

IMPACT

Evaluation Findings

2014-2015

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SUMMARY

In 2012, Iredell-Statesville Schools (I-SS) was awarded a Race to the Top District grant (RTT-D). Implemented over a four-year period, **IMPACT** (Innovative Methods for Personalizing Academics, Complemented by Technology) is designed to support bold innovations in learning and teaching that will directly improve student achievement and educator effectiveness. IMPACT builds upon existing district practices, including Professional Learning Communities (PLCs), an aligned support structure, and student transition initiatives.

There are fifteen schools participating in the intervention. These include four high schools (Statesville, West Iredell, North Iredell, and South Iredell). There are two non-traditional schools (Pressly and Monticello), and nine middle schools (Statesville, East Iredell, West Iredell, Troutman, North Iredell, Northview, Lakeshore, Brawley, and Mount Mourne). Though not receiving grant funds, Lake Norman High School is also participating in the intervention.

There were two evaluation studies conducted in 2014-2015. The formative evaluation explored student and faculty experiences with blended and personalized learning, while the second examined the extent to which IMPACT was being implemented in schools.

The evaluation found that,

- The use of data by faculty **increased by 26%** from 2013-2014.
- There was a **statistically significant increase** in the average student response to questions about persistence, technology use, blended and personalized learning, group collaboration, and technology ethics from Fall to Spring.
- In general, 8th and 11th graders had the **highest average responses** to the student survey.
- There was a **statistically significant increase** in average faculty responses to questions about individualized learning, technology, and personalized and blended learning from Fall to Spring.
- More program components were **successfully implemented** in 2014-2015 compared to 2013-2014.
- Schools with higher fidelity tended to have **higher average student responses**.

Project Overview

Summary of the Intervention

In 2012, Iredell-Statesville Schools (I-SS) was awarded a Race to the Top District grant (RTT-D). Implemented over a four-year period, **IMPACT** (Innovative Methods for Personalizing Academics, Complemented by Technology) is designed to support bold innovations in learning and teaching that will directly improve student achievement and educator effectiveness. IMPACT builds upon existing district practices, including Professional Learning Communities (PLCs), an aligned support structure, and student transition initiatives.

There are four goals outlined in the IMPACT program model:

Individualize Student-Driven Learning to build learning environments that improve learning and teaching through personalization strategies, structures, and supports for students and educators.

Revolutionize Instruction by accelerating achievement and deepening student learning by addressing the academic needs of each student while decreasing achievement gaps across student subgroups.

Cultivate High-Quality Educators by elevating teacher and leader effectiveness while expanding student access to excellent teachers.

Infuse Cross-Cutting Data-Driven Decision-Making at all levels to support instruction and continuous program improvement.

Innovative
Methods for
Personalizing
Academics
Complemented
by
Technology

Participating Schools

There are fifteen schools participating in the intervention. These include four high schools (Statesville, West Iredell, North Iredell, and South Iredell). There are two non-traditional schools (Pressly and Monticello), and nine middle schools (Statesville, East Iredell, West Iredell, Troutman, North Iredell, Northview, Lakeshore, Brawley, and Mount Mourne). Though not receiving grant funds, Lake Norman High School is also participating in the intervention.

Other Interventions

In 2007, I-SS received a Smaller Learning Communities Grant (SLC). This grant was implemented in four high schools (West Iredell, Statesville, North Iredell, and Lake Norman) in 2007 and in South Iredell in 2008. Key aspects of the program, including emphasis on college and career readiness and freshmen transition activities, were sustained and are considered “business as usual” in the district.

In 2010, I-SS received an Investing in Innovation (i3) grant. **COMPASS** (Collaborative Organizational Model to Promote Aligned Support Structures) was implemented in phases in all district schools from 2010-2015 and was in place at all IMPACT schools by the time IMPACT was fully implemented. COMPASS will be sustained after 2015 and is considered “business as usual” in the district.

