

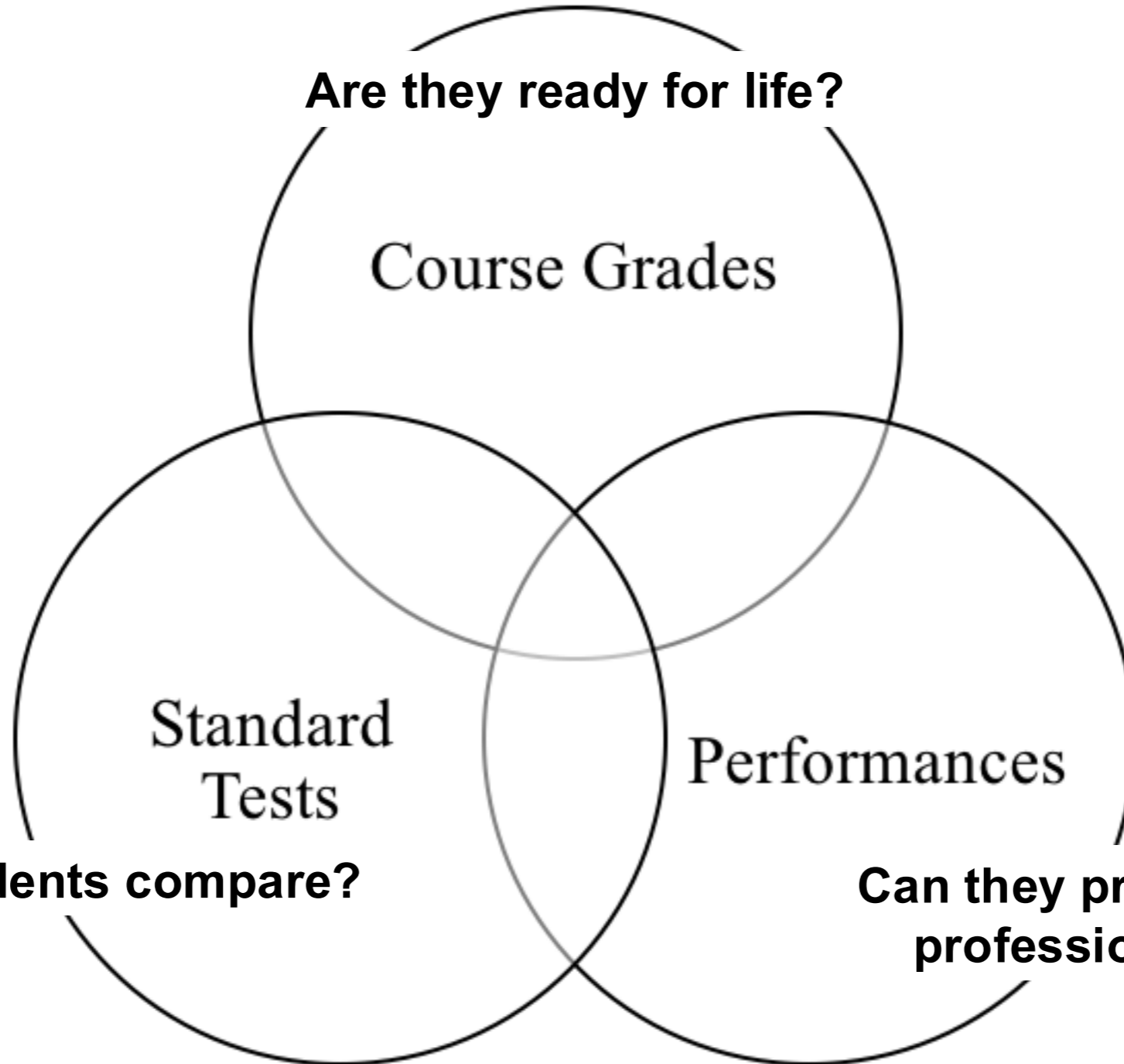
# Technology in Support of Diverse Assessment

