



So There is Never a Gap to Close:

Early, Accurate, Personalized Identification, and
Risk Prevention for Students that Struggle

DMPS Heartland AEA BrightBytes

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Agenda

- A** Welcome & Introductions
- B** Early Warning Research & Predictive Analytics
- C** DMPS' Approach & Experience
- D** Heartland AEA - Implementation & Support
- E** Wrap-up / Q&A

A

Welcome & Introductions

Partnership



Jamie Gilley

At Risk Coordinator
Des Moines Public Schools



Brianne Peppers

MTSS Professional Learning
& Leadership Consultant
Heartland AEA



Carrie Rigney

Client Success Partner
BrightBytes



Karen Goldstein

Client Success Partner
BrightBytes

Who is BrightBytes?

RESEARCH

Informed by
education experts &
practitioners

Educative



ANALYSIS

Data visualized in
research-based frameworks

Engaging



ACTION

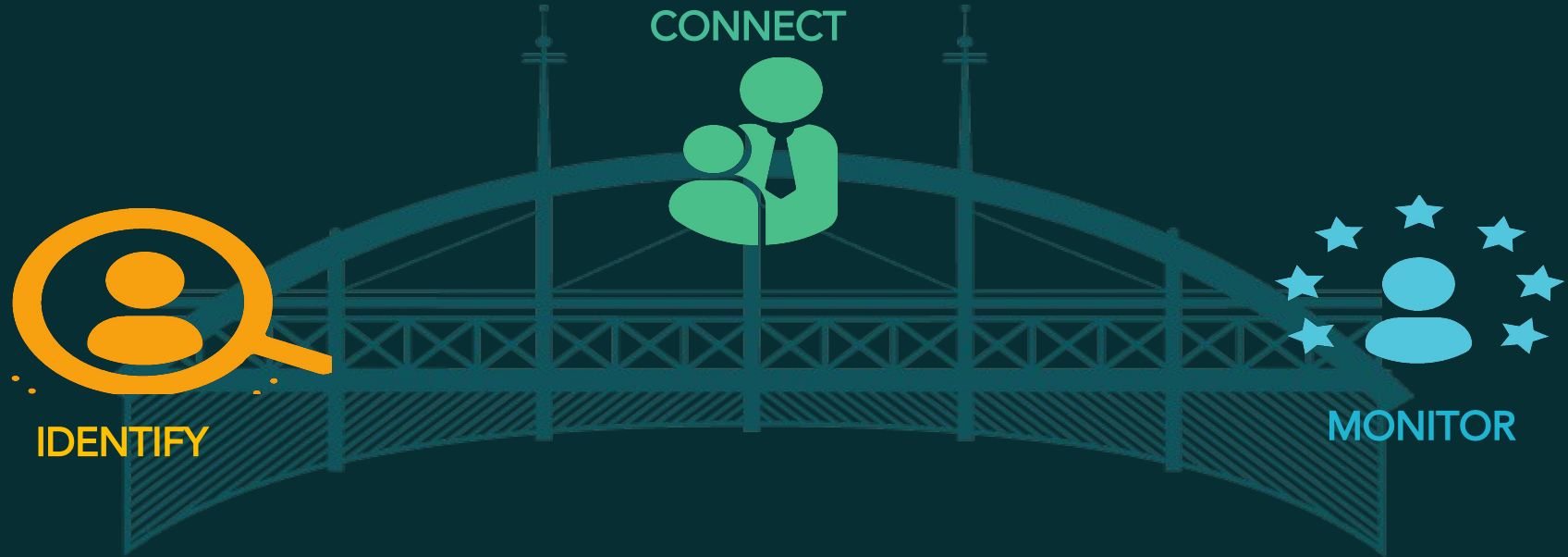
Data-driven
insights to
empower educators

