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A Thousand Points of Light: Data Capture and Analysis in Counseling (that isn't boring)

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I have a confession to make. I'm not a math nerd. I know how that sounds, considering you are about to read an article on data capturing and analysis in counseling, but I swear it's true!

Honestly, I never thought I would be here talking to you about data. Just the idea of it makes my inner 8th grader nauseous. Like most counselors, it just wasn't particularly interesting to me. I'm guessing that sounds familiar because when I start talking about this topic to fellow colleagues, their eyes glaze over. I get it. On its surface, data capturing and analysis seems like the opposite of who we are and what we do as counselors. Numbers are so cold, so black and white, while human experiences are an endless array of colors and shades, a thousand points of light. Counselors get excited by the stories and experiences of those we work with, not data points on an excel spreadsheet. At one point in time, I agreed with you. And then I found myself face to face with information, and I just couldn't look away.

Since you're still here, I'd like the opportunity to change your perception. If you would, sit back, relax, and give me a chance to make data interesting...

cue movie voiceover voice

What if I told you that an accidentally-built data capturing machine helped prove that mental health crises and concerns are not concentrated in lower income communities but are instead evenly distributed across all socioeconomic classes? What if I told you that this same machine found that over 1 in 10 students in a school building fell into an at-risk category? What if I also told you that this machine proved that these same at-risk students had nearly the same attendance percentage as the school's average? Or a higher than expected GPA? What if I told you this machine spoke truth to the resilience and determination of the students and staff that support them? What if this machine told you the school still has a long way to go, but it started to give us a plan? What if I told you that this machine assisted in finding some of the kids that may have fallen through the cracks? Finally, what if I told you it could predict the future? (Okay, that's a stretch, but it did find some very predictive information.) I hope I have piqued your interest.

Allow me to take you on a journey, and I'll explain how an accidental data capture machine and the numbers it generated became interesting and helped some kids along the way.

Let's go back to the beginning.

I was new to my position as an Educational Support Counselor, or ESC, in the Wentzville School District for the 2018-2019 school year. The learning curve for an ESC is steep due in part to the wide-ranging roles and responsibilities it encompasses, which is a whole different article. It was also complicated because schools are like people in that they all have their own personalities. Wentzville Middle School was no exception. In a way, my one true advantage was that, many years ago, I once walked these halls as a student. It's odd to walk down memory lane, though. I regularly walk by where I had my first kiss. My love of hockey came from learning how to play at WMS. My office is in what used to be my 7th grade science classroom. If you would have told 7th grade me that I would be back here as a staff member, I would have told you that you were out of your mind. I suppose the world is small and the path poetic, because here I am, back at the scene of my greatest academic and social struggles. In a way, it's both perfect in its irony and beautiful in its challenge. I get the opportunity to be what I needed.

But where do I start?

There was no easing into my role at WMS. I hit the ground hard and fast in the fall of 2018 and was struggling to manage the torrent of students coming my way. Concerns ranged from bullying, relationship issues, and social media, all the way to vaping, anxiety, and thoughts of suicide...and everything in between. As December approached, I experienced what many teachers had warned me about; a massive uptick of students in crisis before holidays.

It was at this time that my supervisor reached out for all the ESC's to gather some quick data points to report on how things were going in individual schools. Luckily, before school started in the fall, my "Disney princess" counterpart at the high school (Hi, Heather!) had given me a copy of an excel spreadsheet she had been using that helped her keep track of her students. This spreadsheet recorded who she met and their grade level, when she met them, and why. I expanded the sheet to include the referral sources. Since we both came from agency land, tracking information about clients was a natural habit. This spreadsheet became the core of the data collection system and the information it contained would begin to shed light onto the habits and patterns of the students and staff at WMS.

In early December, I emailed my data points back to my supervisor, but the numbers stayed on my mind. A conversation started between myself and other ESC's about their numbers. Up until this time, I had no reference point to say if my building was experiencing more or less volume than the other schools. I just knew I was exhausted. I would learn my school was very busy and that I had pneumonia. By January, I was running on a diet of orange red bull, Prednisone, and willpower.

Through those two grueling months, I became curious about what the information looked like on a month to month level. I took the data from the main spreadsheet and broke it down into monthly tables and tracked that information from the original spreadsheet. I also began to track what I believe to be one of the most important pieces of information of the entire project, something I called the 3-plus.