Dr. Gary L. Ackerman  
Flexible Pathways Coordinator  
Windsor (Vermont) School

# Overview...

- “The data we want to gather...”
- Design for improvement
- Two new platforms
  - Dashboard Spreadsheet
  - ePortfolio
- Lessons learned

# The data we want...



**Are they ready for life?**

**Course Grades**

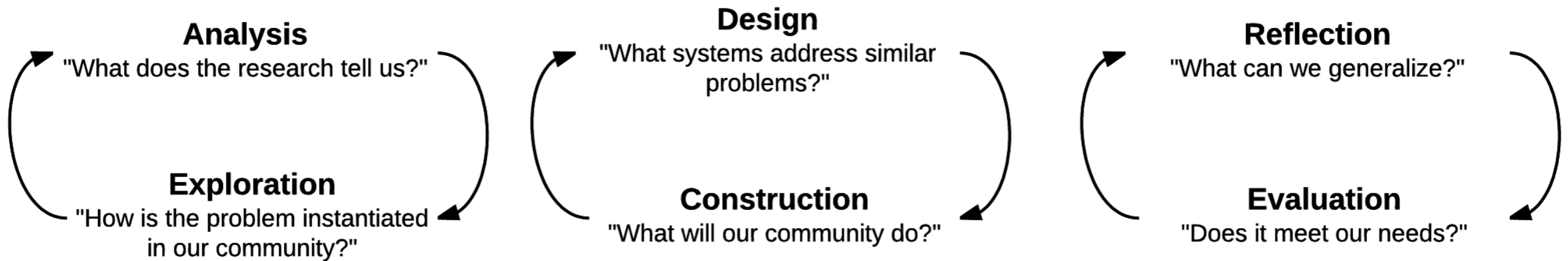
**Standard  
Tests**

**How do our students compare?**

**Performances**

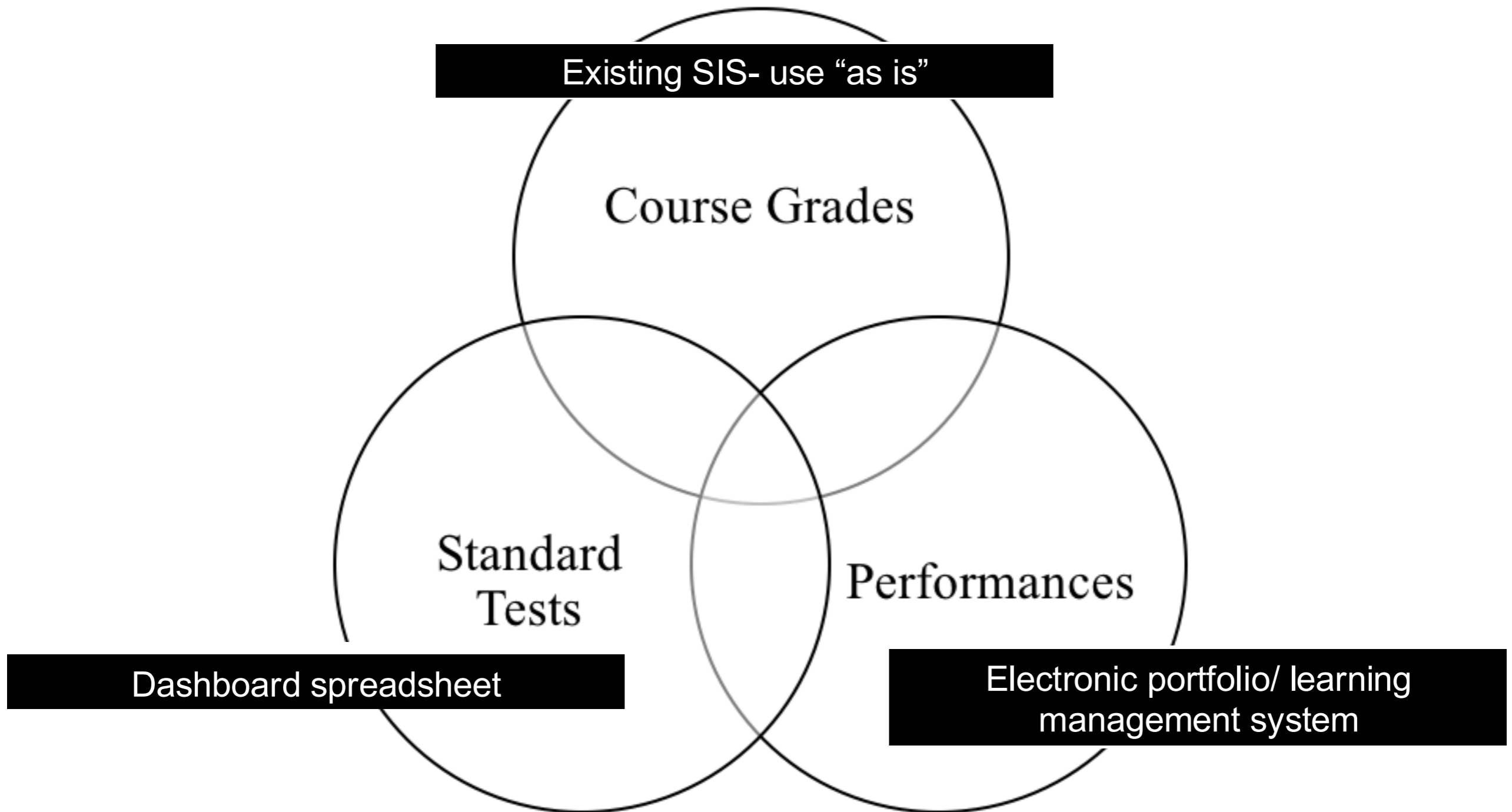
**Can they produce polished,  
professional products?**