Impactful

B

Early Warning Research & Predictive Analytics

Bridging the Gap



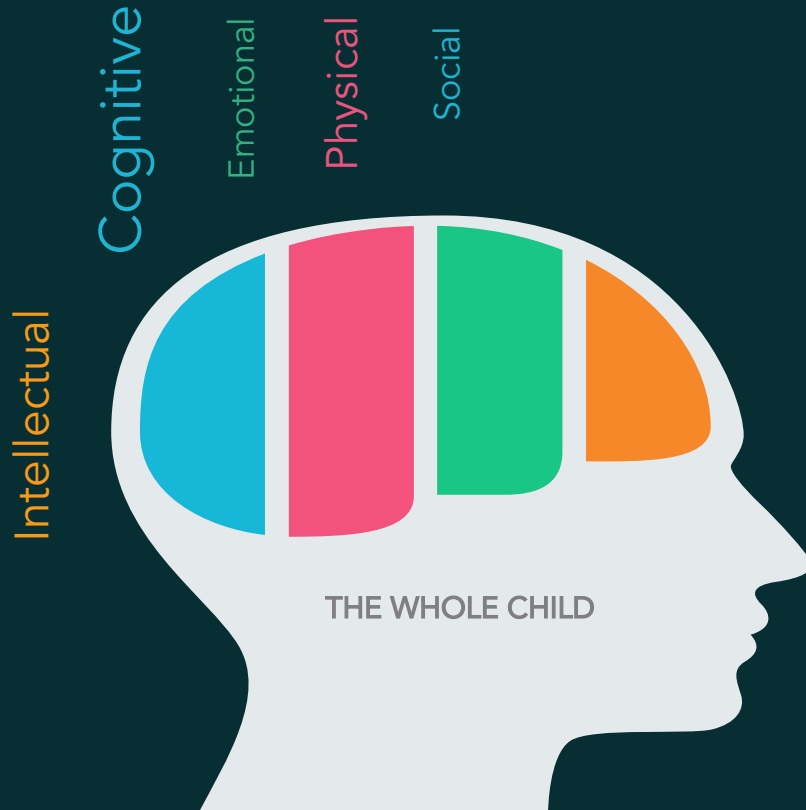
Early Warning Checklist Approach*

Indicator	Value
First 20/30 days absence rate	10%
Grading period absence rate	10%
Annual absence rate	10%
GPA	2.00
# of course fails (per grading period)	1
# of fails (annual)	2
# of credits earned (annual)	4
Major behavioral incidents (per grading period)	
Major behavioral incidents (annual)	

* Everyone Graduates Center – Johns Hopkins University: Based on numerous research studies across a number of different states and districts, a consistent set of triggers have been identified.

Mazin Education:

25 Years of Experience in Early Warning



 **mazin**[™]
EDUCATION

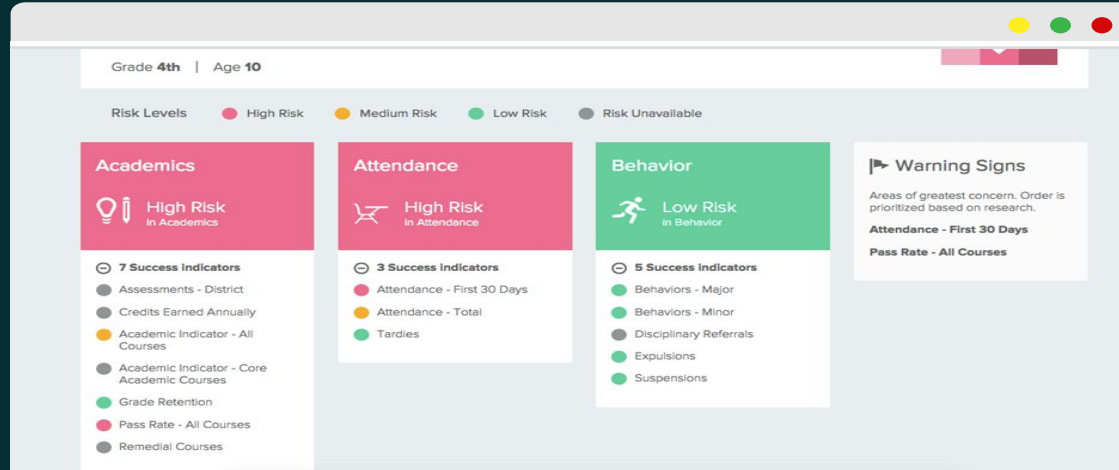
Next Generation: Predictive Analytics

State-of-the-art predictive analytics

Draws upon multiple data points spanning the domains of academics, attendance, behavior, and demographics

Customized to districts & grade levels

Looks at actual dropouts in the district and, using available data across all domains, fits the best predictive models that would have predicted those dropouts. Such predictive models are then applied retroactively to students still in the district.



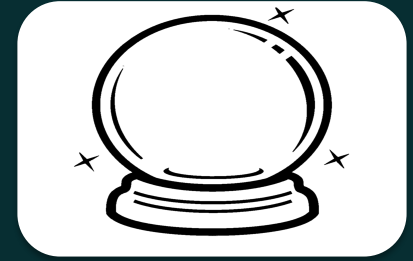
Predictive Analytics



Historical
Data



Machine Learning



Personalized
Predictive
Models

Predictive Analytics (PA) – technology that learns from experience (data) to predict the future behavior of individuals in order to drive better decisions.

Predictive Analytics

- Customized
- Flexible
- Proactive

NETFLIX

amazon

PANDORA

Early Warning Framework

ACADEMICS

- Assessments - District
- State Assessments – Math, Reading, Social Studies & Science
- Credits Earned Annually
- GPA - All Courses
- GPA - Core Academic Courses
- Grade Retention
- Pass Rate - All Courses
- Remedial Courses

DEMOGRAPHICS

- Age
- Ethnicity
- Gender
- Free & Reduced Lunch
- 504 Status
- Special Education (IEP)
- Limited English Proficiency
- Mobility



ATTENDANCE

- Attendance - First 30 Days
- Attendance – Total
- Tardies

BEHAVIORS

- Behaviors - Major
- Behaviors - Minor
- Disciplinary Referrals
- Expulsions
- Suspensions

