused on Self-Control	Respect to Property
	Follows Instruction	Student Communication
	Homework Turned In	Used Calming Strategies

**Table 2:** Sample common and student or student group specific factors in this study. Students may have had a mix and match of any above factors.

Each time a teacher made an assessment, their data was added to the existing data set of their peers and analyzed. This data was immediately available. Reviewing the data took only a handful of minutes and requires no schedule coordination with peers.

## Over 300 additional hours of staff attention without actually taking 300 hours out of the teachers' days.

Based on measurements and logs, we saw activity on the order of a once-per-week review – even if just a glance at the trends - of each student from an involved teacher.

**Comparing this time to what would easily amount to a 15-minute discussion amongst peers, we see what would have been an investment of over 300 hours.** These figures were from a typical student having 4 involved staff and measurements once-per-week from each.

We were able to track and manage the behavior trends of 8 students across two semesters while improving reliability and reducing the time commitments of manual paper processes. In doing so, **we allowed for the equivalent of over 300 additional hours of staff attention to student behavior without actually taking 300 hours out of the teachers' days.**

### How This Can Work for You

Automated, electric behavior analysis is time efficient, reliable, and lets teachers and counselors get on the same page - continually. Assessments are short, simple, and take a couple minutes or less. Setting and sharing targets for student behavior drives consistent delivery in implementing strategies.

Each behavior factor, measurement style, student, and user is configured to a school's need. **Any population of students with any complexity of factors can be brought into the system.** This applies to factors from school specific "codes of conduct" to factors for a unique student need.

In this study, we focus on an RTI program and a handful of students. **This can be applied similarly to all Tier 3 and Tier 2 students in an RTI program, a group of IEP students, a school-wide PBIS program, or a whole district.** Analysis at the student level lets peers share results and strategies. Analysis at the school level shows whole school culture and opportunities for macro level improvement.

### Parent Involvement

While not part of this case study, we feel it is important to mention parent involvement. **After automated behavior tracking is established as a mature process within a school, parents may be invited to collaborate on their children.** We ensure the parent has restricted access to only their children.

Parents may be requested to provide behavior assessments right alongside teachers. This data is viewed exactly the same, with the same analytical implications. The system understands the trends of a parent, the calibration of a parent with the teachers, and any deviations therein.

Involving parents helps two fold. First, parents and teachers can coordinate consistent behavior mitigation strategies. Second, parents will be aware of behavior trends and changes before ever setting foot in an IEP, 504, or other parent-teacher meeting. Surprises for the parent are removed and the focus is entirely on the success of the student.