# Design for improvement



(adapted from McKenny & Reeves, 2012).

# The systems we built



# Dashboard Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1		SBAC M 7	SBAC ELA 7	SBAC M 8	SBAC ELA 8	NECAP S 8	GPA 7	GPA 8	GPA 9	GPA 10	GPA 11	GPA 12	PSAT M	PSAT R & W	SAT M	SAT W & L	SAT R	Math Course	FL 1	FL 2	FL 3	FL 4	Arts 9	Arts 10	Arts 11
2	Browne, Jackson	1	1	1	2	830	2.2	2.9	1.9	2	2.4	3	380	410	350	350	390	Algebra 2	x	x	x		x	x	x
3	Edwards, Kathleen	2	2	2	3	835	2.3	2	2.3	2.1	2.4	2.9	375	490	650	400	425	Algebra 2	x				x	x	
4	Ely, Joe	3	2	3	3	840	2.5	1.8	2.1	2.7	3.1	2.9	325	400	620	325	290	Geometry	x	x	x	x	x	x	x
5	Gauthier, Mary	2	3	1	2	836	2.4	2.9	3.1	2.9	2.6	3.4	400	325	470	400	325	Algebra 2	x	x	x			x	x
6	Foster, Ruthie	1	1	2	3	837	3	3.2	3	3.1	3.2	3.6	390	335	290	380	325	Geometry	x	x	x	x			
7	Keen, Robet Earl	3	2	3	2	840	3.1	3.3	3.2	3.4	3.1	3.6	380	280	410	350	290	Algebra 2	x	x			x	x	x
8	Lovett, Lyle	1	3	3	2	841	3.3	3.4	3.2	3.2	2.9	3.1	410	390	350	410	335	PreCalculus	x	x	x	x		x	x
9	Lynne, Shelby	2	2	2	2	843	3.6	3.1	3.4	3.2	3.1	3.3	280	325	410	530	335	Algebra 1	x				x	x	x
10	Merritt, Tift	2	2	2	3	844	2.9	3.1	3.1	3.2	3.5	3.1	305	295	440	425	375	Geometry	x	x	x	x	x	x	
11	Moorer, Allison	2	3	3	2	846	3	2.9	2.7	2.9	2.7	3.1	365	424	470	580	400	Algebra 2	x	x			x		x
12	Rait, Bonnie	3	2	3	2	847	2.3	2.5	2.7	3	3.2	3	355	280	500	500	400	Algebra 2	x	x	x	x	x	x	x
13	van Zandt, Townes	2	1	2	1	849	3	2.6	2.6	2.8	3	2.8	425	375	530	540	410	Algebra 1	x					x	x
14	Willimas, Lucinda	3	1	2	1	850	3.8	3.5	3.2	3.1	3.4	3.2	295	325	560	360	325	Geometry	x	x	x		x	x	x
15	Zevon, Warren	3	2	2	2	852	3.9	3.3	3.2	2.5	2.7	3.1	310	335	490	290	490	Geometry	x				x		