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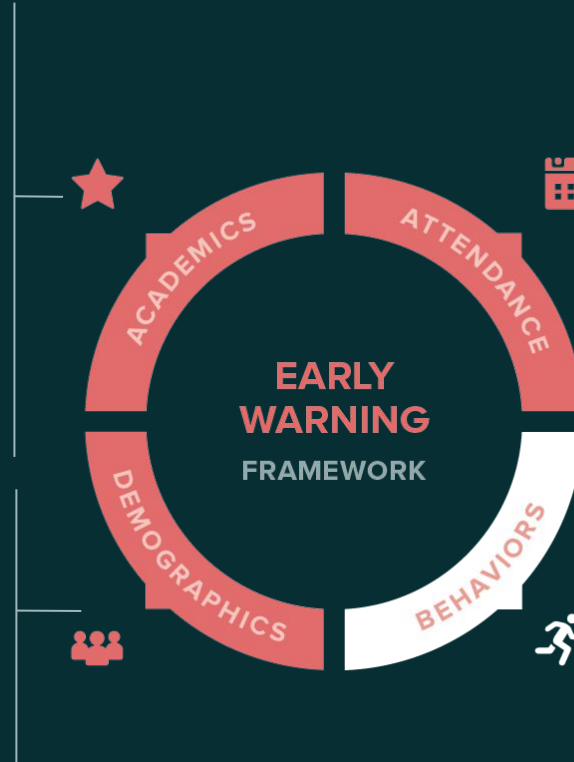
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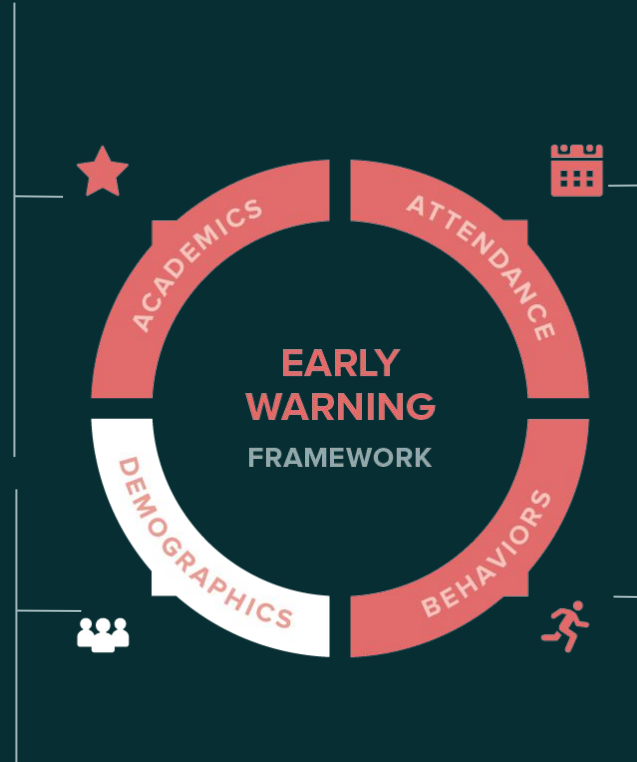
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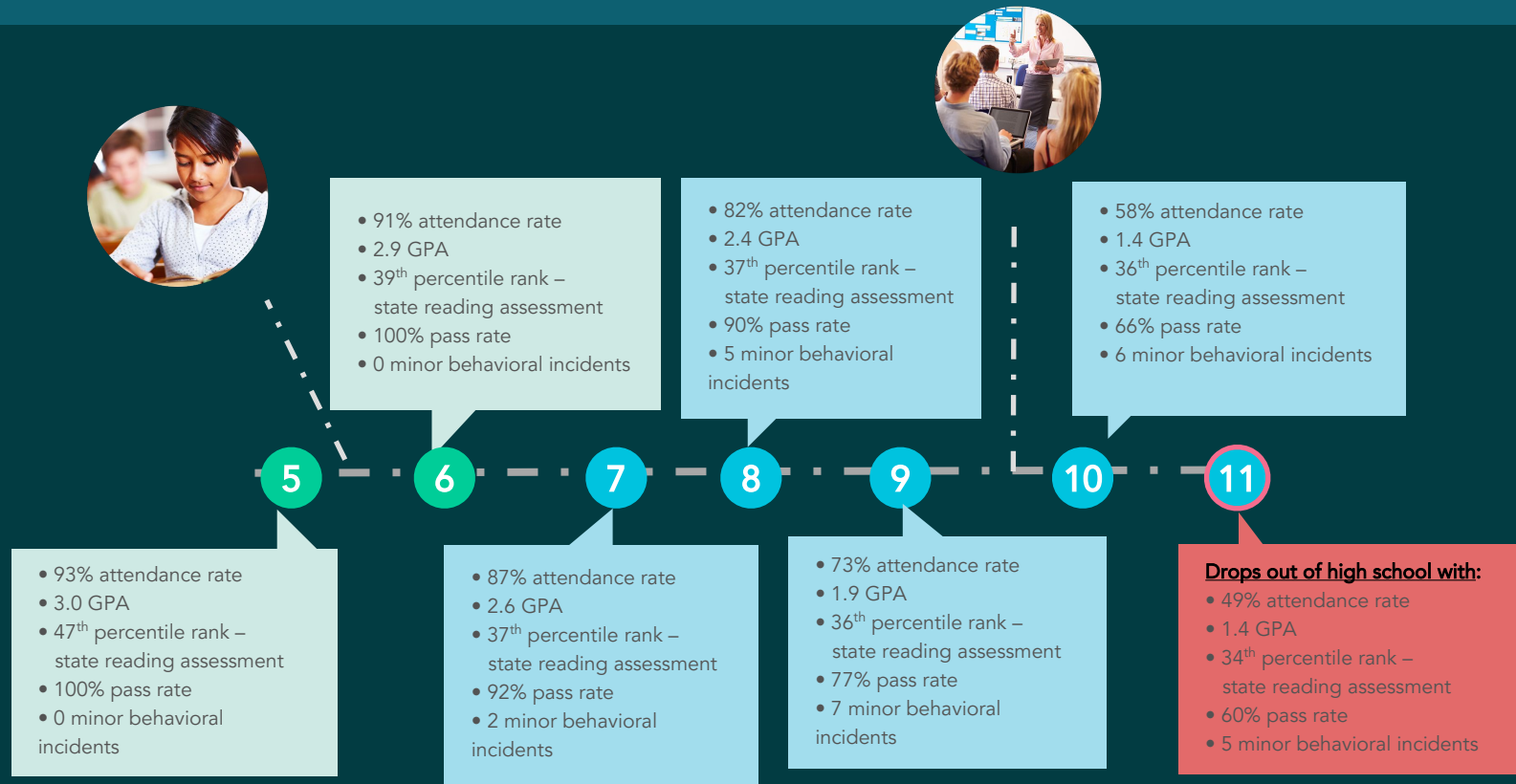
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Diary of a Teenage *Dropout*: Des Moines