Okay, this is the part where Ferris Bueller scratches the record in typical 80's fashion to stop everything and explain some important plot points.

I need to explain the importance and value of this 3-plus number, specifically how I came upon it and how it is used. One of the major areas of the data collection for my building (but maybe not every building) is the area of suicide screenings and assessments. We tend to have quite a few. Post-screening, specific staff (usually ESC's and school counselors) would continue to check in with these students over a period of time. Between these students, those who ended up on discipline reports, and those who tend to naturally seek out counselors and trusted adults, a list of the highest need students began to take shape.

The solution was elegant in its simplicity. The students would identify themselves. They would be the ones to meet with staff three or more times, but they were easy to identify. What I was looking for were the students like me when I was in middle school. I was looking for the ones that had all the signs but fell through the cracks. This is important due to a relatively high rate of students that would report concerns, but were not necessarily involved or immediately identified at risk. Sure, there were those that saw things on social media, or who overheard things throughout their day. More often than not, though, they were

friends with these students and they were alerting staff. This could be just the group I've been looking for.

So, why were the friends so significant?

Have you ever wondered how you make friends? It's a strange process if you think about it. You and a stranger decide that your brand of weird and their brand of weird will fit together like some kind of Awkward Voltron. From then on,

WITH YOUR POWERS COMBINED! Poof, friends. People tend to stick together based on shared experiences and understanding. Keeping this in mind, I began to look at my frequent

flyers and their friend groups. I reasoned that my frequent flyers were like-minded with their closest friend groups, so initiating conversation with these students might provide the conduit for more ongoing, and valuable communication. This isn't rocket science. I'm certainly not the first person to make this connection, but there it was staring me right in the face. The more they talked, the more significant the issues that were uncovered.

It was late January 2019, and I was running out of time.

I had the primitive data tables built, the formulas created, and the data plugged in. As the machine was starting to generate information, I began to realize that I was missing something. I needed an educational viewpoint with an eye toward analytics. Specifically, I needed someone who would bring into focus the data points that educators value. I found that person in my building principal, Dr. Kelly Mantz.

A few minutes into sharing the early version of this data system with Dr. Mantz, we started gathering several new data areas from her suggestions, including discipline, demographics, attendance, and GPA. She suggested that we create a map of our footprint using the 3-plus data to generate the addresses for these students to see where they lived, and specifically, if there were patterns to focus our potential interventions. One of the common theories was that, because our footprint was in a mostly blue collar area (we have a GM plant within 3 miles of WMS), the frequent flyers may be located in the lower income areas. The results were nothing less than stunning. The pattern was that there was no

pattern at all. The map showed a fairly even distribution across our entire footprint, from \$300k homes to section 8 housing. The hypothesis was wrong, but the proof was more impactful. Mental health concerns didn't care about your socioeconomic status.

It was everywhere.

This posed some new, serious questions. What if WMS wasn't an anomaly? What if it was the norm? If it were happening here and across all backgrounds, wouldn't that mean it would be happening in other places? For the first time, we were holding some measure of proof in our hands. It was a wake-up call.

The pattern was that there was no pattern at all.

I feverishly worked to automate the data tables. The more data that was plugged in, the more that trends became clear. By mid-February, it was up and running. All that was left was to make the pretty charts and graphs. The data was punched into the charts and BOOM! We had visual information. As spring break finally arrived, I analyzed the data I had to that point. From here, there were a few adjustments I settled on.

The first was to temporarily relocate myself from my room at the far end of the building and into our student office where our assistant principals are located. These changes were made specifically to be able to respond more quickly to situations in real time. I loved my room, but the change was necessary. I later joked that posting up in the student office made me feel like Salinger's *Catcher in The Rye*. I just caught kids before they spiraled off so I could help them work through the conflict cycle, and then move them to the principal for their part of the conversation. I felt like it was a major step forward and the principals vocalized the positive impact. Victory.