**SBAC scores**

**GPA**

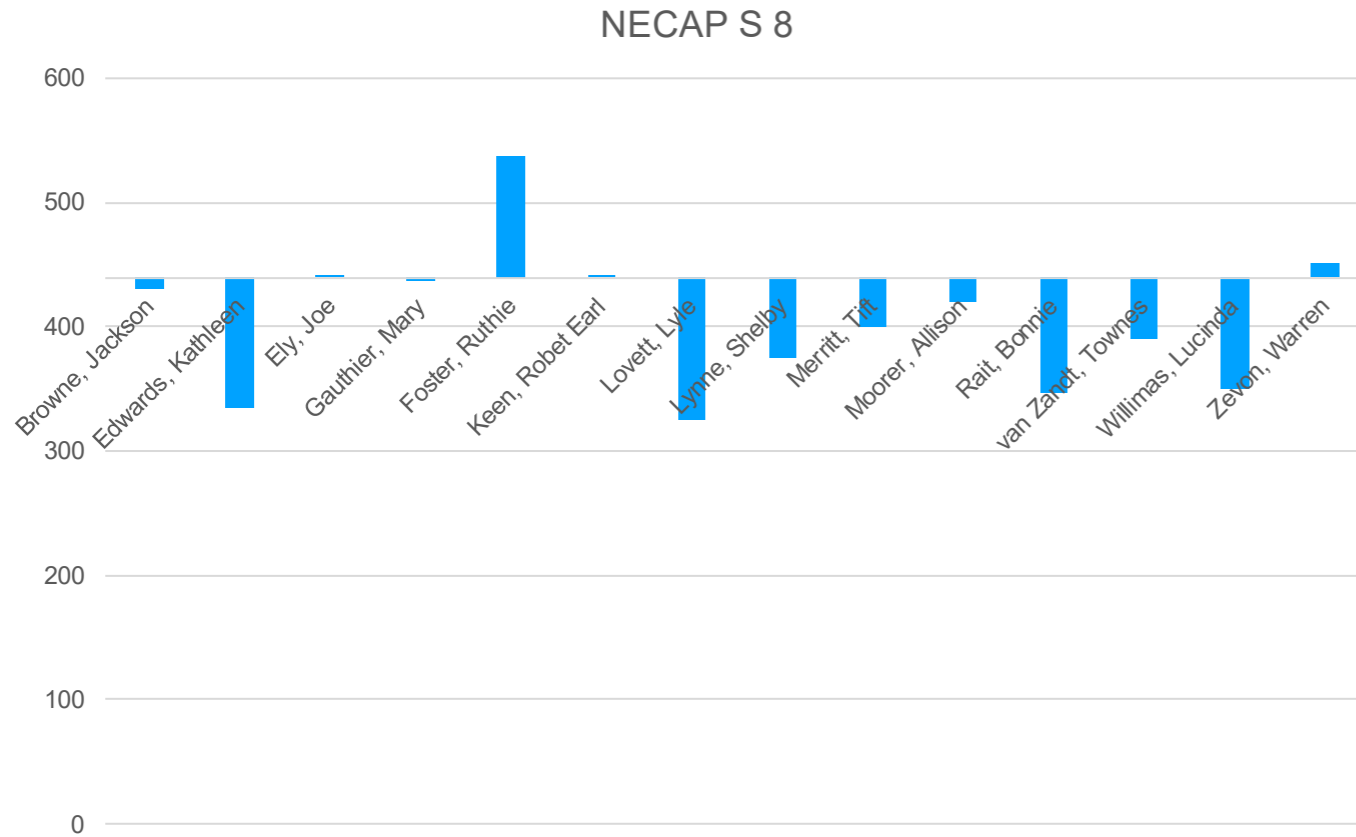
**PSAT/ SAT**

**“Highest”  
math class  
passed**