Analysis is based on 2,422 students who dropped out in 11th grade and 45,658 students who graduated in Des Moines between the years of 2009-2015

C

DMPS' Approach & Experience

Des Moines Schools Current State

Early Indicator System

- EIS developed in 2010
- Identification of students at risk of dropping out
- First graders and 12th graders measured the same
- No change in number of dropouts

Des Moines School Future State

BrightBytes integration

- Smarter about identification
 - Analysis of former dropouts profiles to create a profile of a Des Moines Schools dropout
 - More accurate identification
 - Allows us to serve younger youth-better prevention
 - Developmentally appropriate-1st grader vs. 12th grader
 - Holistic view of student-not a linear view
 - Individual profiles to be smarter regarding targeted areas
 - district, school, student
 - attendance, academics, behavior

All Dropout Prevention Programs will utilize system

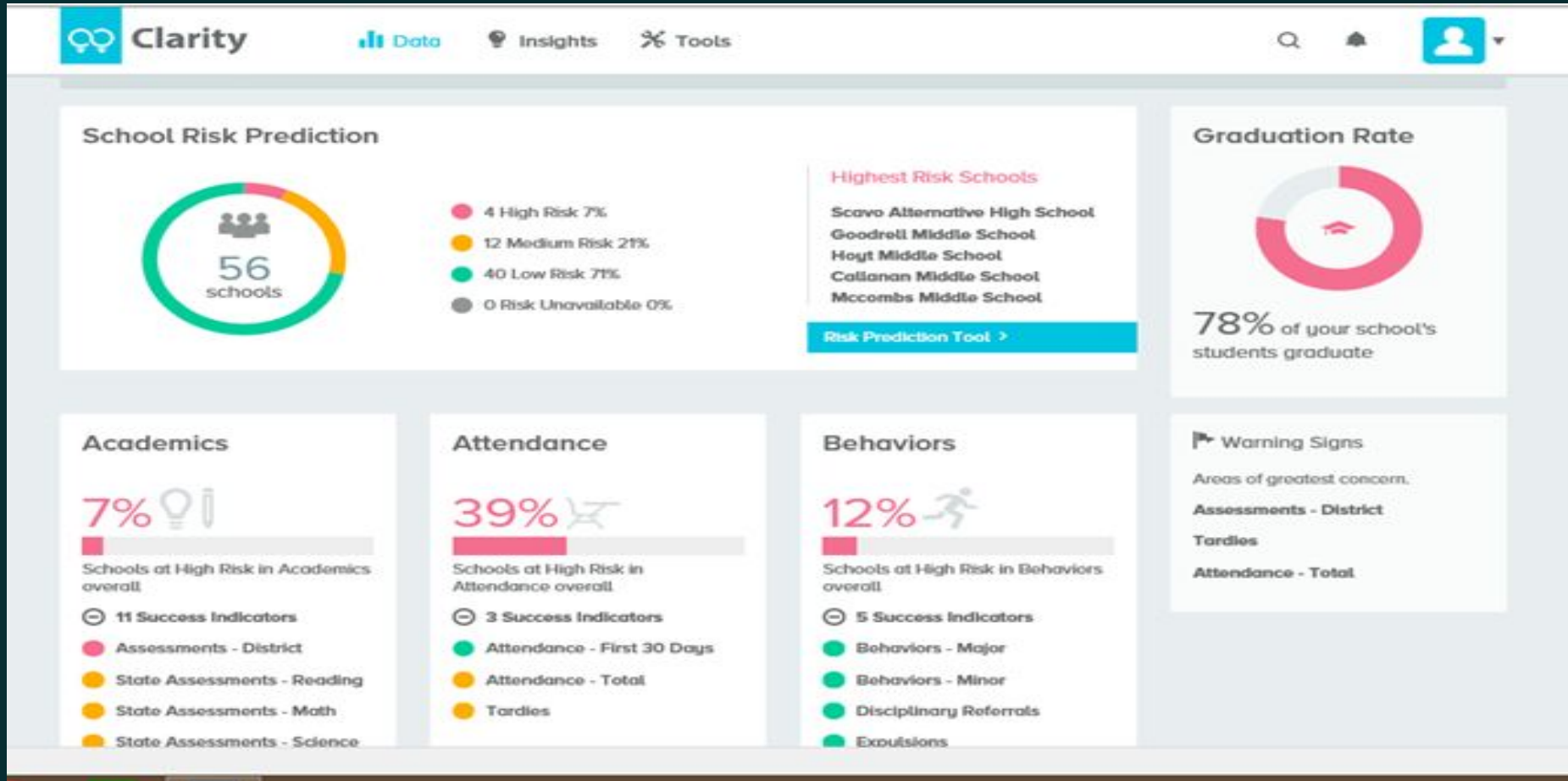
- Integrated onto the new Tier 2 dashboard