Evaluation Overview

2014-2015 Formative Evaluation Study

There were two evaluation studies conducted in 2014-2015. The first was a formative evaluation that addressed the following questions:

1. What does the blended learning environment look like in English and Math Classrooms?
2. What are the experiences of blended learning participants? Were there differences in experiences between males and females? Were there differences in experiences between grade levels?
3. What were faculty experiences with blended learning?

The second study looked at the degree to which IMPACT was implemented in schools. We explored relationships between the above questions and levels of fidelity to ascertain if there were differences among schools based upon fidelity.

Data Collection

To address these questions, we conducted a comprehensive data collection, as shown in figure 1.



Figure 1: Data Collected for the 2014-2015 Evaluation Study

Blended Learning Environment

What does the blended learning environment look like in English and Math Classrooms?

Using data to inform instruction allows faculty to create targeted, personalized instruction for students. To assess the extent to which this was occurring in IMPACT schools, we collected meeting minutes from Professional Learning Communities (PLCs), and compared the use of data to inform instruction between 2013-2014 and 2014-2015. We found that the use of data by faculty **increased 26%** from 2013-2014 to 2014-2015.

We also looked at faculty responses to the annual survey, and found that English teachers had a **.27 higher** average response than Math teachers to questions about Individualized Learning.

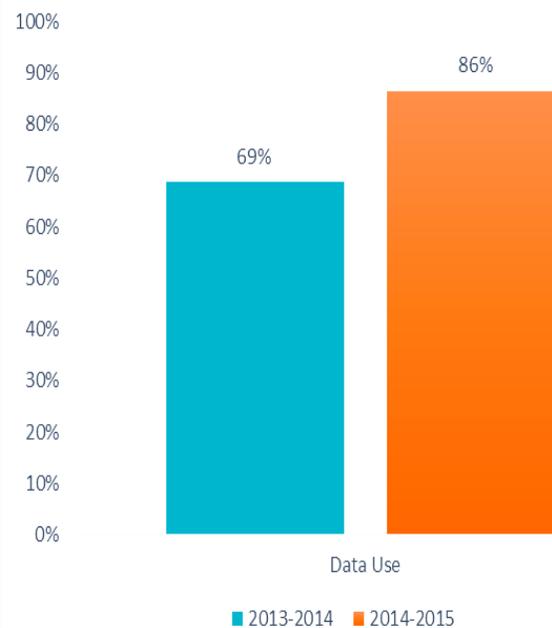


Figure 2: Percentage of PLC Minutes Showing Use of Data to Inform Instruction

What are the experiences of blended learning participants?

Using results from the 2014-2015 student survey, we examined the experiences of blended learning participants in five areas:

- Persistence
- Technology Use
- Blended and Personalized Learning
- Group Collaboration
- Technology Ethics

We found the average student response **increased** from Fall to Spring in each of the five areas; this was statistically significant. We also compared student responses with the 2013-2014 survey, and found that the average response to persistence questions was **.02 points higher** in 2015. However, the average response to technology questions was **.06 points lower** than 2014. Comparisons between the other areas did not yield statistically significant results.

Blended Learning Environment

Were there differences in experiences between males and females?

We looked at differences in the average response based upon gender. We found that the average response for females to questions about persistence were **.09 points higher** than males. However, males' responses to questions about technology were **.05 points higher** than females'.

Were there differences in experiences between grade levels?

We found in general that 9th and 10th graders had the lowest average responses, and that 8th and 11th graders had the highest average responses.

Persistence

11th graders had the highest average response (3.1). There was a statistically significant difference in the mean score between 11th, 9th (+.16), 10th graders (+.16), and 12th graders (+.05).

Technology

8th graders had the highest average response (3.3). There was a statistically significant difference in the mean score between 8th, 9th (+.15), 10th (+.19), and 12th graders (+.08).

Personalized and Blended Learning

11th graders had the highest average response (2.95). There was a statistically significant difference in the mean score between 11th, 9th, (+.19) and 10th graders (+.18).

Group Collaboration

11th graders had the highest average response (3.17). There was a statistically significant difference in the mean scores between 11th, 9th (+.15), and 10th graders (+.15).