**Participate  
in arts?**

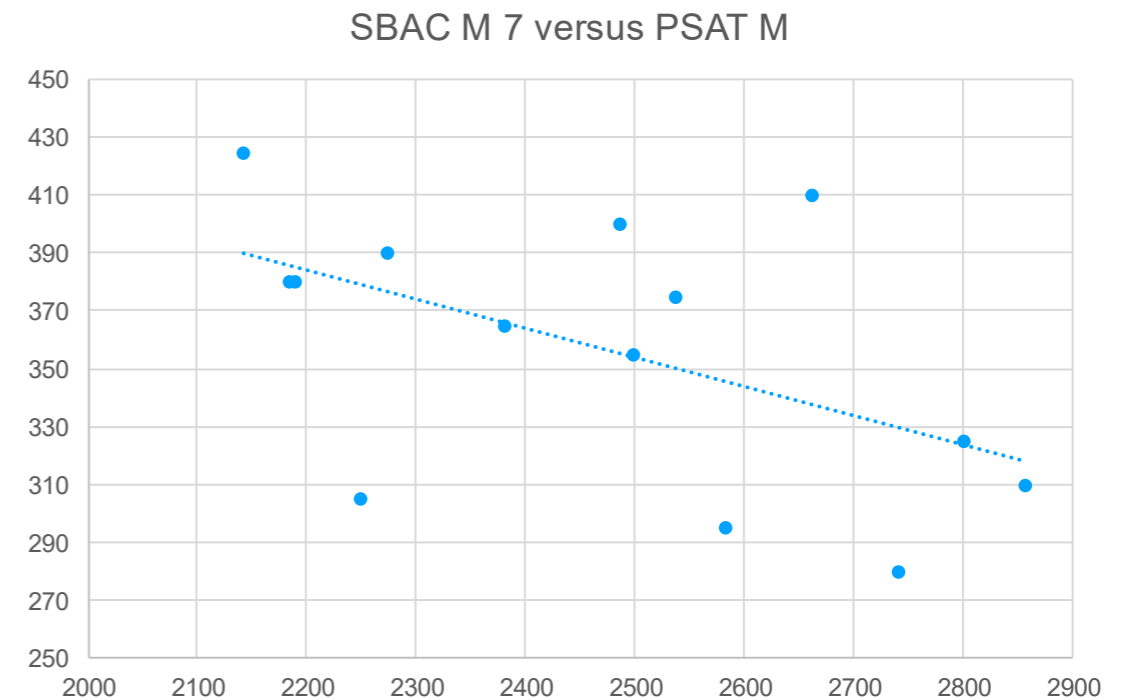
**Data from multiple places “lives” in one place...**