Threshold model vs. BrightBytes

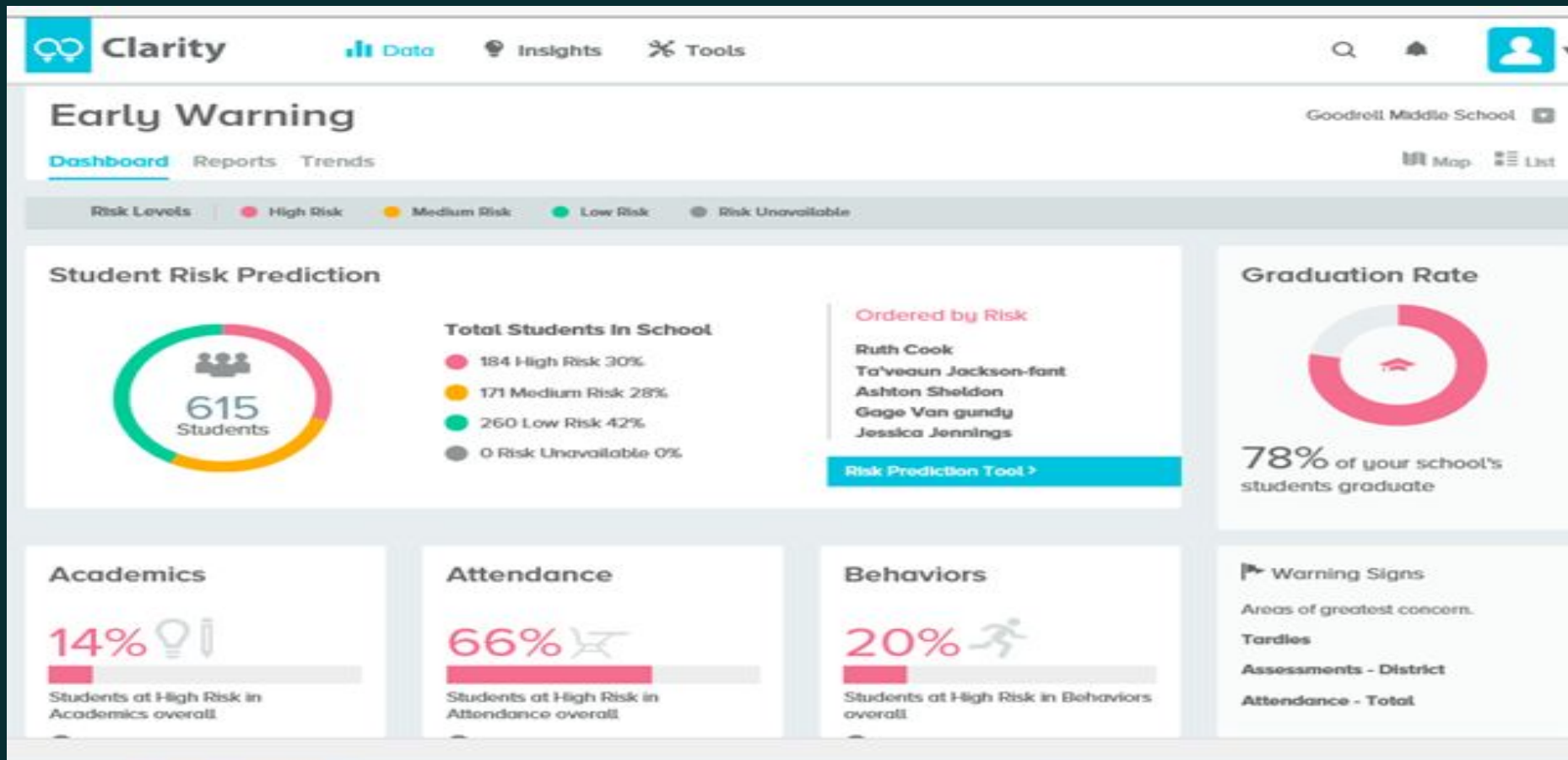
Table 1: Differences in Identification of Current Students²