Technology Ethics

8th graders had the highest average response (3.36). There was a statistically significant difference in the mean score between 8th, 9th (+.19), 10th (+.19), and 12th graders (+.07).

Blended Learning Environment



“I finally get it! I have been able to incorporate blended learning fairly easily into my lesson plans. For THAT I am proud because it was a difficult transition, but now I feel comfortable.”

Teacher, South Iredell High School

Figure 3: Change in Faculty Responses from Fall 2014 to Spring 2015

What were faculty experiences with blended learning?

There was a statistically significant change in average responses from Fall to Spring in three areas. The average response to questions about individualized learning **increased .128**, while response to technology **increased .187**. Lastly, responses to questions about personalized and blended Learning **increased .218**.

We compared faculty responses from Spring 2014 with Spring 2015 and did not find any statistically significant differences between years.

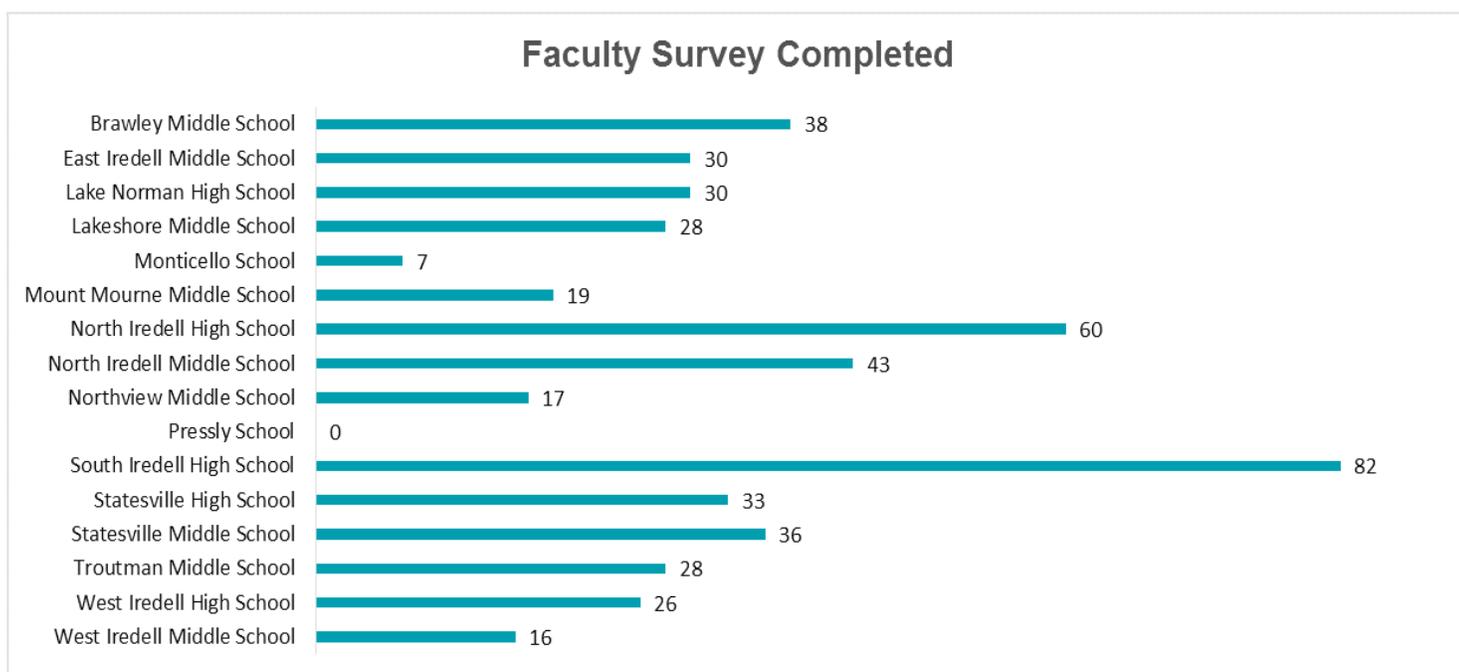


Figure 4: Number of Faculty who Completed the 2014-2015 Survey by School

Fidelity of Implementation

Fidelity of implementation is the degree to which a program is implemented as intended, and it is measured annually. We assessed fidelity across four components:

1. Individualized Student Learning
2. Student Transition Activities
3. Professional Development
4. Data Driven Decision Making

Within each component, we measured the following aspects: quality, dosage, reach, and reactions. Quality is the extent to which the core component was delivered clearly and correctly according to known best practices and standards. Dosage is the amount of the component being delivered, expressed in terms of frequency, intensity, and duration. Reach is the extent to which targeted participants actually received the core component. Lastly, reactions assess the extent to which the core component stimulates interest and participants are satisfied with their experiences.

Using existing research and in consultation with district staff, we established annual targets for each aspect. The results were then combined to create fidelity scores for all five components and then an overall fidelity score for each school.

In addition to calculating school-level fidelity scores, we also assessed district fidelity. We determined annual district fidelity scores by calculating an overall fidelity score that combined data across core components from all IMPACT schools. District fidelity scores are interpreted using the same guidelines for school-level scores.

If a school or the district met its targets, IMPACT was considered to be “In Place.” If not, the component was considered to be “Emerging.” Table 1 shows the guidelines we used to interpret fidelity scores.

Table 1: *Fidelity Score Guidelines*

Fidelity Score	Interpretation
1 or greater	In Place
Less than 1	Emerging

Fidelity of Implementation

What aspects of fidelity were in place during the 2014-2015 year?

Table 2: 2014-2015 District Fidelity Results

2014-2015 District Fidelity Results		
Component	Action	Fidelity Interpretation
Individualized Student Learning	Blended Learning Implementation	Emerging
	Impact Classrooms	Emerging
	Blended Learning Technology	Emerging
Student Transition Activities	Summer Transition Camp	In Place
	College Readiness Institute	In Place
Professional Development	District PD for Priority Teachers	In Place
	BL Coaching for Priority Teachers	In Place
	Priority Teacher BL Self-Assessment	Emerging
Using Data to Inform Instruction	Using Data to Inform Instruction	In Place

Did Fidelity of Implementation change from the previous year?

When comparing fidelity scores from year to year, it is important to keep in mind that annual targets change, which will impact the overall fidelity score. Therefore, comparing scores is not necessarily an ‘apples to apples’ comparison. Rather, it is better to look at whether or not a component was “In Place” or “Emerging.”

Table 3 shows the components measured in 2013-2014.

Table 3: Fidelity Components Measured in 2013-2014

2013-2014 Fidelity Components	
Component	Action
Individualized Student Learning	Blended Learning Implementation
	Blended Learning Technology
Student Transition Activities	College Readiness Institute
Professional Development	District PD for Priority Teachers
	BL Coaching for Priority Teachers
	Priority Teacher BL Self-Assessment
Using Data to Inform Instruction	Using Data to Inform Instruction

Fidelity of Implementation

In 2013-2014, **43%** of sub-components were in place. This increased in 2014-2015, with **56%** of sub-components in place.

Table 4: Comparison of Fidelity Findings

Fidelity Comparison			
Component	Action	2013-2014	2014-2015
Individualized Student Learning	Blended Learning Implementation	Emerging	Emerging
	Impact Classrooms	Not Measured	Emerging
	Blended Learning Technology	Emerging	Emerging
Student Transition Activities	Summer Transition Camp	Not Measured	In Place
	College Readiness Institute	In Place	In Place
Professional Development	District PD for Priority Teachers	Emerging	In Place
	BL Coaching for Priority Teachers	In Place	In Place
	Priority Teacher BL Self-Assessment	Emerging	Emerging (.99)
Using Data to Inform Instruction	Using Data to Inform Instruction	In Place	In Place

“I am so much better at using and integrating technology into my classroom this year! One of my proudest moments was being able to create an entire unit online (using s’more), which included notes, activities and videos for the students to complete. I also really enjoyed having the students create a video explaining a mathematical procedure and then being able to teach them how to edit and do cool thing with that video with an i-movie.”