# Dashboard spreadsheet types of displays- cohort



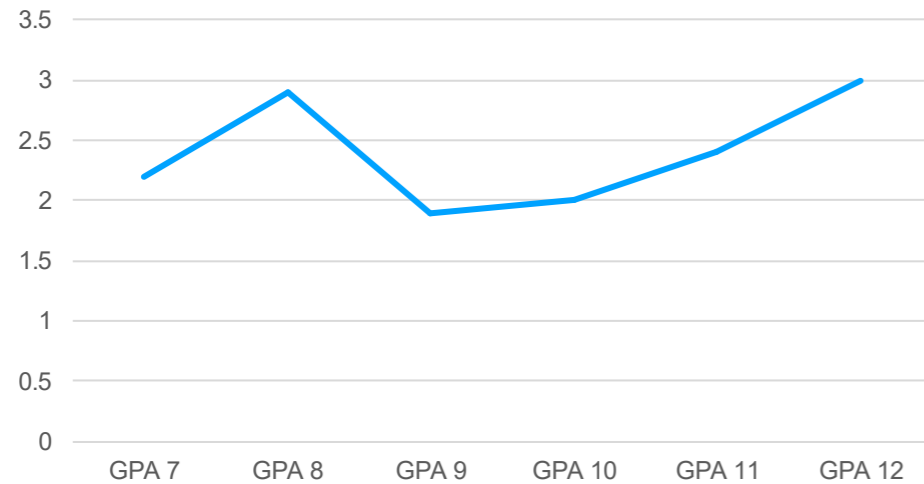
How do our NECAP scores compare to the state average?

Is there a correlation between SBAC Math scores as 7<sup>th</sup> graders and PSAT Math scores in 10<sup>th</sup> grade?



# Dashboard spreadsheet types of displays- individual

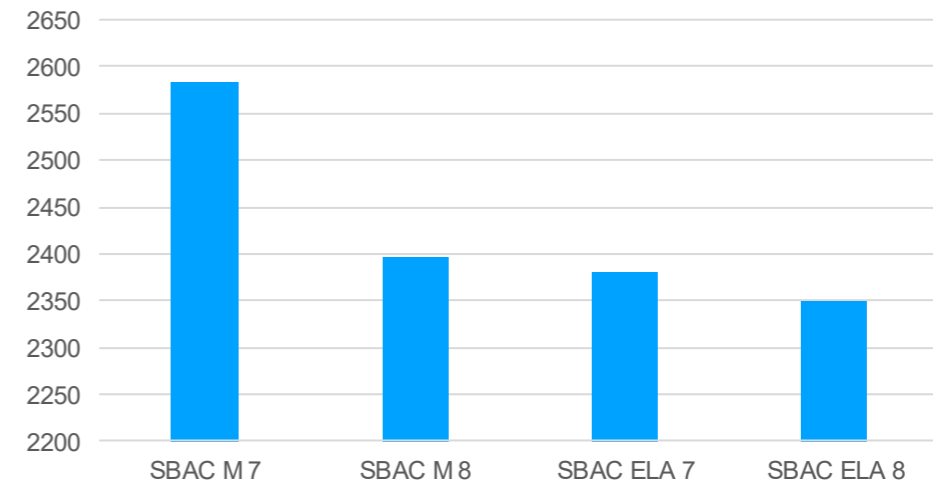
Jackson Browne GPA



How has GPA varied over high school years?

How consistent are SBAC scores between 7<sup>th</sup> & 8<sup>th</sup> grade?