Grade	Total High/Moderate Risk Clarity EWS	Total At Risk - IA Threshold	Total N	Total Identified by Both	Total Identified by Clarity EWS only	Total Identified by IA threshold only
1	656 (25%)	294 (11%)	2652	219	437	75
2	683 (25%)	324 (12%)	2749	240	443	84
3	643 (24%)	253 (4%)	2705	190	453	63
4	473 (18%)	236 (9%)	2655	134	339	102
5	366 (15%)	196 (8%)	2471	122	244	74
6	593 (25%)	387 (16%)	2416	256	337	131
7	712 (31%)	461 (20%)	2270	348	364	113
8	744 (32%)	539 (23%)	2337	399	345	140
9	737 (31%)	737 (31%)	2374	527	210	210
10	450 (19%)	840 (36%)	2346	414	36	426
11	515 (24%)	880 (40%)	2187	463	52	417
12	534 (23%)	1107 (47%)	2353	455	79	652

Des Moines Public Schools Profile of a Dropout



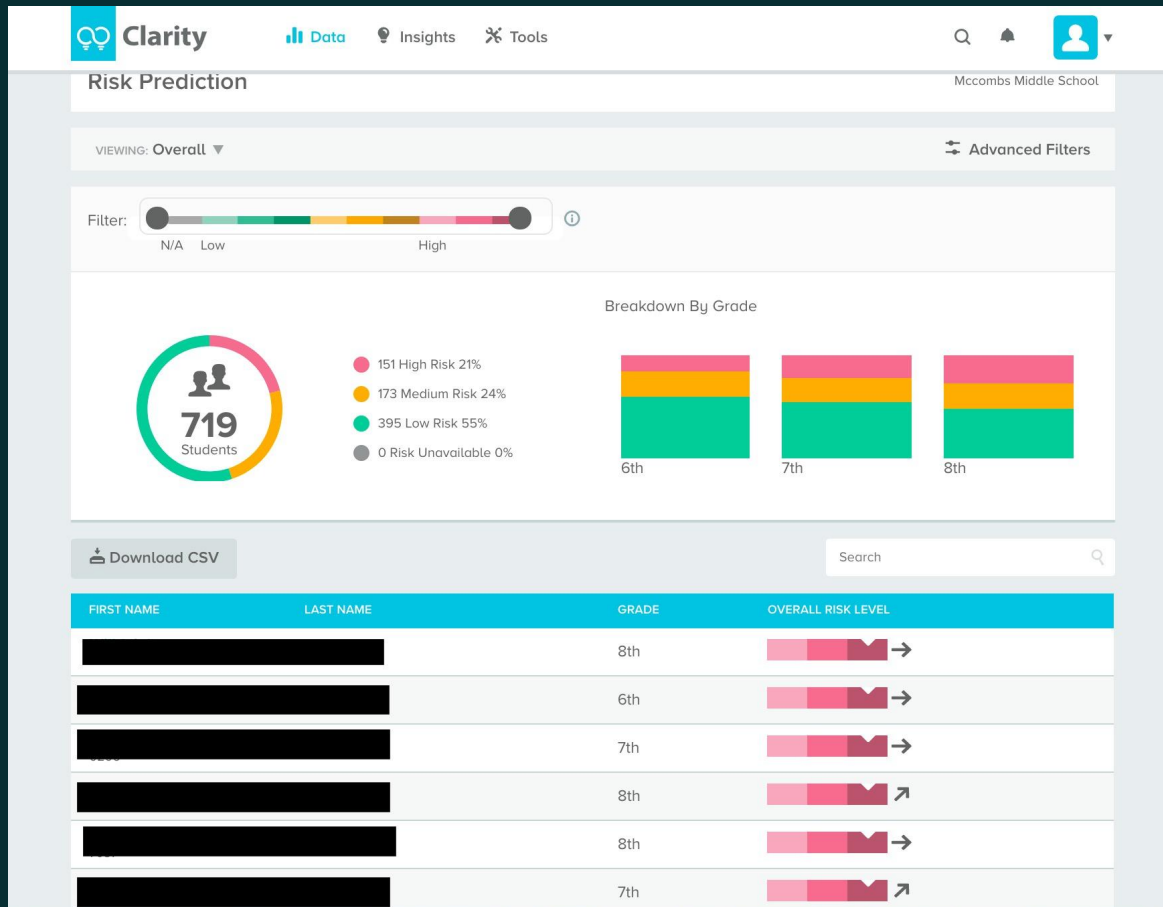
School Level Profile



D

Heartland AEA - Implementation & Support

First Impressions



Reactive vs. Preventative

Reactive

- Students receiving the majority of behavior referrals
- Not attending classes, but are coming to school
- Failing classes
- These students received multiple resources (therapy, case managers, special education, etc)