Next was a greater focus to build up and communicate with staff, particularly in classrooms that tend to be more active. One of our more active areas is our social-emotional room (shout out to Room 127!). I cannot stress enough the importance of all the staff there. They are the front line and know the inner workings of their classroom. Supporting them in any way I can is a priority, even if it's just random pop ins throughout the day. But it's not just them. It's

the teachers across the building, the office staff, instructional assistants; anyone who wanted the additional support. I began to focus much more attention to supporting staff and trying to identify what "support" means to them. It is definitely an ongoing process that gets better every day. One of the ladies assigned to 127 recently said to me, "you know which side your bread is buttered." Yes. Yes, I do.

The last change was to start meeting all the friend groups of my 3-plus students. This was a monumental task. You know what the most impressive part of this was? The fact that staff always seemed to know about the students I was asking about. From the principals to the teachers, they knew important details about our students' lives and friends and struggles. This was invaluable information. You might be asking yourself how these friend groups were identified? I went to lunch and watched where kids sat. From there, if I didn't know them, there was a staff member who did. After that, all I needed to do was make contact. Simple, yet effective.

In order to achieve the greatest impact and validity, the information needed to be able to speak the same language between schools.

As the school year came to a close, a more complete picture came into view. One more thing that happened, though. Remember my favorite Disney princess, Heather? We took her numbers from the high school and plugged them into the data machine too. Data for one school is great, but it would exist in a vacuum. In order to achieve the greatest impact and validity, the information needed to be able to speak the same language between schools. And you probably won't be surprised that we found nearly identical patterns for the high school as we did in the middle school.

I guess you want to know what the data said, huh?

At the end of the year, I ended up meeting nearly 200 students, 20% of the student body of WMS. 11% of students fell into the 3-plus category. I ended up having 998 check-ins with students over the span of the year. Over a third of those came in April and May alone. Our 3-plus students had a

2.16 GPA and a higher than expected attendance percentage, around 91% by years' end, just shy of the average for the building. This is just a small sample of the data collected. We were able to see trends on a month to month basis. We could analyze trends among students who have IEP's. We tracked information based on a host of demographics. We tracked referrals to the ESC and how many of those referrals ended up being 3-plus students. I could go on.

That's what was new, but what was next?

I think it's important to say that this is still a work in progress. It is certainly not perfect. Far from it. For those involved, their ideas all contribute to making this a truly proactive and useful tool, but it is still very much in the test phases. In its current state, the data machine itself can be cumbersome to use. It is easy to break the formulas on accident or input numbers on the wrong line. Just the transfer of information from the original sheet to the data tables can be complex. In order for this to be a truly useful tool, we have to make it easy to use for all. Ease of use is absolutely critical if it is going to have widespread use. If it's great, but complicated, it's not great.

I have recently begun conversations with our building tech coach to use the data in order to make a heat map of our building. A heat map could be used to clearly identify hotspots for discipline and other data points throughout the building. Using a heat map may help us deploy our limited resources more quickly and effectively. This data is already known and being used, but much like the original data, the visual may present new clues. At this time, it's just a theory. It may not show us anything. Or it may be the next step in the evolution of this data capture. Time will tell.

And finally, I know what you REALLY want to hear about. You want to know about the "predict the future" thing from the beginning of the article, don't you?

That's a pretty bold claim, I know. Here's what we did. Remember the part about Awkward Voltron and how we make friends? Wouldn't the same hold true for siblings? I thought so, so we cross referenced our 3-plus students with their siblings and the schools they attended. Once we had the list of kids and schools, I gathered the ESC's and read the list. Out of the 68 siblings to our 3-plus group, 61 were known by the other ESC's. That's

almost 91%. And those last 7? The ESC's for those buildings made contact with them. What if all the schools cross referenced their 3-plus students to identify siblings? There was no reason for us to know those names, aside from the fact that the data told us to look, and when we cross referenced them, the ESC's knew most of the students. Most, but not all. It appears we have the beginnings of an early warning system.

All that light wanted was to be seen.

We just needed the right lens.

Well, here we are. The end of our story, so far. I guess in the end, this wasn't a math article at all. I'd like to think it was more of a story about a thousand points of light. All that light wanted was to be seen. We just needed the right lens. That's all this data capture stuff is, really. It's a lens to see the world through. All we had to do was be bold and take in that endless array of colors and shades.

I have a confession to make. I am not a math nerd. I just wanted to help some kids and I was running out of time.

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