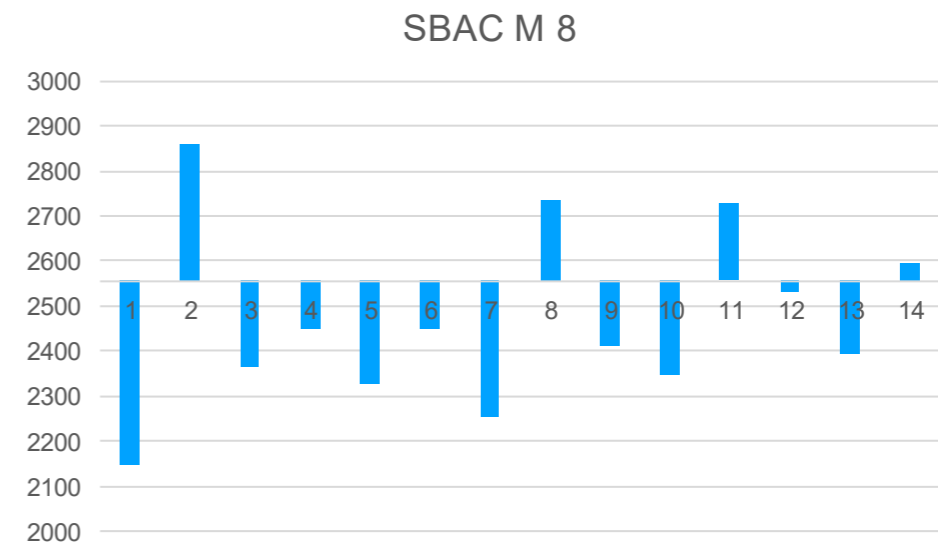
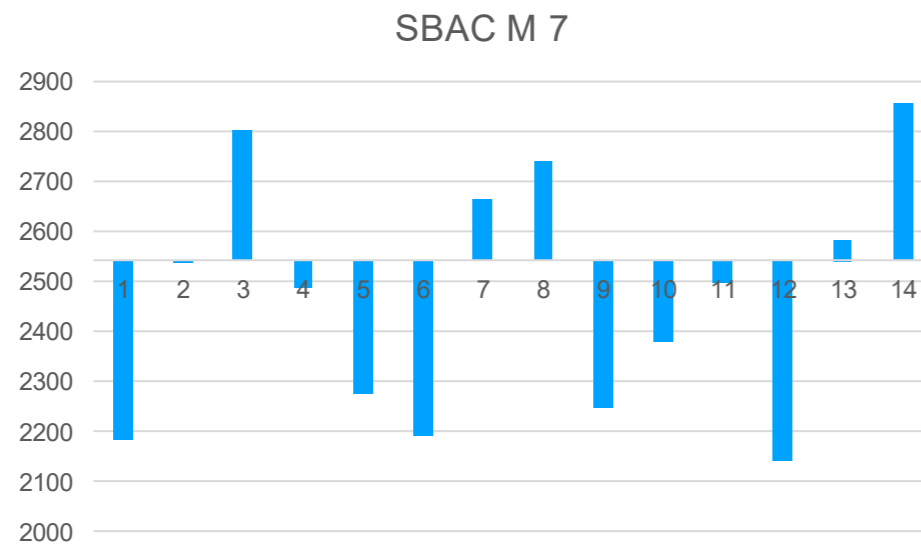
Williams, Lucinda



# Dashboard spreadsheet types of displays- groups

	<u>Geometry</u>	<u>Algebra 2</u>
	620	350
	290	650
	440	470
	560	410
	490	470
		500
Average SAT M	480	475

Are there differences in SAT Math scores between students who passed Geometry versus those who passed Algebra 2?



How did SBAC Math scores changes compared to state average between 7<sup>th</sup> & 8<sup>th</sup> grade?

# Dashboard spreadsheet challenges and discussions

- How sophisticated do we make the statistics?
  - Are differences significant?
  - Problem of small population
- Graphic displays misleading because of inconsistent scales
- Are we answering questions of convenience?
  - Ask the question... add the data

# Electronic Portfolio



- **Assignments**
- **Grades**
- **Rubrics**
- **Map to expectations**

- **Media-rich pages**
- **Text (for reflections)**
- **Navigation**
- **Set access rules**

# Lessons Learned:

- Efficiency matters
  - Populating the spreadsheet
  - Cognitive load of graphs
- Ease of use
  - Single sign-on and Moodle and Mahara
- Understanding learning
  - Qualitative data matters

# References

McKenney, S., & Reeves, T. (2012). *Conducting educational design research*. New York: Routledge.