Preventative

- Using previous year's' data (elementary & middle school)
- First 30 days of school attendance
- Grades/Testing
- Using the profile of a DMPS dropout student

Beginning Stages

January 2017 Drop Out Data

1/11/17 We have had 111 kids transfer and drop out of school

104 Total Drop outs only at East

7 9th grade (3 new students, 2 SPED, 1 ELL, 2 ELL & SPED)

22 10th grade (4 new students, 5 SPED, 7 ELL)

29 11th grade (5 new students,)

46 12th grade (8 new students)

24 Students are identified as ELL

11 Students have 0 Credits

4 Families have more than one drop-out at East

1) [REDACTED]

2) [REDACTED]

3) [REDACTED]

4) [REDACTED]

5) [REDACTED] (11th & 12th)

6) [REDACTED] her brother is on home instruction

Currently 4 of our drop out students, also had siblings from East who didn't graduate

5-Asians

7-Bi-racial

14-Black

32-Hispanic

34-White

11 Students Transferred to another school/other circumstance

8 Students have enrolled at SCAVO

1 Student incarcerated

1 Student to DMACC

1 Student to Norwalk (may need to check on -is he considered a drop-out if he transferred to Norwalk?)

9 babies due this month

15 s are identified as SPED

1 partial ASL

1 No schedule

3 Have dropped out twice

12 First drop out

2 Identified ELL

Not included in the 15 SPED

4 Transferred to another school/program

Child Study Teams

Positives

- More concrete list
- Data driven decisions
- Visuals each month of growth or decline
- Problem solving meetings are more focus, systematic, and solution orientated
- Whole picture of the student

New Learning

- Only changes once a month
- Understanding the algorithm
- Case managers and services

Sample Reports

	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	Z	AA
	Jan #	Feb #	Mar #	April #	May #	First Name	Last Name	Grade	Overall Risk Level	Overall Risk Score	Academics	Attendance	Behavior	Provider/ Support Person(s)	Interventions/ Services	Credits
7																
76	56	47	28	18	13			11	High	9	High	High	Medium	Ashlee/Sped/Woodson	Dropped half his schedule 1st semester and 2nd semester. He has been emailing the school team for help. Said let the roster team know.	
77			123	104	84			10	High	8	High	High	Medium	Ashlee/Sherry	Mile. Smart. Learning more.	
78	75	64	71	54	39			11	High	9	High	High	Low	Ashlee/Chad	Chad was intervening with him-Ashlee had to take him to go home. Mom didn't want him to go home. Ashlee will have Chad call home and take him back to school.	
79			49	37	26			10	High	9				Ashlee/Lab/Larry	Lab full time. Ashlee was the last to go to her.	
80	129	106	62	51	32			11	High	8	High	High	High	Ashlee/Sped/Waller	has been emailing to make a schedule. 3/23 SC. No target into. been in place. back when she's referred to counseling.	
81			69	T1	78			11	High	9				Ashlee/Lab/Carlos	is working with Carlos.	
82	112	93	84	84	67			12	High	9	High	High	Low	Ashlee/Lab/Larry	re-enrolled returning 5th year. Bill is helping him. Ashlee and Reed and possibly have been encouraging him. Mail team about options. has one class left!! He would be getting done by May!!!	24.75
83			54	39	23			12	High	9				Ashlee/Lab/Larry	Re-enrolled. Not attending school. Ashlee is not attending school. Ashlee is not attending school.	20
84	12	6	14	12	9			10	High	9	High	High	High	Ashlee/Sped/Weite	Possible IVO	4
85	3	10	75	60	44			10	High	9	High	High	Low	Ashlee	improving-ding fine now 4/14.	
86	137	115	67	53	38			11	High	8	Medium	High	High	Ashlee	she's in a stable environment. 4/14/17 coming in every day.	
87			20	11	5			12	High	9				Ashlee/Lab	Miss 10 class periods this semester and only missed 1 class periods last semester.	21.5
88	92	79	91	80	61			10	High	9	High	High	High	Reid	No contact. 1st semester, 0.5 class periods	

May 2017 updated

Notes

April 2017 List

May 2017

May 2017 Trends

+

Sum=0

Sample Reports

MAY DROP OFF LIST TO LOWER TIER														
148	127	132	113	T2			10	High	7				Lauren	intervention with hoston and lauren-unde and on summer school
		93	75	T2			11	High	9				Lauren	dropped on the attendance intervenio Lauren had parent meeting last week a have summer school
			110	T2			10	High	7					
			126	108	T2		11	High	8	Medium	High	High	Ried	Came back for March-failed a lot o classes 1st semester missed 33 classes semester and has a lot of resources
40	31	29	33	T2			11	High	9	High	High	Medium	Linda/SPED/ Waller	Shortened schedule with Sanders, has transportation and Waller is checkin
		77	65	T2			11	High	9				Ashlee	Ashlee met with aunt and dad-asked Ash could do credit recovery-ashlee will meet possibly see if waller to see if he will his attendance-4/14/17 should be atten was helping dad care for new baby.
17	14	11	10	T1			12	High	9	High	High	low	Ashlee/ELL	Spoke attendance, not going to 8th bloc returning 12th grade nothing in contact besides Ashlee and Derek one time 4/14 came home multiple phone calls home.
			91	T2			11	High	9				Ashlee/Sped/Sasseen/ Taylor	Sasseen Worked hard at decreasing the nurses involved
44	37	115	101	T2			10	High	9	High	High	High	Reid/Linda/504	Tone from teachers involved v and has outside services, earned 3.5 last