Teacher, North Iredell Middle School

Implementation and Effects

What are the observable key differences in implementation between high fidelity schools and all other IMPACT schools?

We theorized that there would be differences in outcomes between IMPACT schools with high implementation and low implementation. Using schools' fidelity scores from 2014-2015, we grouped schools into three groups, representing high, medium, and low fidelity. It should be noted that the groupings are not based upon whether or not a school met its fidelity target; the groups were determined based upon the fidelity score.

We compared the schools with the highest fidelity (Group 3) with the lowest fidelity (Group 1).

BMS 3 1.4058	SIHS 3 1.3782	SMS 2 1.3032	WIHS 2 1.3018	WIMS 2 1.2715
LNHS 3 1.4186	EIMS 2 1.2336	LMS 1 1.1543	Pressly 1 0.8478	SHS 1 1.0571
	MM 2 1.2732			
NIMS 3 1.4005	NVMS 2 1.2438	Monticello 1 1.0252		
		NIHS 1 1.1453	TMS 1 1.1923	

Figure 5: Groups based upon overall fidelity scores.

Implementation and Effects

We compared the average responses for students from low and high fidelity schools. We found statistically significant differences in the areas of group collaboration and leadership, technology, and ethics.

We found that for group collaboration and leadership, the average response from high fidelity schools was **.06 points higher** than for low fidelity schools. For technology, the average response for high fidelity schools was **.16 points higher** than for low fidelity schools. Lastly, for ethics, responses from high fidelity schools were an average of **.12 points higher** than for low fidelity schools.

Among faculty responses, we found that while there were no statistically significant differences in average responses between high and low fidelity schools, high fidelity schools had consistently higher average responses.

To what extent does the relationship between blended learning implementation and student and teacher outcomes differ between high and low fidelity schools?

To answer this question, we looked more closely at fidelity scores to see if there was a difference between schools based upon their component scores. This will help us to identify the contribution of each component to variations in outcomes. We grouped schools based upon their component fidelity scores.

Implementation: Individualized Student Learning

We found that the average student response to questions about technology was **.09 points higher** than responses from the low fidelity group. However, the average response to questions about personalized learning was **.11 points higher** at low fidelity schools than high fidelity schools. This may be due to some schools' use of personalized learning as part of their overall approach to alternative education.

LNHS 3 1.811	BMS 2 1.560	NIMS 1 1.133	MM 1 0.961	SHS 1 0.893
SIHS 3 1.768	NVMS 2 1.316	EIMS 1 0.889	NIHS 1 0.793	
WIHS 2 1.619	WIMS 2 1.224	LMS 1 0.851	Monticello 1 0.761	
	SMS 1 1.186	TMS 1 0.848	Pressly 1 0.381	

Figure 6: Groups based upon Individualized Student Learning fidelity scores.

“Students’ test scores have shown improvement, and I think it is due to working in small groups and more time with the teacher instead of whole class lessons.”

Teacher, Statesville Middle School

Implementation: Student Transition Activities

We found statistically significant differences in all areas. High fidelity schools had higher average student responses to questions about persistence (+.12), group collaboration and leadership (+.26), personalized learning (+.2), technology (+.27), and ethics (+.26).

MM 3 1.9789	LNHS 2 1.6842	Pressly 1 1.4870	SHS 1 1.4867	SMS 1 1.4860
NIMS 2 1.8073	BMS 1 1.5668	Monticello 1 1.4690		WIHS 1 1.3983
EIMS 2 1.8003	TMS 1 1.5233	WIMS 1 1.4144		NVMS 1 1.3579
NIHS 2 1.7762	LMS 1 1.5168	SIHS 1 1.4054		

Figure 7: Groups based upon Student Transition Activities.

Implementation: Professional Development

We found that high fidelity schools had a higher average student response to questions about persistence (+.09), personalized learning (+.17), and ethics (+.16).