# Appendix A: Example Student Report

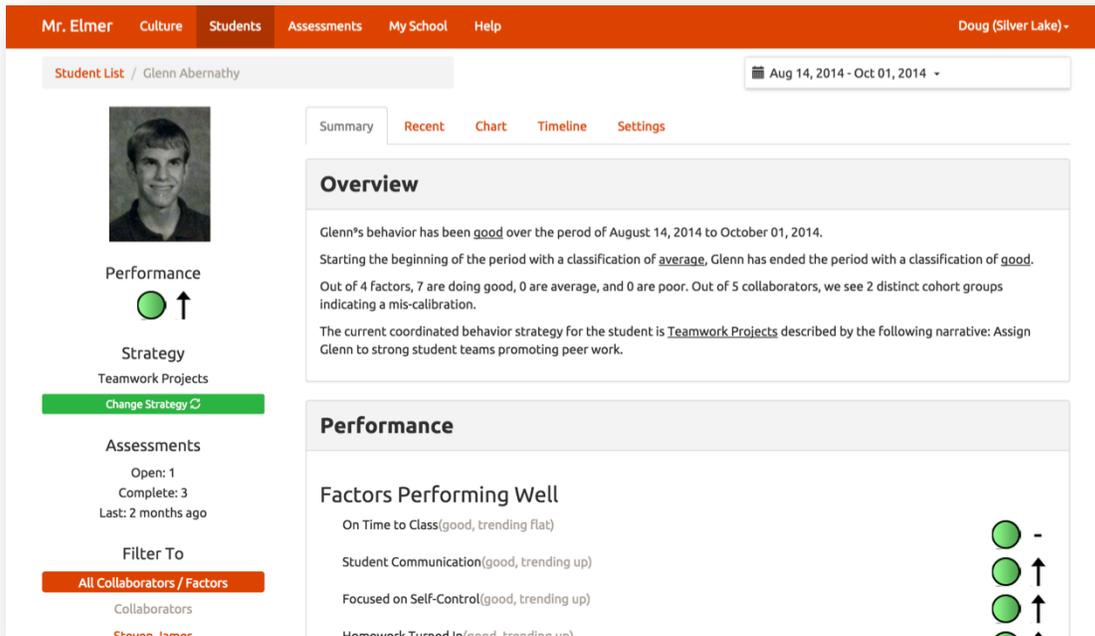


Figure 1: A student report cover page with overview and outline of factors.

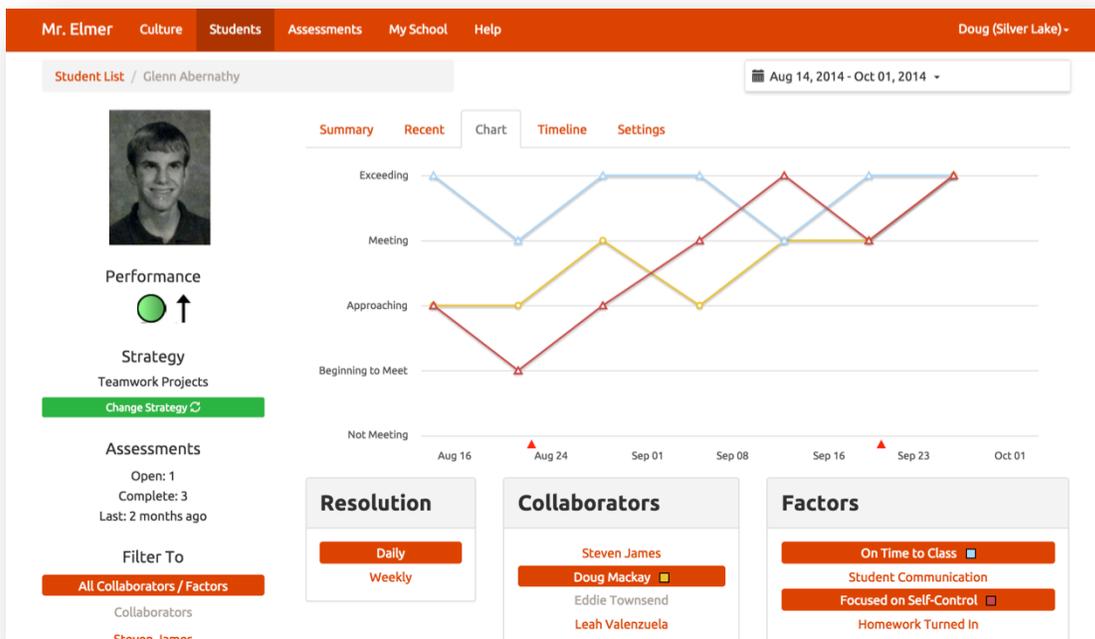


Figure 2: See all collaborators and factors on a student charted through time.

# Appendix B: Example Student Assessment

The screenshot shows a web interface for assessing a student named Glenn Abernathy. At the top, there is a navigation bar with links for Mr. Elmer, Culture, Students, Assessments, My School, and Help. The user is identified as Doug (Silver Lake). The main heading is "Assessing Glenn Abernathy". Below this, there is a section for assessment details: "Requested by" (Doug Mackay), "Requested on" (October 02, 2014), and "Due by" (as soon as time permits). To the right of these details is a text area for "Assessment notes (optional)".

The "Assessment" section contains four rows, each representing a different factor. Each row has five buttons corresponding to the assessment values: Poor, Fair, Average, Good, and Excellent. The "Good" button is highlighted in a darker shade of orange, indicating it is the selected value for each factor.

Factor	Poor	Fair	Average	Good	Excellent
On Time to Class				Selected	
Student Communication				Selected	
Focused on Self-Control				Selected	
Homework Turned In				Selected	

At the bottom of the assessment section, there are two buttons: "Cancel" and "Submit".

**Figure 3:** An example of a simple micro-assessment. Assessing four factors requires a total of five mouse clicks – four to choose assessment values, one to submit the assessment.



OCTOBER 2014

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