Sample Reports

May 2017 DROP-OUT/NON-ATTENDER OR MOVED SCHOOLS														
		36	26	DO			12	High	9				Lauren/Sped/Pater	Sped student want her
104	87	88	78	SCA			10	High	9	High	High	High	Reid/Linda/SCAVO referral/Lab	going to SCAVO
		61	48	SCA-3			12	High	9				Linda/SCAVO	Linda already wrote SCA get a hold of her either
					Graduate March 2017									
105	90	109					12	High	9	High	High	Low	Linda	Walker Building-Graduat
		5					12	High	9	Medium	High	Low	Ashlee	Graduated
87	75	45	44	Grad			12	High	9	High	High	High	Linda/SPED/ Sanders/	Linda and Sanders are c some serious life issues graduate in May

Biggest Take Away

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	BrightBytes	Grade	Gender	Homeless	Race Fed	SPED	Section 504	ELL	At Risk Indicators	Events Oss	Total Tardies	Intervention	Check & Connect	CICO	Community Partners	Behavior Coaches	Flex	FBA	Intervention Attendance	Intervention Behavior	Social Skills
953	Low	11	Female	Yes	White	Yes	No	No	3	0	0	Yes	No	No	No	No	No	No	No	No	No
954	Medium	10	Male	No	Hispanic/Latin	Yes	No	Yes	4	0	0	No	No	No	No	No	No	No	No	No	No
955	Medium	12	Female	No	Hispanic/Latin	No	No	Yes	5	0	0	No	No	No	No	No	No	No	No	No	No
956	Medium	10	Male	No	Hispanic/Latin	No	No	Yes	1	0	0	No	No	No	No	No	No	No	No	No	No
957	Low	11	Male	No	Hispanic/Latin	No	No	No	4	0	0	Yes	No	No	No	No	No	No	No	No	No
958	High	11	Female	No	White	Yes	No	No	5	0	0	Yes	No	No	No	No	No	No	No	No	No
959	Medium	10	Female	No	Hispanic/Latin	No	No	Yes	5	0	0	No	No	No	Yes	No	No	No	No	No	No
960	High	10	Female	No	Hispanic/Latin	No	No	Yes	5	0	0	No	No	No	No	No	Yes	No	No	No	No
961	High	10	Male	No	White	No	Yes	No	5	0	1	No	No	No	No	No	No	No	No	No	No
962	Low	12	Male	No	White	No	No	No	3	1	0	No	No	No	No	No	Yes	No	No	No	No
963	High	11	Female	No	Black or Africa	No	No	No	5	0	0	Yes	No	No	No	No	No	No	No	No	No
964	Low	10	Female	No	White	No	No	No	1	0	2	No	No	No	No	No	No	No	No	No	No
965	Medium	11	Male	No	Black or Africa	Yes	No	No	5	2	2	No	No	No	No	No	No	No	No	No	No
966	Low	11	Female	No	Black or Africa	No	No	No	3	0	0	No	No	No	No	No	No	No	No	No	No
967	High	10	Female	No	White	No	No	No	3	1	0	Yes	No	No	No	Yes	No	No	No	No	No
968		12	Female	No	Hispanic/Latin	No	No	No	2	0	0	No	No	No	No	No	No	No	No	No	No
969	Low	12	Female	No	Hispanic/Latin	No	No	No	2	0	0	No	No	No	Yes	No	No	No	No	No	No
970	Low	10	Female	No	Hispanic/Latin	No	No	No	2	0	0	No	No	No	Yes	No	No	No	No	No	No
971	Low	10	Male	No	Hispanic/Latin	No	No	No	2	0	0	No	No	No	No	No	No	No	No	No	No
972	Medium	12	Female	No	Hispanic/Latin	No	No	Yes	5	0	0	No	No	No	No	No	Yes	No	No	No	No
973	Low	11	Male	No	Hispanic/Latin	Yes	No	No	3	0	0	No	No	No	No	No	No	No	No	No	No
974	Low	11	Female	No	Hispanic/Latin	No	No	Yes	5	0	0	No	No	No	No	No	No	No	No	No	No
975	Low	12	Female	No	Black or Africa	No	No	No	1	0	0	No	No	No	Yes	No	No	No	No	No	No
976		12	Female	No	White	No	No	No	3	0	0	No	No	No	No	No	Yes	No	No	No	No
977	Low	11	Female	No	Black or Africa	No	No	No	2	0	1	No	No	No	No	No	No	No	No	No	No
978	Low	12	Male	No	Asian	No	No	No	1	0	0	No	No	No	No	No	No	No	No	No	No

E

Wrap-up / Q&A

Thank You!



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