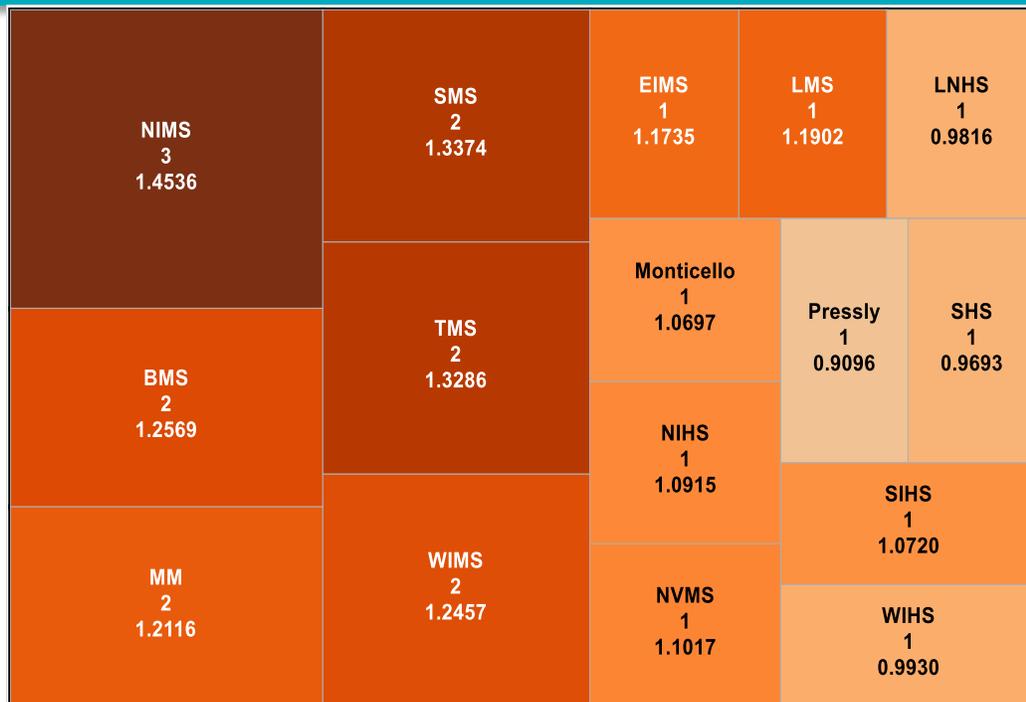


Figure 8: Groups based upon Professional Development fidelity scores

“Students completed Project Based Learning Projects, which included a service learning component. Students created multi media technology presentations like iMovie to show their work, pics, and learning. They completed written essays using Pages. They used Easy Bib to complete bibliographies. They presented to the class. I used a rubric for scoring that they had up front, and every student completed a project.

This all came about because of the Project Based Training I received, and the short personalized technology professional development at WIMS. Both the IF and BLC were instrumental in helping to plan.”

Teacher, West Iredell Middle School

Implementation: Data Driven Decision Making

Schools with high fidelity scores in Data Driven Decision making had higher student responses to persistence (+.09), group collaboration and leadership (+.15), personalized learning (+.15), technology (+.11), and ethics (+.16).

There was a statistically significant difference among faculty responses. High fidelity schools had a **.14 point higher** response to questions about individualized learning and a **.24 point higher** response to questions about personalized and blended learning.

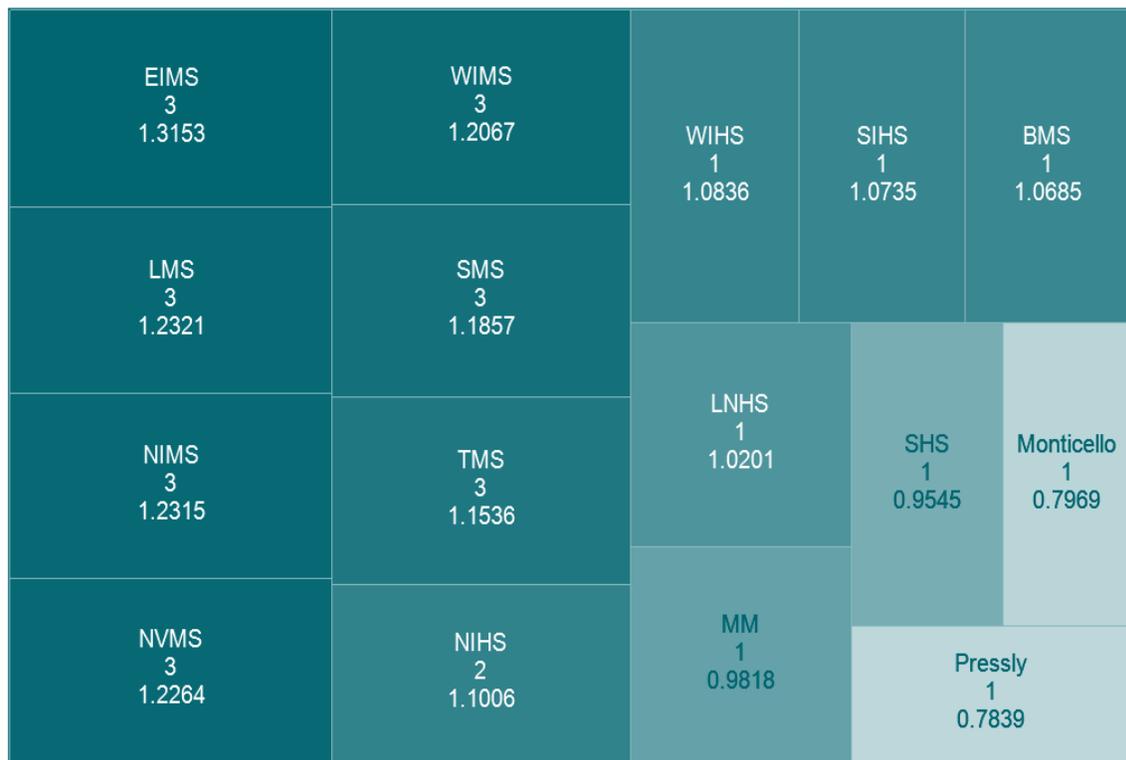


Figure 9: Groups based upon Data Driven Decision Making

Summary of Findings

The findings of this study indicate that IMPACT is making progress towards achieving its goals of individualizing student-driven learning, cultivating high-quality educators, revolutionizing instruction and increasing data driven decision making.

Individualize Student-Driven Learning and Data Driven Decision Making

The use of data to inform instruction as reflected in PLC meeting minutes is increasing across schools. This includes the use of formative assessments and screening tools, like AIMSweb. Faculty have more information about individual student performance, and are utilizing it during meetings to create more personalized learning strategies.

Cultivate High-Quality Educators

Based upon responses to the Faculty survey, faculty knowledge of technology, personalized and blended learning, and individualized learning increased during 2014-2015.

Revolutionize Instruction

The average student response to the student survey increased in all areas during 2014-2015. Based upon student responses, students are demonstrating more persistence when confronted with challenging tasks. Their knowledge of technology is increasing, as is their understanding of the ethical considerations involved with technology use. Lastly, students noted an increased use of blended and personalized learning, as well as group collaboration.

Summary of Findings

Fidelity

Our findings indicate that students attending schools with high overall fidelity have higher responses to questions about technology, group collaboration and leadership, and ethics. When looking at differences in student responses by fidelity component, schools with high fidelity for student transition activities, and data driven decision making had higher student responses in all areas of the survey.

Table 5 presents a summary of our fidelity findings. A “+” indicates that there was a statistically significance increase in survey responses.

Table 5: *Summary of Fidelity Findings*

Fidelity	Persistence	Tech	Personalized Learning	Group Collaboration and Leadership	Ethics
Overall		+		+	+
Individualized student learning		+			
Student transition activities	+	+	+	+	+
Professional development	+		+		+
Data driven decision making	+	+	+	+	+